

I hereby give notice that a hearing by commissioners will be held on:

Date: Wednesday 6, Thursday 7 and Friday 8 November
2019
Time: 1:00pm (Wed), 9.30am (Thurs and Fri)
Meeting Room: Warkworth Town Hall
Venue: 21 Neville St, Warkworth 0910

**HEARING REPORT – VOLUME ONE
PRIVATE PLAN MODIFICATION 25 -
WARKWORTH NORTH
TURNSTONE CAPITAL LTD**

COMMISSIONERS

Chairperson David Hill
Commissioners Rebecca Macky
Michael Parsonson

**Kelsey Partridge
HEARINGS ADVISOR**

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WHAT HAPPENS AT A HEARING

At the start of the hearing, the Chairperson will introduce the commissioners and council staff and will briefly outline the procedure. The Chairperson may then call upon the parties present to introduce themselves to the panel. The Chairperson is addressed as Mr Chairman or Madam Chair.

Any party intending to give written or spoken evidence in Māori or speak in sign language should advise the hearings advisor at least five working days before the hearing so that a qualified interpreter can be provided.

Catering is not provided at the hearing. Please note that the hearing may be audio recorded.

Scheduling submitters to be heard

A timetable will be prepared approximately one week before the hearing for all submitters who have returned their hearing attendance form. Please note that during the course of the hearing changing circumstances may mean the proposed timetable is delayed or brought forward. Submitters wishing to be heard are requested to ensure they are available to attend the hearing and present their evidence when required. The hearings advisor will advise submitters of any changes to the timetable at the earliest possible opportunity.

The Hearing Procedure

The usual hearing procedure (as specified in the Resource Management Act) is:

- The applicant will be called upon to present his/her case. The applicant may be represented by legal counsel or consultants and may call witnesses in support of the application. After the applicant has presented his/her case, members of the hearing panel may ask questions to clarify the information presented.
- Submitters (for and against the application) are then called upon to speak. Submitters may also be represented by legal counsel or consultants and may call witnesses on their behalf. The hearing panel may then question each speaker. The council officer's report will identify any submissions received outside of the submission period. At the hearing, late submitters may be asked to address the panel on why their submission should be accepted. Late submitters can speak only if the hearing panel accepts the late submission.
- Should you wish to present written information (evidence) in support of your application or your submission please ensure you provide the number of copies indicated in the notification letter.
- Only members of the hearing panel can ask questions about submissions or evidence. Attendees may suggest questions for the panel to ask but it does not have to ask them. No cross-examination - either by the applicant or by those who have lodged submissions – is permitted at the hearing.
- After the applicant and submitters have presented their cases, the chairperson may call upon council officers to comment on any matters of fact or clarification.
- When those who have lodged submissions and wish to be heard have completed their presentations, the applicant or his/her representative has the right to summarise the application and reply to matters raised by submitters. Hearing panel members may further question the applicant at this stage.
- The chairperson then generally closes the hearing and the applicant, submitters and their representatives leave the room. The hearing panel will then deliberate "in committee" and make its decision by way of formal resolution. You will be informed in writing of the decision and the reasons for it.

**A NOTIFIED PRIVATE PLAN CHANGE TO THE AUCKLAND COUNCIL UNITARY PLAN
BY TURNSTONE CAPITAL LTD**

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Reporting officer, Ila Daniels

Reporting on proposed Private Plan Modification 25 - Warkworth North to rezone approximately 99 hectares of Future Urban zoned land to a mix of business and residential zones.

APPLICANT: TURNSTONE CAPITAL LTD

SUBMITTERS:	
Page 129	Joan and Ian Civil
Page 131	Chad Ranum and Carly Ranum
Page 137	Robert White
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Private Plan Modification 25 - Warkworth North
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Hearing Report for Proposed Private Plan Change 25: (Warkworth North) to the Auckland Unitary Plan (Operative in part)

Section 42A Hearing Report under the Resource Management Act 1991

Report to: Hearing Commissioners

Hearing Date/s: 6, 7 and 8 November 2019

File No: Hearing Report – Proposed Private Plan Change 25 (PPC25)

File Reference

Report Author Ila Daniels, Principal Planner, Campbell Brown Planning Ltd

Report Approvers Peter Vari, Team Leader Planning, North, West and Islands, Plans and Places

Report produced 11th October 2019

Summary of Proposed Notified Plan Change 25 (Warkworth North): Rezone 99ha of land in Warkworth North from Future Urban Zone to a range of residential and business zones.

PPC25 as notified¹ seeks to apply the following AUP (OP) zones:

- Residential – Single House
- Residential – Mixed Housing Suburban
- Residential – Mixed Housing Urban
- Business – Neighbourhood Centre
- Business – Light Industry

PPC25 seeks to introduce a new precinct known as 'Warkworth North Precinct'² which includes various provisions over a part of the Warkworth North land between Falls Road and SH1 and includes a further sub-precinct A to Stubbs Farm portion only. There are a number of plans attached to the precinct being:

- Precinct Plan 1 – Warkworth
- Precinct Plan 2 – Warkworth North SWCMP – Streams

¹ Submission 23 from TCL seeks to amend all these notified zones.

² Refer Appendix 1 of the Hearing Report

- Precinct Plan 2 – Warkworth North SWCMP – Sub Precinct A (1 of 2)
- Precinct Plan 3 – Road Sections and Road Stormwater Management

PPC25 seeks to extend a number of overlays or controls over the site:

- The addition of two areas of Significant Ecological Area overlay on 220 Falls Road; and
- Extend the Stormwater Management Area Control – WARKWORTH Flow 1 over the whole plan change area.

Plan subject to change	Auckland Unitary Plan (Operative in part), 2016
Number and name of change	Proposed Plan Change 25 – (Warkworth North) to the Auckland Unitary Plan
Status of Plan	Operative in part
Type of change	Proposed Private Plan Change
Committee date of approval (or adoption) for notification	5 th February 2019
Parts of the Auckland Unitary Plan affected by the proposed plan change	<ul style="list-style-type: none"> • Zoning Maps • Chapter I Precincts – North – Warkworth North • Chapter L Schedules – Schedule 3 – Significant Ecological Areas • Stormwater Management Area Control: Warkworth Flow 1
Date draft proposed plan change was sent to iwi for feedback	June 2018 (see Attachment 7 of the Private Plan Change Request Application within Appendix 2)
Date of notification of the proposed plan change and whether it was publicly notified or limited notified	16 May 2019 Public Notification
Plan development process used – collaborative, streamlined or normal	Normal
Submissions received	35
Date summary of submissions notified	29 August 2019
Number of further submissions received	9
Legal Effect at Notification	None
Main issues or topics emerging from all submissions	<ul style="list-style-type: none"> • Lack of alignment with the Warkworth Structure Plan in terms of zoning pattern, green network and roading pattern and potential to undermine forward

	<p>planning for Warkworth town;</p> <ul style="list-style-type: none"> • Inadequacy of transport assessments including traffic modelling, street typologies and movement plans; • Lack of certainty around route protection for Western Link Road, alignment and delivery; • Fundamental changes sought by Turnstone via its submission on a number of matters including seeking to apply a different number, size and range of zones across the land; • Extent of employment land delivered by the plan change compared to the Warkworth Structure Plan; • Suitability of the centre zoning and size and whether it should be a Neighbourhood or Local centre zone • Lack of funding or alternative mechanism identified to ensure transport infrastructure and services; • Transitional zoning adjacent to Viv Davie Martin Drive area and northern side of valley; • Intensity of residential zonings across the site; • Location of further road connections and lack of internal collector roading on precinct plan; • Stormwater and stream management across the plan change area, including adequacy of the Stormwater Management Plan and understanding of flooding effects; • Urban design approach to the central stream corridor and interface with residential and business zoning; • Lack of information on management of reverse sensitivity issues between residential and industrial land; • Need for a gateway landscape treatment along SH1 and the business zonings; and • Provision of walking and cycling connections across the site and delivery of these facilities.
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Abbreviations

Abbreviations in this report include:

Abbreviation	Meaning
AUP(OP)	Auckland Unitary Plan (Operative in Part)
FULSS	Future Urban Land Supply Strategy July 2017
FUZ	Future Urban Zone
GBZ	Business – General Business Zone
ITA	Integrated Transport Assessment
LIZ	Business – Light Industrial Zone
MHSZ	Residential – Mixed Housing Suburban Zone
MHUZ	Residential – Mixed Housing Urban Zone

MLR	Matakana Link Road
MUZ	Business – Mixed Use Zone
NOR	Notice of Requirement
PPC25 or ‘Plan Change’	Proposed Plan Change 25
P2WK	Ara Tuhono - Puhoi to Warkworth Project
OSZ	Open Space Zone
OSIZ	Open Space – Informal Recreation Zone
OSZC	Open Space – Conservation Zone
TCL or Turnstone	Turnstone Capital Limited
RMA	Resource Management Act 1991
RUB	Rural Urban Boundary
SH1	State Highway 1
SHZ	Residential – Single House Zone
RMA	Resource Management Act 1991
WLR	Western Link Road
WNSP	Warkworth North Structure Plan
WSP	Warkworth Structure Plan

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Appendix 2	Applicant’s Section 32 Report
Appendix 3	Map of Submitter Sites
Appendix 4	Submissions and Further Submissions
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Appendix 6	Specialist Assessments
Appendix 7	Clause 23 Requests and Applicants Response
Appendix 8	Councils Decision to accept PPC25 for processing
Appendix 9	Adopted Warkworth Structure Plan June 2019
Appendix 10	NZTA P2WK Landscape Plans

EXECUTIVE SUMMARY

1. Proposed Private Plan Change 25 (Warkworth North) (**‘PPC25’** or **‘Plan Change’**) to the Auckland Unitary Plan (Operative in Part) (**‘AUP(OP)’**) as notified seeks to rezone 99ha of land in Warkworth North from Future Urban Zone to a range of residential and business zones, and introduce a new precinct ‘Warkworth North’.
2. The purpose of PPC25 is principally to enable urbanisation of the land for a range of residential and business zones across the plan change area.
3. The normal plan change process set out in Schedule 1 of the Resource Management Act 1991 (**‘RMA’**) was adhered to in the processing of PPC25.
4. Council received a private plan change request on 29th March 2018 from Turnstone Capital Limited (**‘TCL’**). Further information was sought from TCL, under clause 23 of schedule 1 on the 30th April and 9th July 2018. TCL provide additional information or updated documents on the 9th July, 17th October and 15th January 2019. The private plan change request was accepted for processing by the Planning Committee on 5 February 2019.

5. PPC25 was publicly notified on the 16th May 2019 with submissions closing on the 5th July 2019. It was agreed between the applicant and Council that notification of the privately initiated plan change would be delayed to allow Council to finish the consultation concurrently being undertaken for the Draft Warkworth Structure Plan to avoid any confusion amongst the community. The summary of decisions requested in submissions on PPC25 was then notified for further submissions on the 29th August 2019 and this closed on the 12th September 2019.
6. A total of 35 submissions were received, with one late submission³ and nine further submissions received.
7. Auckland Council has made a submission on PPC25 as a result of the work that has been undertaken in preparing the adopted Warkworth Structure Plan ('**WSP**'). Consequently, it was determined that to prevent any perceived conflict of interest that an independent consultant planner would be engaged for the s42A reporting on PPC25. Campbell Brown Planning was engaged at the end of August 2019 to assist in this regard.
8. TCL has made a submission on PPC25, for the stated reason that it wished to respond to the adoption of the Warkworth Structure Plan in June 2019. The submission identifies that the relief sought was a 'fundamental change' to the notified PPC25. It now seeks a different range and size of zonings to that notified.
9. In preparing for hearings on PPC25, this hearing report has been prepared in accordance with section 42A of the RMA.
10. This report considers the issues raised by submissions and further submissions on PPC25. The discussion and draft recommendations in this report are intended to assist the Hearing Commissioners, and those persons or organisations that lodged submissions on PPC25. The recommendations contained within this report are not the decisions of the Hearing Commissioners.
11. This report also forms part of Council's ongoing obligations, which are to consider the appropriateness of the proposed provisions, as well as the benefits and costs of any policies, rules or other methods, when considering issues raised in submissions on PPC25.
12. A report in accordance with section 32 of the RMA has also been prepared by the applicant for this purpose for the privately initiated plan change and is attached in **Appendix 2**. This 'Section 32 evaluation report' and associated documentation related to PPC25 can be found on the Council's website and should be considered in making decisions on PPC25.
13. On the basis of the information available at the time of preparing this report it is recommended that PPC25 be declined given the inadequacy of information provided to support the zoning framework and precinct provisions sought for the land, particularly in respect of traffic, stormwater and economic matters. These matters are integral to informing the assessment of the most appropriate zoning and precinct approach to the land and are necessary given the divergence of the proposal from the recently adopted Council led Warkworth Structure Plan.

³ Submission no. 37 from Mahurangi Action Incorporated received 8th August 2019

1. BACKGROUND

1.1. PPC25 Purpose

14. Proposed Private Plan Change 25 (Warkworth North) to the Auckland Unitary Plan (Operative in Part) seeks to rezone 99ha of land in the Warkworth North area from Future Urban zone (FUZ) to a mix of residential and business zones in the Auckland Unitary Plan (Operative in Part).
15. The private plan change request was lodged with the Council by TCL and the purpose of PPC25 as outlined in the s32 evaluation report is to enable the applicant to redevelop the land in a manner that aligns with the zoning sought and increase the housing and business land supply for Warkworth⁴.

1.2. FUZ Zoning

16. The land the subject of the Private Plan Change request is zoned FUZ and was outlined by Council as being an area suitable for urbanisation as part of the 'RUB location' discussions considered during the Independent Hearing Panel process for the AUP(OP). In particular, the s32 evaluation report notes that Council identified that the Warkworth North area was suitable because:
 - *"It adjoins the existing Warkworth Urban area and urban development would support efficient provision (including upgrades) of infrastructure;*
 - *The proposed Puhoi to Warkworth motorway extension in the north provides a defensible urban boundary;*
 - *The proposed transport upgrades (Puhoi to Warkworth motorway extension; Matakana Link Road and proposed Western Link Road) make the area highly accessible;*
 - *The land is of limited rural production value;*
 - *No significant landscapes or areas (Outstanding Natural Landscape or High Natural Character overlay) or cultural or heritage areas are identified; and*
 - *Reasonable access to social infrastructure (Schools, open spaces, recreation reserves and community facilities etc")⁵*
17. The land was subsequently zoned FUZ in the AUP(OP). This portion of FUZ is identified within the Future Urban Land Supply Strategy July 2017 ('FULSS'). The FULSS seeks to provide for the land falling within the Warkworth North area to be 'development ready' from 2022⁶.

⁴ Section 5.2 of the s32 report, Warkworth North Plan Change, Prepared by Barkers & Associates, dated 21 January 2019

⁵ Page 6 of the s32 report, Warkworth North Plan Change, Prepared by Barkers & Associates, dated 21 January 2019

⁶ Future Urban Land Supply Strategy, July 2017, p18

1.3. Land Ownership within the Plan Change Area

18. The applicant and the main landowner for the PPC25 area is TCL, as I understand that they are the owners of 'Stubbs Farm Estate'. The land that falls within the TCL landholding within the private plan change areas is shown in **Figure 1** below.
19. The other landowners within the PPC25 area include a number of additional properties which are identified below. It is noted that the full certificate of title details are included within Appendix 2 of the s32 evaluation report.
 - 11 Sanderson Road;
 - 86 Hudson Road;
 - Sec 4 SO 476652, Hudson Road;
 - 27 State Highway 1;
 - Pt lot 1 DP 180823, State Highway 1;
 - 63 State Highway 1;
 - SECT 16 SO 495251, State Highway 1;
 - Crown Lan Blk 11 Waioneke Survey District SO 33495
 - Lot 3 DP 209013, Falls Road;
 - Lot 2 DP 509795, Falls Road;
 - 215 Falls Road;
 - 91 Falls Road;
 - 93 Falls Road;
 - 16 View Road; and
 - 20 View Road.
20. Some of these land owners have submitted on PPC25 and matters raised are addressed in section 10 of this report⁷.

1.4. Existing Environment

21. Having visited the PPC25 land on the 19th September 2019, I concur with the applicant's description of the land at section 4.1 of the s32 evaluation report.
22. The land at Warkworth North, within the area subject to this request, is primarily used for farming activities. It is located north-west of Warkworth township within the Rural Urban Boundary. Warkworth is the largest rural town in the northern part of Auckland.
23. The northern boundary of the area is the existing State Highway 1 ('**SH1**') and the western boundary is the Puhoi to Warkworth motorway designation, currently under construction. The Mahurangi River forms the southern boundary with the Hudson Road industrial estate to the east and the Viv Davie Martin Drive countryside living area to the south-west. Access to the area is available from Hudson and Falls Roads, and off SH1.
24. Flood prone lowlands form the northern section of the Warkworth North land, adjacent to SH1. These lowlands rise to a clearly defined central ridge which runs north to south primarily through the Stubbs Farm portion of the land. The topography is undulating and rolling in part to steep along the central ridge and down to the Mahurangi Stream.

⁷ Submission Numbers 7, 13, 15, refer Appendix 4

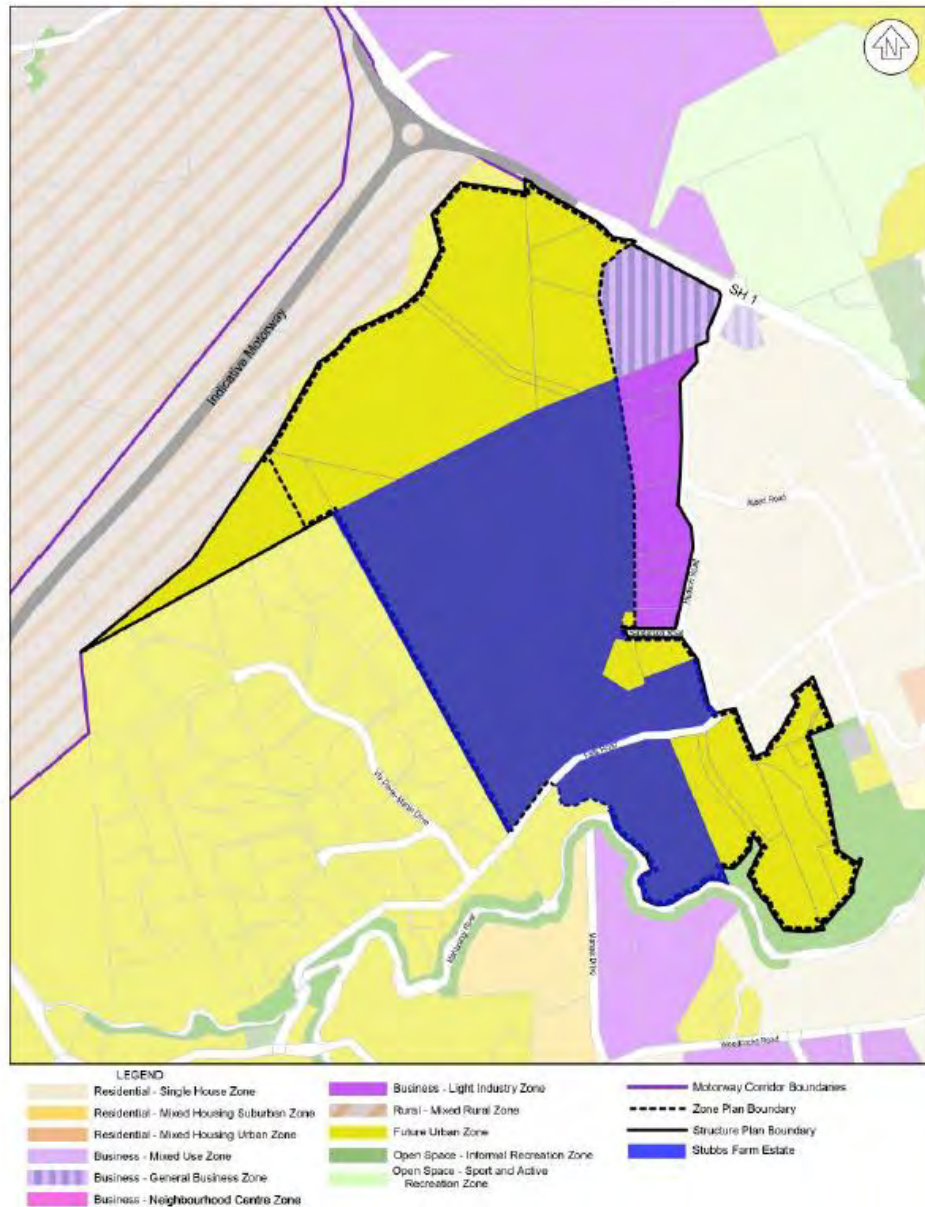


Figure 1: Boundary of PPC 25 (shown as a dotted line), existing zoning and extent of TCL Landholdings (shown in dark purple) (Source: Warkworth North Plan Change, prepared by Barkers & Associates, dated 21 January 2019).

25. Most of the area is covered in pasture of limited production value. There are three isolated pockets of indigenous vegetation, some of which include streams and wetlands. The area includes a number of unnamed intermittent streams which flow to the main tributary to the Mahurangi River. A Significant Ecological Area (SEA_T_2294 in the Auckland Unitary Plan) is located on the site at 223 Falls Road taking in riparian forest. An esplanade reserve partially extends along the Mahurangi River and is vested in Council.

Hudson Road and Sanderson Road

26. Both Hudson and Sanderson Road comprise a range of light industrial activities and include the Watercare water treatment facility, storage uses, Atlas concrete batching plant, contractors yards, a plastics company, motor vehicle operations and small offices. A new Pak 'n' Save complex and other bulk retail is under construction on the

corner of Hudson and SH1, opposite the Z petrol station. It is noted that one side of Hudson Road is zoned LIZ whilst the opposite east side is zoned SHZ and is located at a higher elevation.

North of State Highway 1

27. To the north of the PPC25 area includes the Warkworth Showgrounds, a timber yard and a number of rural properties. The rural properties have been live zoned for light industrial purposes as part of the AUP process and a resource consent has been lodged at 42A, 102, and 104 State Highway 1 for 94 industrial lots⁸.

Falls Road Area

28. Adjacent to the central PPC25 area on the southern side of Falls Road is land that is rural in appearance with sloping topography that drops down to the Mahurangi River below. Falls Road becomes more urban in appearance to the east of the intersection with Hudson Road with use predominantly for residential purposes, typically featuring detached housing on full sites being reflective of the existing SHZ. Falls Road further eastwards becomes Hill Street and the Warkworth Primary School is located on this road.

Mansel Drive Area

29. The new bridge across Mahurangi Drive was constructed in 2017 by Auckland Transport and is known as Stage 1 of the Warkworth Western Collector. The area to the south west is dominated on the west of Mansel Drive by the large Summerset Retirement Village and Hospital which includes a range of housing typologies - small single level units, to serviced apartments and hospital level care buildings. To the east of Mansel Drive the zoning is light industrial and features a range of uses including industrial and bulk retail uses, with a large Mitre 10 depot.

1.5. Lodged Documents

30. The applicant has provided the following reports and documents to support its application for PPC25:

Warkworth North Private Plan Change Request, Section 32 Assessment Report, prepared by Rachel Morgan and Burnette O'Connor, Barker & Associates Ltd and dated 21st January 2019;

Appendix 1: Planning Maps and Precinct Provisions and Plans comprising:

- *Proposed Zoning Map*
- *Proposed SEA Overlay Map*
- *SMAF Control Map*
- *Precinct Plan 1 – Warkworth*
- *Precinct Plan 2 – Warkworth North SWCMP*
- *Precinct Plan 2 – Warkworth North SWCMP – Sub Precinct A (1 of 2)*
- *Precinct Plan 3 – Road Sections and Road Stormwater Management*

Appendix 2: List of Affected Properties and Certificates of Title;

⁸ Council Reference BUN60326958

Appendix 3: Legal Opinion addressing Clause 25 matters, prepared by Bronwyn Carruthers and Aidan Cameron dated 21st March 2018;

Appendix 4: Warkworth North Structure Plan, prepared by Turnstone Capital, dated January 2019;

Appendix 5: Warkworth Spatial Plan, prepared by Warkworth Spatial Plan Working Group and dated November 2017;

Appendix 6: Consultation Report, prepared by Barker & Associates Ltd and dated 29 June 2019;

Appendix 7: Cultural Impacts Assessment for Warkworth Road Structure Plan, prepared by Te Kawerau a Maki Settlement Trust and Tribal Authority and dated July 2017;

Appendix 7: Cultural Values Assessment for the Warkworth North Structure Plan and Associated Development, prepared by Fiona McKenzie for the Ngati Manuhiri Kaitiaki Charitable Trust and dated May 2017;

Appendix 8: Warkworth North Proposes Plan Change, Economic Assessment, prepared by McDermott Consultants and dated January 2019;

Appendix 9: Neighbourhood Design Statement, prepared by Architects Pacific Environments, Revision J and dated January 2019;

Appendix 10: Warkworth North, Structure Plan and Proposed Plan Change Landscape and Visual Assessment, prepared by Littoralis and dated January 2019;

Appendix 11: Warkworth North Structure Plan, Open Spaces and Community Facilities, prepared by Barker & Associates Ltd and dated 29 June 2019;

Appendix 12: Stubbs Farm Plan Change, Integrated Transportation Assessment, prepared by Harrison Grierson and dated May 2019;

Appendix 13: Ecological Assessment, Warkworth North, prepared by Bioreserches and dated 3 May 2019;

Appendix 14: Land Development Report, Warkworth North Plan Change, prepared by Chester and dated 3rd May 2019

Appendix 15: Warkworth North Structure Plan and Plan Change: Archaeological Assessment, Heritage and Archaeology Report, prepared by Clough & Associates Ltd and dated May 2019;

Appendix 16: Environmental Site Investigation, Warkworth Private Plan Change, prepared by Babbage and dated 23rd January 2019;

Appendix 17: Geotechnical engineering Feasibility Assessment, Proposed Plan Change North Warkworth Area, Warkworth, prepared by KGA and dated 18 January 2019;

Appendix 18: Time line for Infrastructure Provision and Urban Development – Warkworth North Structure Plan Area;

Appendix 19: Objectives and Policies Assessment Table;

Appendix 20: Urban Design Assessment Table of Plan Provisions;

Appendix 21: Acoustic Assessment, prepared by Styles Group and dated 3rd May 2019; and

Appendix 22: Arboricultural Report, Warkworth North Private Plan Change on Notable Trees Assessment, prepared by The Tree Consultancy Company and dated 18 September 2018.

1.6. Structure Plans

1.6.1. Turnstone Capital Ltd - Warkworth North Structure Plan 2018

31. Given the application was lodged in 2018 and accepted for processing in February 2019 it predated the adoption of the Council led Warkworth Structure Plan. Consequently, the applicant has submitted a Structure Plan for the site and adjacent area to inform and support the plan change request.
32. The TCL Warkworth North Structure Plan ('**WNSP**') is appended as Appendix 4 to the PPC25 application. The Structure Plan covers 120 ha of the 324 ha of FUZ within the Warkworth North area, refer **Figure 2** below. The majority of land is rural in nature apart from the existing Hudson Road properties. The boundaries for the Structure Plan are SH1 to the North, Hudson Road to the east, Mahurangi Stream and Falls Road to the south and Viv Davie Martin Drive and motorway designation corridor to the west/ northwest, as shown in **Figure 2**.
33. The Structure Plan outlines that it has considered the opportunities and constraints of the identified area both in terms of the subject site and the wider Warkworth area.
34. The Structure Plan identifies that it has been prepared in accordance with Appendix 1 of the AUP(OP) and identifies the constraints and opportunities for urban development within the wider area, including the local, strategic and statutory context for development. The key outcomes of the Structure Plan are summarised within the s32 report as being:
 - *"The potential location of the proposed Western Link Road that will be the key collector road and could provide access to the site traversing the eastern boundary of the Structure Plan area (if this is not the chosen location for the Western Link then the alignment or similar would be retained as a local road);*
 - *The location of the watercourses and remnant bush areas;*
 - *The need to provide an open space network that is useable, accessible and responds to site characteristics;*
 - *The topography of the site and location of key ridgelines;*
 - *The desire to minimise earthworks and manage visual landscape and character effects;*
 - *The need to manage potential reverse sensitivity and amenity effects, taking into account the nature of surrounding land uses:*

- The expected low market attractiveness for business uses in those parts of the Structure Plan area with steeper topography; and
- The need to manage potential effects on the vitality and amenity of other centres in Warkworth⁹.

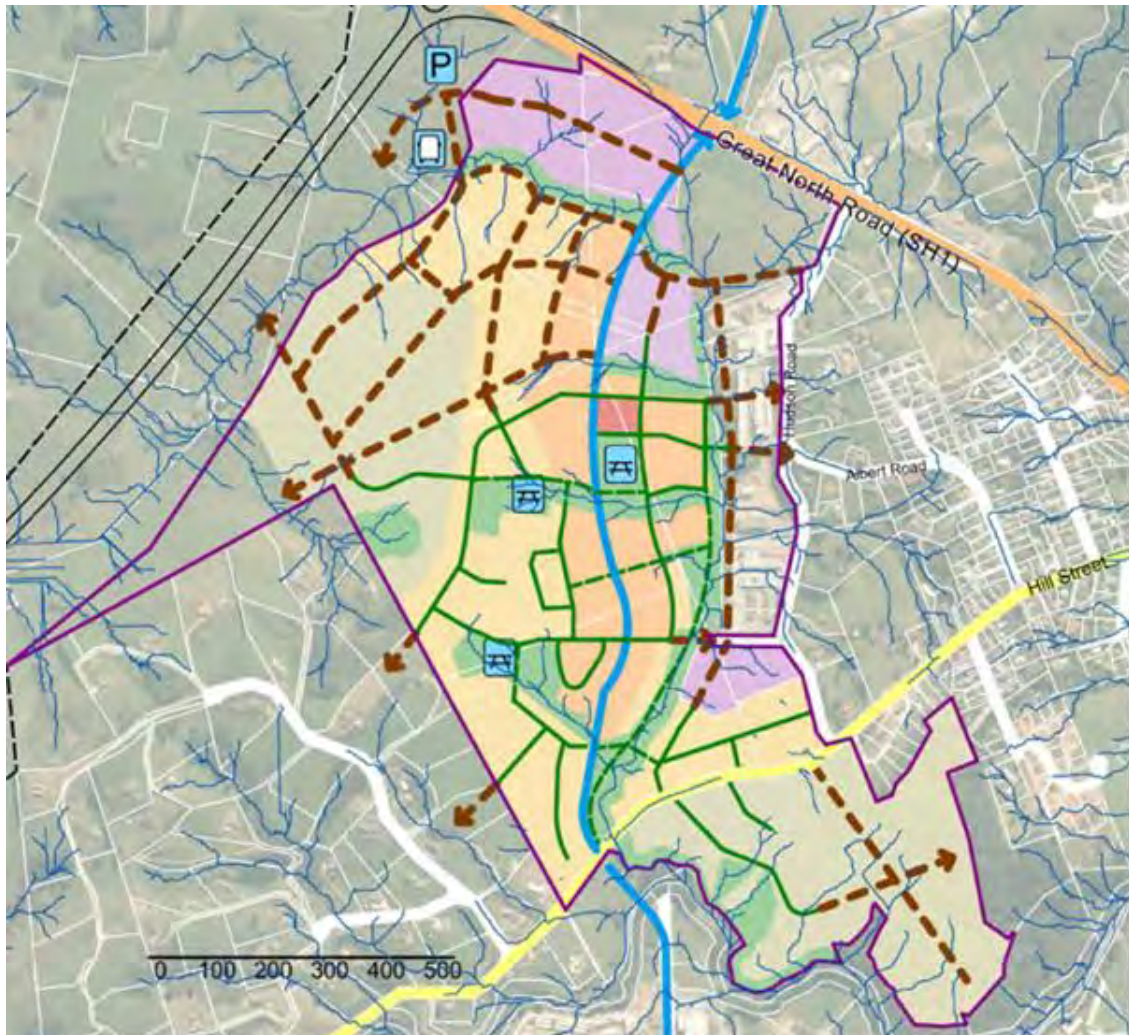


Figure 2: Warkworth North Structure Plan, prepared by Turnstone January 2019

35. Based on these drivers and the framework of the AUP (OP), the WNSP proposed a series of land uses including a mixture of residential and business uses including light industry, and a neighbourhood centre, a linear open space network and Western Link Road ('WLR'). **Figure 2** above illustrates an indicative road network, and identifies the open space network concentrated around existing remnant bush and water courses.
36. The Structure Plan was supported by a number of documents appended to the s32 evaluation report and outlined in section 1.5 above.

⁹ Section 8.1.2, s32 Report, Warkworth North Plan Change, Prepared by Barker & Associates, dated 21 January 2019

1.6.2. Auckland Council - Warkworth Structure Plan Adopted June 2019

37. Council adopted the WSP in June 2019 after progressing the structure plan process in Warkworth for the past 18 months. It is understood that there were a number of conversations with TCL about this document in terms of amendments made to PPC 25 prior to the acceptance and notification of PPC25. Further, the timing for notification was amended to cater for the dual consultation occurring at the time with both PPC25 and WSP out for consideration. Since adoption, the WSP has informed both Council's and other submissions on the plan change.
38. The Warkworth Structure Plan sets out a pattern of land use and a network of transport and other infrastructure for the 1,000ha of Future Urban zoned land around Warkworth. The structure plan is intended to be the foundation to inform future plan changes to rezone the land.
39. Before Future Urban zoned areas are urbanised (and 'live' zoned), the AUP (OP) requires structure planning to occur. The Auckland Unitary Plan also contains guidance on the matters to be addressed in a structure plan (Appendix 1 of the Auckland Unitary Plan). The Warkworth Structure Plan followed these guidelines.
40. The process to create the WSP began in December 2017 with the preparation of a series of technical 'topic reports' to understand the existing environment within the study area and the opportunities and constraints for development. The topic reports covered various areas such as heritage and archaeology, stormwater, transport, environment, along with others.
41. During April 2018, the initial phase of public consultation for the project was undertaken to promote awareness of the project and understand what stakeholders value as Warkworth grows.
42. The next phase of the structure plan was community structure plan workshops in June 2018. The purpose of the workshops was to involve the public in 'hands-on' sessions to generate ideas on how the Warkworth Structure Plan could look in terms of a land use layout and supporting infrastructure. The Council then reported back to the community in August 2018 through two open days to summarise the outcomes of the workshops.
43. A draft Warkworth Structure Plan was then developed using inputs from the topic reports (opportunities and constraints), consultation feedback (April 2018), the community workshops ideas, and internal Council specialist workshops. The draft plan was then taken out for feedback from the community in February 2019. The feedback on the draft plan was reviewed and some changes were made to produce the final Warkworth Structure Plan that was adopted in June 2019.
44. During the process the Council worked with various infrastructure providers and organisations including Auckland Transport, NZTA, Vector, Chorus, Ministry of Education, and Watercare. Consultation occurred throughout the whole project with Mana Whenua. At a political level the project was overseen by a political working group made up of councillors, local board representatives, and members of the Independent Maori Statutory Board. The Rodney Local Board was also consulted throughout the process.

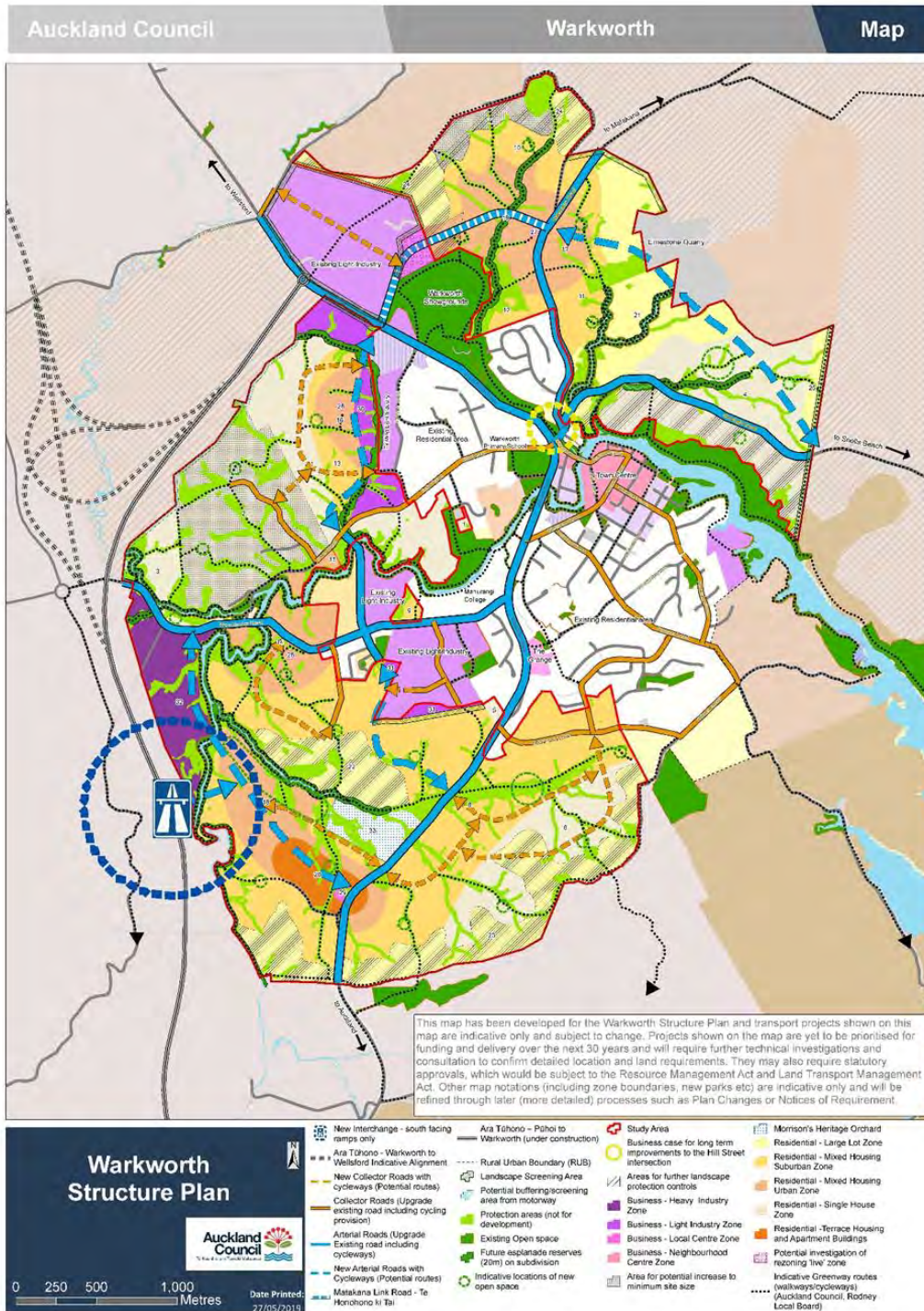


Figure 3: Council Led Warkworth Structure Plan, adopted June 2019

High-level outcomes of the Warkworth Structure Plan

45. The key high-level features of the Warkworth Structure Plan are listed below:
- Ecological and stormwater areas are set aside from any built urban development.
 - The new residential areas across the Future Urban zone enable around 7,500 dwellings and offer a range of living types from spacious sections around the

fringe to more intensive dwellings such as town houses and apartments around the new small centres and along public transport routes.

- Warkworth's local and rural character is protected through various measures including provisions to protect the bush-clad town centre backdrop by the Mahurangi River and retaining the Morrison's Heritage Orchard as a rural feature of the town.
- New employment areas are identified, comprising land for new industry (e.g. warehousing, manufacturing, wholesalers, repair services) and land for small centres (e.g. convenience retail, local offices, restaurants/cafés). The existing Warkworth town centre by the Mahurangi River will remain as the focal point of the town.

46. The structure plan identifies infrastructure to support the future land uses that include:

- Prioritising active transport in Warkworth through a separated walking and cycling network providing connectivity to new and existing centres, employment areas, schools and public transport stations.
- A roading network including a potential southern interchange on Ara Tūhono – Pūhoi to Warkworth (south facing ramps only).
- A public transport network built upon the recently introduced 'New Network for Warkworth' and in the long term has a bus station/interchange in Warkworth's southern Local Centre and a proposed new Park and Ride near the potential Ara Tūhono – Pūhoi to Warkworth southern interchange.
- Other infrastructure providers for utilities such as wastewater, water, power supply, telephone, broadband, community facilities, schools, and healthcare have plans underway to service the planned growth of Warkworth.

47. The structure plan notes that the development of Warkworth's FUZ is sequenced in stages over the next 20 years as bulk infrastructure capacity allows. It will be implemented through a series of plan changes to rezone the Future Urban zone.

48. The structure plan recognises that it is not an exact site by site zoning map with the accuracy required for a statutory plan change. The WSP states on page 23 that *"the structure plan shows zone boundaries in a general way...and will be refined later through the plan change process"*.

49. While localised zone boundaries may be subject to change, the main structural land use elements such as larger centres and industrial areas are not anticipated to be altered without significant additional evidence and reasons.

1.7. Clause 23 Requests for Further Information

50. On the 30th April 2018, prior to accepting PPC25, the Council requested that the applicant provide further information in accordance with Clause 23 of Schedule 1 to the RMA. This request is attached as **Appendix 7** to this report. The purpose of the further information request was to enable Council to better understand the effects of PPC25 on the environment and the ways in which adverse effects may be mitigated. The key information sought through the Clause 23 request related to the following matters:

- Auckland Unitary Plan (operative in part) (AUP) objectives and policies
- Implementation including:
 - precinct plan

- stormwater management plan
- roads and open space networks
- road network
- streams

- Consultation
- Reverse Sensitivity (Noise and Air Quality)
- Geotechnical
- Land Development
- Flooding
- Hydrology Mitigation
- Water Quality
- Streams
- Wetlands
- Ecology
- Urban Design
- Economics

51. The applicant responded to the Clause 23 request on the 9th July 2018. This response is also contained within **Appendix 7** to this report and comprises a letter and a series of updated reports.

52. On the 30th July 2018 the Council responded to TCL advising that further information was still required on a number of matters being:

- Auckland Unitary Plan (operative in part) (AUP) objectives and policies
- Implementation including:
 - precinct plan
 - stormwater management plan
 - roads and open space networks
 - road network
 - streams
- Section 32 evaluation report
- Urban design
- Geotechnical
- Water quality
- Flooding

53. The applicant responded to the outstanding Clause 23 matters on 17th October and 15th January 2018. These responses resulted in the package of information outlined at section 1.5 above. Council staff who evaluated the request considered that the applicant had provided sufficient information to enable the request to be considered for processing. Following this it was taken to the Council's Planning Committee on 5 February 2019 for a decision under clause 25. The report did identify that there were still some matters outstanding and these could be addressed via submissions and hearing process or for non-RMA matters to be resolved in parallel to the PPC process. PPC25 was publicly notified on the 16th May 2019 with submissions closing on the 5th July 2019.

1.8. Relevant Consenting

54. There are a number of lodged or determined resource consents or notices of requirement either on or adjacent to the PPC25 land which are of interest when assessing the plan change. These have been identified below.

1.8.1. 223 Falls Road and Lot 1 DP 508375, Warkworth

55. A non-complying land use and subdivision consent application is currently being processed by Auckland Council (Reference BUN60339957) at 223 Falls Road (Lot 1 DP 508375). This site falls within the PPC25 land area and is owned by TCL, though the applicant is Falls Road Limited. The consent proposes a four stage 51 lot fee simple subdivision including two roads to vest, four local purpose reserves and an esplanade reserve (refer **Figure 4** below). It requires consent for subdivision within the FUZ, extensive earthworks, removal of vegetation within a SEA overlay and installation of stormwater, wastewater, water and general utility connections. The public notification submission period ended on the 7th October 2019.



Figure 4: Proposed Subdivision of 223 Falls Road, Warkworth (Source: Resource Consent Application for 223 Falls Road, Warkworth, prepared by Barker & Associates, dated 20 May 2019)

1.8.2. 220 Falls Road and 12 and 22 Sanderson Road – Stubbs Farm Estate

56. A non-complying bulk earthworks and stream works consent application has been lodged with Auckland Council (Reference: BUN60344551) at 220 Falls Road, 12 and 22 Sanderson Road, Warkworth. The consent covers the area known as sub-precinct A on the PPC25 application. The application outlines that it seeks consent to undertake bulk earthworks in preparation for the intended future urban zoning of the site. The bulk earthworks cover the majority of the Stubbs Farm site as identified in **Figure 1** above and involve a cut of 468,111m³ and fill of 243,518m³. The majority of existing bush is identified to be protected but the earthworks will result in loss of 1,370m² of existing bush and riparian margin. In terms of stream works, 316m of stream reclamation and two culverts of 49m and 65m on two watercourses for the WLR is identified.

1.8.3. Sec 4 SO 476652, Hudson Road – Pak ‘n’ Save Development

57. A discretionary land use consent and a stormwater permit was granted by Auckland Council (Reference BUN60332296) on the 7th August 2019 for the redevelopment of part of the GBZ site at the corner of Hudson Road and SH1 for land known as Sec 4 SO 476652. The consent holder is the National Trading Company of NZ Ltd, and the consents provide for a 5,200m² supermarket with associated four pump petrol facility, a large format retail store of 5,300m² and a smaller retail development with tenancies totalling 550m² (refer **Figure 5** below). It is known as the Pak ‘n’ Save development.

1.8.4. 42A, 102 and 104 State Highway 1 – Industrial Estate

58. The Auckland Council is currently considering an application at the above site for a staged industrial subdivision to create 94 industrial lots, vest a number for roads, earthworks, stream works and riparian planting protection (refer **Figure 6** below). The landowner (Goatley Holdings) has lodged a submission on PPC25.

1.8.5. Matakana Link Road – Notice of Requirement

59. A Notice of Requirement (**‘NOR’**) and associated resource consent applications for the construction, operation and maintenance of the Matakana Link Road were notified on the 1st November 2018. A hearing was held on the 27th, 28th and 29th March and 1st April, and a recommendation to confirm the designation and approve the resource consent was made by Independent Commissioners on the 6th June 2019. Auckland Transport (**‘AT’**) confirmed as the Requiring Authority that it accepted the Commissioners’ recommendation on the 16th July 2019. The plans attached to the confirmation identified that the intersection adjacent to SH1 will be provided by NZTA. This NOR and the related resource consent have been appealed and are currently going through a mediation process with the parties involved. It is anticipated that AT and NZTA will be able to update the commissioners on this matter at the hearing.

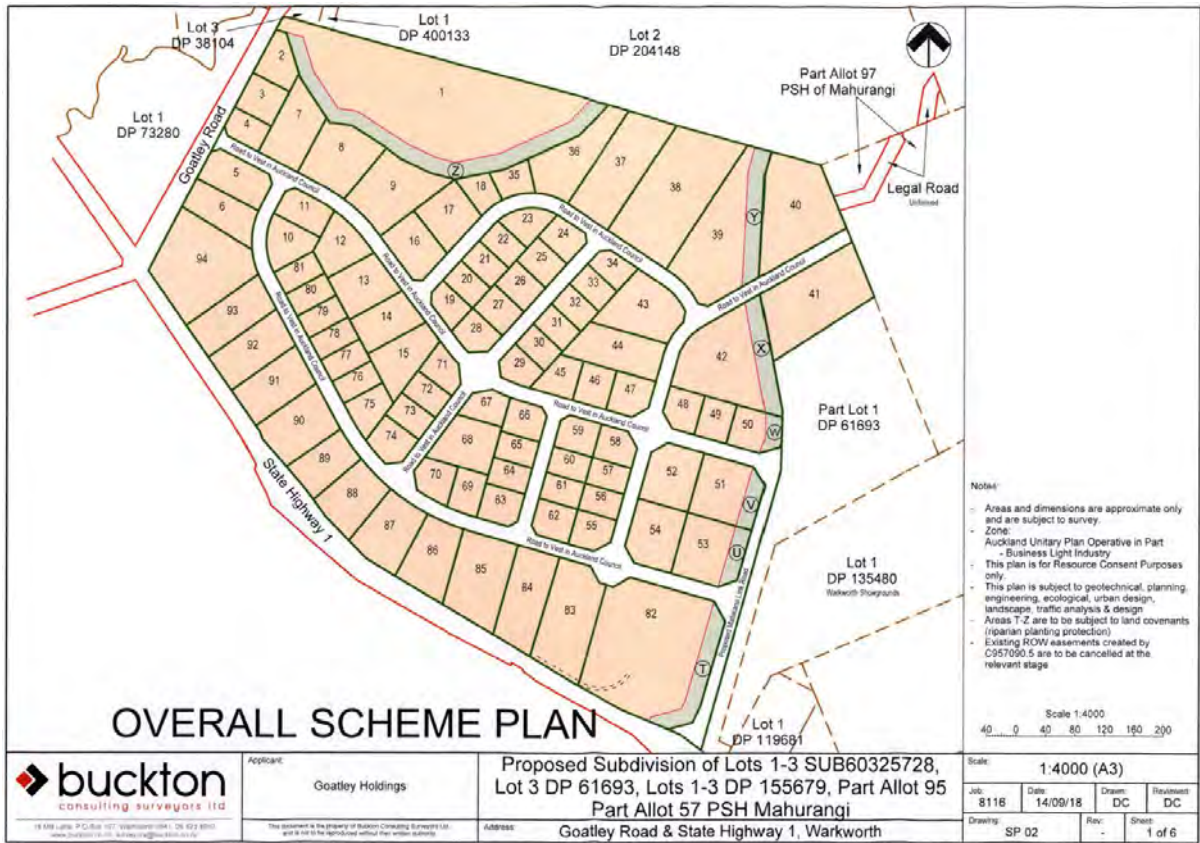


Figure 6: Lodged Scheme Plan for 38 Goatley Road and 42, 42A, 56, 102 and 104 State Highway 1, Warkworth (Source: Buckton scheme plan attached to Resource Consent referenced BUN60326958)

2. EXISTING PLAN PROVISIONS

61. The PPC25 area lies within the Rural Urban Boundary and is currently zoned FUZ in the AUP(OP). The FUZ is a transitional zone that applies to greenfield land located on the periphery of existing urban development but within the Rural Urban Boundary ('RUB'). The land has been identified by the Council as being suitable for urbanisation and bringing it forward will negate the need for urban development outside the RUB.
62. The FUZ anticipates a structure planning process to enable greenfield land to be released for urban subdivision, development and use. The structure planning process, which is set out in Appendix 1 to the AUP(OP), requires consideration of a broad range of matters, including the location, type and form of urban development, the demand for residential or business land within the structure plan area, the delivery and timing of critical infrastructure to meet this demand, the protection of existing natural resources and heritage features, and the integration of land use and development with the wider transport network. Prior to the land being urbanised the FUZ provides for rural activities that align with the objectives and policies of the Rural – Rural Production Zone.
63. The AUP(OP) zoning of the wider existing urban areas is defined by either residential zones of mostly Single House though there is a pocket of Mixed Housing Suburban to the south of Mahurangi River and Light Industrial Zone to the north, east and south.
64. The PPC25 area is also subject to a number of existing overlays and controls, identified below:

- Significant Ecological Area overlay along the Mahurangi River Tributary as it relates to Lot 1 DP 508375 Falls Road, Warkworth;
- Macroinvertebrate Community Index – Urban and Native;
- Natural Resources: High Use Stream Management Areas Overlay over the whole plan change area; and
- Natural Resources: High Use Aquifer Management Areas Overlay – Mahurangi Waitemata over the whole plan change area.

3. PROPOSED PLAN CHANGE PROVISIONS

3.1. Proposed Zones

65. PPC25 as notified¹⁰ seeks to apply the following AUP (OP) zones and precinct. The zones are all identified in **Figure 7** below.

Residential – Single House
 Residential – Mixed Housing Suburban
 Residential – Mixed Housing Urban
 Business – Neighbourhood Centre
 Business – Light Industry

66. The Residential - Single House Zone (**'SHZ'**) is applied to parts of the site which typically have particular amenity values that reflect the neighbourhood character, such as special character or coastal location. It can provide for a choice of zoning applied to greenfield areas. The development within the zone is anticipated to be one to two storeys in height and typically anticipates detached dwellings. It identifies that multi-unit development is not anticipated.
67. The Residential - Mixed Housing Suburban Zone (**'MHSZ'**) is the most widespread residential zone, and enables intensification whilst retaining a suburban built character. Development within the zone is anticipated to be two storey and can comprise a both detached and attached housing typologies in a variety of types and sizes to provide housing choice.
68. The Residential - Mixed Housing Urban Zone (**'MHUZ'**) is a reasonably high-intensity residential zone which provides for development up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. The zone is generally applied to areas within walking distance to centres, public transport, social facilities and open spaces.
69. The Business – Neighbourhood Centre Zone (**'NCZ'**) is applied to centres which comprise a small set of shops or to single corner stores that are located in residential neighbourhoods. They are typically sized to provide for local residents and passers-by. The zone provides for building up to three storeys and allow for residential uses at the upper level.

¹⁰ Submission 23 from TCL seeks to amend all these notified zones.

70. The Business – Light Industry Zone ('LIZ') is a zone typically providing for industrial activities such as manufacturing, production, logistics, storage, transport and distribution. The zone provides for building heights of 20m and anticipates industrial activities that do not generate objectional odour, noise or dust.
71. The Open Space – Conservation Zone ('OPCZ') is applied to open space. It is just identified as an indicative zone on the 'Proposed SEA Overlay Plan' so it is understood that this zoning is not sought to be live zoned under the notified plan change. Whilst it is typically applied to land owned by Council it can be applied to privately owned open space areas¹¹. It is used to identify open spaces with a natural, ecological or landscape value, being bush reserves, natural wetlands or coastline. The standards are more limited in terms of development.

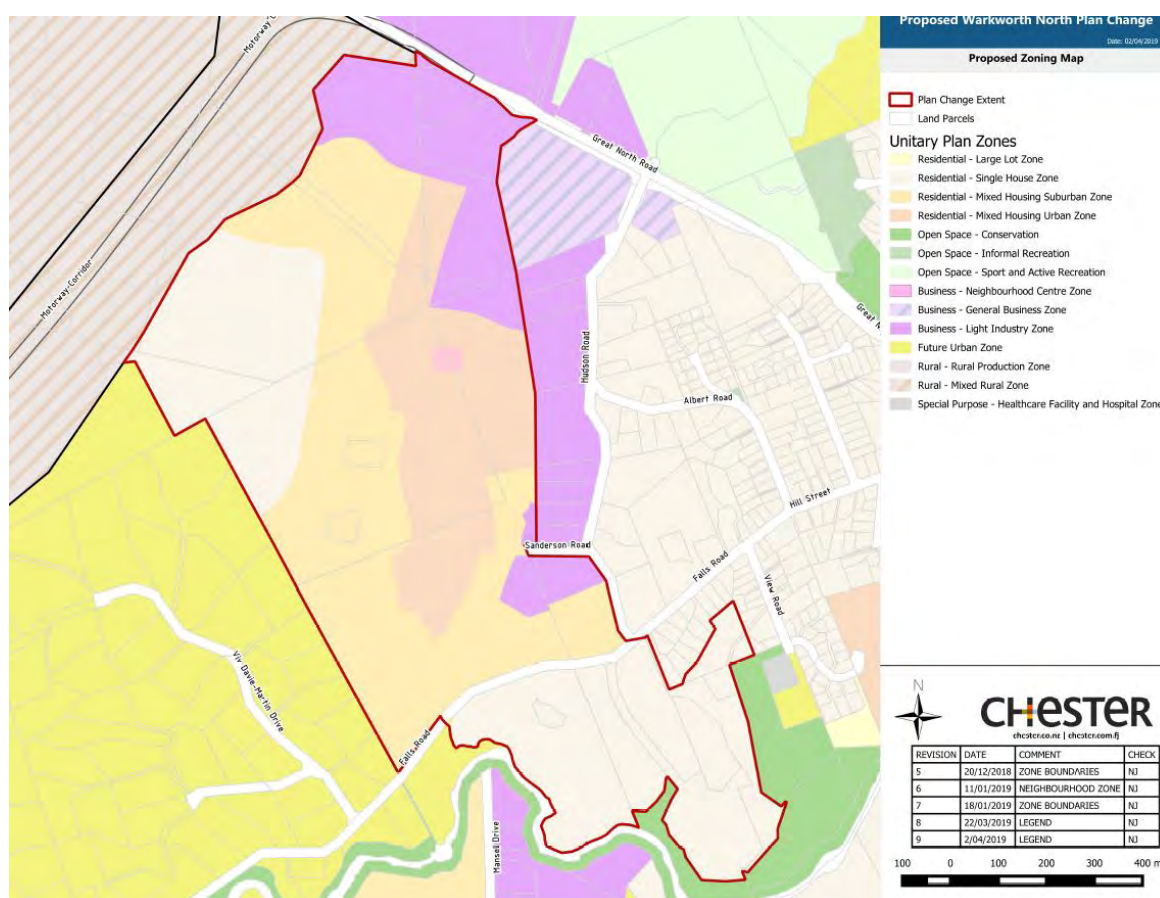


Figure 7: Notified Proposed Zoning for PPC25 (Source: s32 Report, Warkworth North Plan Change, prepared by Barker & Associates, dated 21 January 2019)

3.2. Warkworth North Precinct

72. PPC25 introduces new precinct provisions over a part of the Warkworth North land between Falls Road and SH1 and a further sub-precinct A to the Stubbs Farm portion only. There are five plans included alongside the precinct which are identified below and attached in **Appendix 1**¹².

- Precinct Plan 1 – Warkworth North Precinct Plan

¹¹ H7.1 Open Space Zones, AUP(OP)

¹² The numbering of the precinct provision is as provided by the applicant.

- Precinct Plan 2 – Warkworth North SWCMP – Streams
- Precinct Plan 2 – Warkworth North SWCMP – Sub Precinct A (1 of 2)
- Precinct Plan 3 – Road Sections and Road Stormwater Management

73. The precinct proposes a number of site-specific provisions in terms of objectives and policies and new standards that cover:

- Route alignment for the Western Link Road (WLR);
- Identifies future road connections to adjacent site along the interfaces with sub-precinct A area;
- Additional design criteria for the Neighbourhood Centre; and
- Provides for stream loss, protection and enhancement.

74. Precinct Plan 2 includes three plans, with the first titled 'Warkworth North SWCMP – Streams' showing streams retained, removed and enhanced over the precinct area, and identifies classifications. The second set relate to sub-precinct A and are titled 'Warkworth North SWCMP – Sub Precinct A (1 of 2)', and these show details from the Stormwater Management Plan (SMP) with devices, catchment areas and indicative road network alongside the stream works from the initial plan.

75. Precinct Plan 3 provides a cross section for the WLR and includes stormwater management information for roading.

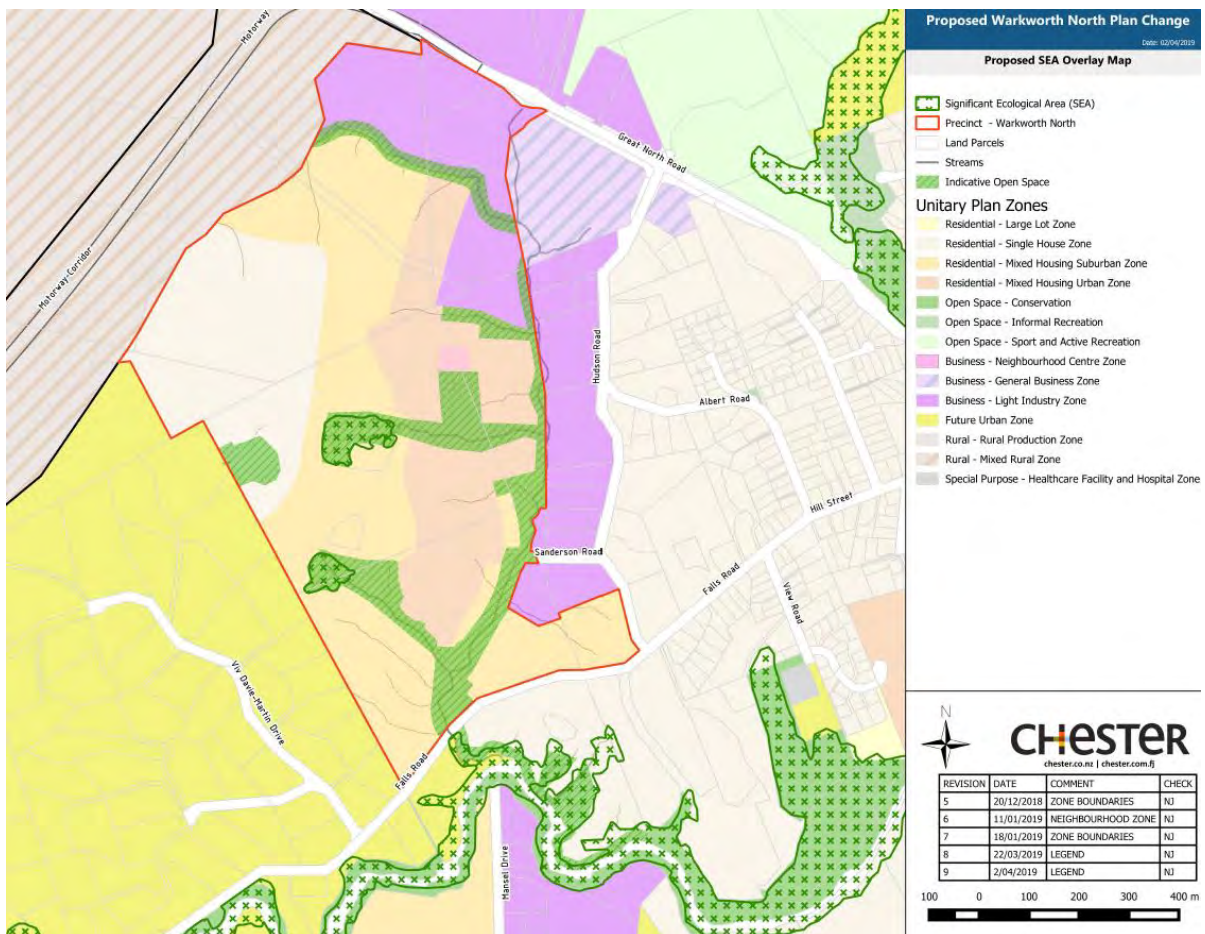


Figure 8: Additional Significant Ecological Areas for PPC25 (Source: s32 Report, Warkworth North Plan Change, prepared by Barker & Associates, dated 21 January 2019)

3.3. Additional Overlays

76. The plan change seeks to extend a number of overlays or controls over the site, including:
- Add two additional Natural Resources: Significant Ecological Area as it relates to 220 Fall Road (see **Figure 8** above).
 - Extend the Stormwater Management Area Control – WARKWORTH Flow 1 over the whole plan change area;

4. HEARINGS AND DECISION MAKING CONSIDERATIONS

77. Clause 8B (read together with Clause 29) of Schedule 1 of RMA requires that a local authority shall hold a hearing into submissions on a proposed private plan change.
78. The Regulatory Committee has delegated to the Hearings Commissioners authority to determine Council's decisions on submissions on PPC25, under section 34 of the RMA. Hearing Commissioners will not be recommending a decision to the Council, but will issue the decision directly on PPC25.
79. This report summarises and discusses submissions received on PPC25. It makes recommendations on whether to accept, in full or in part; or reject, in full or in part; each submission. This report also identifies what amendments, if any, can be made to address matters raised in submissions. Any conclusions or recommendations in this report are not binding on the Hearing Commissioners.
80. The Hearing Commissioners will consider all the information in submissions together with evidence presented at the hearing.
81. This report has been prepared by the author and draws on technical advice provided by the following technical experts:

Speciality Area	Reviewing Specialist
Community Facilities	Liz Ennor, Policy Analyst, Community and Social Policy, Auckland Council
Contamination	James Corbett, Principal Contaminated Land Specialist, Engineering & Technical Services, Auckland Council
Ecology (Terrestrial)	Rue Statham, Senior Ecologist, Biodiversity Team, Auckland Council
Economics	Derek Foy, Associate Director, M.E Consulting Ltd
Geotechnical	Ross Roberts, Geotechnical & Geological Practice Lead, Engineering & Technical Services, Auckland Council
Heritage	Robert Brassey, Principal Specialist Cultural Heritage, Auckland Council

Infrastructure funding	Alan Hanley, Infrastructure Funding agreements Specialist, Development Program Office, Auckland Council
Landscape	Stephen Brown, Director, Brown NZ Ltd
Parks	Roma Leota, Policy Analyst, Parks and Recreation Policy, Auckland Council
Stormwater	Paula Vincent, Principal Planner, Healthy Waters, Auckland Council
Streams	Jason Smith, Environmental Scientist, Morphem Environmental Ltd
Transport	Martin Peake, Director, Progressive Transport Solutions Ltd
Urban Design	Lisa Mein, Director, Mein Urban Design and Planning Ltd

5. STATUTORY AND POLICY FRAMEWORK

5.1. Resource Management Act 1991

82. Private plan change requests can be made to the Council under clause 21 of Schedule 1 of the RMA. The provisions of a private plan change request must comply with the same mandatory requirements as Council initiated plan changes, and the private plan change request must contain an evaluation report in accordance with section 32 of the RMA (clause 22(1), Schedule 1, RMA. Clause 29(1) of Schedule 1 provides *“except as provided in subclauses (1A) to (9), Part 1, with all necessary modifications, shall apply to any plan or change requested under this Part and accepted under clause 25(2)(b)”*.
83. PPC25 is a private plan change request (that included a section 32 evaluation report) that was made to the Council by Turnstone Capital Limited. PPC25 was accepted by Council under clause 25(2)(b) of schedule 1 of the RMA.
84. The private plan change was publicly notified, and 35 submissions were received by the Council. The summary of decisions requested in submissions was publicly notified by the Council and the Council received 9 further submissions.
85. Having considered the submissions, the further submissions, and the technical reports of the Council Team, as outlined at section 10 of the report I have recommended a number of changes to the precinct in terms of deletion and addition. It would normally be expected that the s42A report would include a tracked changes version of Precinct provisions as an appendix, in order to assist the Commissioners in their consideration of the Plan Change. I did commence that exercise but found that, in light of the fundamental issues highlighted elsewhere in this report, the amendments would have been widespread. More importantly, it became clear that there were too many unresolved issues to make the task worthwhile as there would almost certainly need to be further extensive changes as more information becomes available and matters are resolved. I have, however, some general comments and observations to make on the Precinct provisions, which are noted in **Appendix 5** to this report.

86. A further evaluation, under section 32AA of the RMA, is required only for any changes that have been made to, or are proposed for, the proposal since the evaluation report for the proposal was completed.
87. Section 32AA of the RMA requires a further evaluation for any changes that are proposed to the notified PPC25 since the original Section 32 Evaluation Report was completed. Section 32AA requires that all changes to a proposal since the original evaluation must be well justified and supported by sound information that demonstrates that the changes will be appropriate, efficient and effective.
88. All amendments to the notified PPC25 proposed in this report have been assessed in accordance with section 32AA. Although not explicitly stated, the options, appropriateness, effectiveness and efficiencies that I have considered in my assessment included the proposed provision, the amended provision as sought by submitters, and the provision I have proposed in each case. The outcomes of my section 32AA analysis is reflected in the evaluation and recommendations of the analysis of submission(s) in submission topics (where relevant) found in section 10 of this report.
89. In the case of PPC25, the application included a section 32 evaluation report within the private plan change request. I adopt the section 32 evaluation report, with the exception of where it relates to the provisions that I propose amendments to.
90. The matters that must be considered by the Council when considering changes to its regional plan provisions are set out in section 66 of the RMA, although those matters are not relevant in this instance.

5.1.1. Plan change matters – regional and district plans

91. In the development of a proposed plan change to a regional and/ or district plan, the RMA sets out mandatory requirements in the preparation and process of the proposed plan change. Table 1 below summarises matters for plan changes to regional and district plan matters.

Table 1 : Plan change matters relevant to regional and district plans

Relevant Act/ Policy/ Plan	Section	Matters
Resource Management Act 1991	Part 2	Purpose and intent of the Act
Resource Management Act 1991	Section 32	Requirements preparing and publishing evaluation reports. This section requires councils to consider the alternatives, costs and benefits of the proposal
Resource Management Act 1991	Section 80	Enables a 'combined' regional and district document. The Auckland Unitary Plan is in part a regional plan and district plan to assist Council to carry out its functions as a regional council and as a territorial authority
Resource Management Act 1991	Schedule 1	Sets out the process for preparation and change of policy statements and plans by local authorities

92. The mandatory requirements for plan preparation are comprehensively summarised by Environment Court in *Long Bay-Okura Great Park Society Incorporated and Others v North Shore City Council* (Decision A078/2008)¹³, where the Court set out the following measures for evaluating objectives, policies, rules and other methods. This is outlined in Box 1.

Box 1

A. General requirements

1. *A district plan (change) should be designed to accord with, and assist the territorial authority to carry out its functions so as to achieve, the purpose of the Act.*
2. *When preparing its district plan (change) the territorial authority must give effect to any national policy statement or New Zealand Coastal Policy Statement.*
3. *When preparing its district plan (change) the territorial authority shall:*
 - (a) *have regard to any proposed regional policy statement;*
 - (b) *not be inconsistent with any operative regional policy statement.*
4. *In relation to regional plans:*
 - (a) *the district plan (change) must not be inconsistent with an operative regional plan for any matter specified in section 30(1) [or a water conservation order]; and*
 - (b) *must have regard to any proposed regional plan on any matter of regional significance etc.;*
5. *When preparing its district plan (change) the territorial authority must also:*
 - *have regard to any relevant management plans and strategies under other Acts, and to any relevant entry in the Historic Places Register and to various fisheries regulations; and to consistency with plans and proposed plans of adjacent territorial authorities;*
 - *take into account any relevant planning document recognised by an iwi authority; and*
 - *not have regard to trade competition;*
6. *The district plan (change) must be prepared in accordance with any regulation (there are none at present);*
7. *The formal requirement that a district plan (change) must also state its objectives, policies and the rules (if any) and may state other matters.*

B. Objectives [the section 32 test for objectives]

8. *Each proposed objective in a district plan (change) is to be evaluated by the extent to which it is the most appropriate way to achieve the purpose of the Act.*

C. Policies and methods (including rules) [the section 32 test for policies and rules]

9. *The policies are to implement the objectives, and the rules (if any) are to implement the policies;*
10. *Each proposed policy or method (including each rule) is to be examined, having regard to its efficiency and effectiveness, as to whether it is the most appropriate method for achieving the objectives of the district plan taking into account:*
 - (a) *the benefits and costs of the proposed policies and methods (including rules); and*
 - (b) *the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

D. Rules

¹³ Subsequent cases have updated the Long Bay summary, including *Colonial Vineyard v Marlborough District Council* [2014] NZEnvC 55.

11. In making a rule the territorial authority must have regard to the actual or potential effect of activities on the environment.

E. Other statutes:

12. Finally territorial authorities may be required to comply with other statutes. Within the Auckland Region they are subject to:

- the Hauraki Gulf Maritime Park Act 2000;
- the Local Government (Auckland) Amendment Act 2004.

5.1.2. Resource Management Act 1991- Regional matters

93. There are mandatory considerations in the development of a proposed plan change to regional matters. Table 2 below summarises regional matters under the RMA, relevant to PC25.

Table 2 : Plan change - regional matters under the RMA

Relevant Act/ Policy/ Plan	Section	Matters
Resource Management Act 1991	Part 2	Purpose and intent of the Act
Resource Management Act 1991	Section 30	Functions of regional councils in giving effect to the RMA
Resource Management Act 1991	Section 59	Sets out the purpose of a regional policy statement in giving effect to the RMA
Resource Management Act 1991	Section 60	Sets out the requirement for and the process for, changes to the regional policy statement
Resource Management Act 1991	Section 61	Sets out the matters to be considered for a regional policy statement
Resource Management Act 1991	Section 62	Sets out the required contents of regional policy statements
Resource Management Act 1991	Section 63	Sets out the purpose of regional plans
Resource Management Act 1991	Section 65	Sets out matters to be considered for changes to regional plans
Resource Management Act 1991	Section 66	Sets out matters to be considered in (other) regional council plans
Resource Management Act 1991	Section 67	Sets out required contents of regional plans
Resource Management Act 1991	Section 68	Sets out the purpose and considerations of rules in regional plans (regional rules)
Resource Management Act 1991	Section 69	Sets out matters to be considered for rules relating to water quality
Resource	Section 70	Sets out matters to be considered for rules relating to

Relevant Act/ Policy/ Plan	Section	Matters
Management Act 1991		discharges

5.1.3. Resource Management Act 1991- District matters

94. There are mandatory considerations in the development of a proposed plan change to district plans and rules. Table 3 below summarises district plan matters under the RMA, relevant to PC25.

Table 3: Plan change - district plan matters under the RMA

Relevant Act/ Policy/ Plan	Section	Matters
Resource Management Act 1991	Part 2	Purpose and intent of the Act
Resource Management Act 1991	Section 31	Functions of territorial authorities in giving effect to the Resource Management Act 1991
Resource Management Act 1991	Section 73	Sets out Schedule 1 of the RMA as the process to prepare or change a district plan
Resource Management Act 1991	Section 74	Matters to be considered by a territorial authority when preparing a change to its district plan. This includes its functions under section 31, Part 2 of the RMA, national policy statement, other regulations and other matter
Resource Management Act 1991	Section 75	Outlines the requirements in the contents of a district plan
Resource Management Act 1991	Section 76	Outlines the purpose of district rules, which is to carry out the functions of the RMA and achieve the objective and policies set out in the district plan. A district rule also requires the territorial authority to have regard to the actual or potential effect (including adverse effects), of activities in the proposal, on the environment

5.1.4. National policy statements

95. The relevant national policy statements (NPS) must be considered in considering submissions on PPC25. Table 4 below summarises the NPS that applies to PPC25.

Table 4: National Policy Statements relevant to PPC25

Relevant Act/ Policy/ Plan	Section	Matters
National Policy Statement on Freshwater Management 2017	Te Mana o te Wai	Consider and recognise Te Mana o te Wai in the management of fresh water.
	Water quality	Safeguard the life supporting capacity, ecosystem processes and indigenous species of freshwater. Maintain or improve the overall quality of freshwater whilst protecting significant

Relevant Act/ Policy/ Plan	Section	Matters
		values of outstanding freshwater bodies and wetlands, and improving the quality of degraded waterbodies. Improve quality of freshwater so it is suitable for primary contact more often.
	Water quantity	Safeguarding the life-supporting capacity, ecosystems processes and indigenous species in sustainably managed taking, using damming or diverting of freshwater Protect significant values of wetlands and of outstanding freshwater bodies.
	Integrated Management	Improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land and associated ecosystems.
National Policy Statement on Urban Development Capacity	Outcomes for planning decisions	Provide efficient urban environments that enable people and communities and future generations to provide for wellbeing. Provide sufficient opportunities and choice for housing and business land. Take into account the benefits of urban development to provide for people and communities and future generations.
	Responsive planning	Planning decisions should enable urban development that provide for wellbeing of people and communities and future generations in the short, medium and long term.
	Coordinated planning evidence and decision making	Provide for urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other.

96. The NPS on Freshwater Management directs regional and territorial authorities in respect of improving the quality of the fresh water bodies in their region. Mr Jason Smith, Council's Specialist on Freshwater Ecology states that the approach adopted in PPC25 to streams is inconsistent with the direction provided through the provisions of the National Policy Statement: Freshwater Management. Mr Smith states that those statutory planning documents provide clear direction around minimising the loss of all freshwater systems, not just streams of existing high ecological values, and enhancing those streams where functions and values have become degraded. The precinct provisions as lodged appear to be seeking to circumvent the process outlined within the RPS and AUP to manage freshwater eco systems in Auckland. The AUP framework has been put in place to achieve the direction of the NPS, so a proposal that seeks to avoid this process can only be contrary to the direct of the NPS.

97. The NPS on Urban Development Capacity requires, amongst other things, that land use is considered alongside a clear understanding on the delivery and timing for infrastructure. However, there is uncertainty about the agreed timing, funding and location of transport upgrades, and the delivery and funding of these to support the rezoning sought in terms of both the notified plan change and the various relief sought by submissions for more intensive uses¹⁴. This infrastructure is pivotal to informing the best zoning response across the site and aligning delivery of urbanisation. Based on the information before me it is clear that integration is not occurring. In my opinion, what is being sought via PPC25 is premature and could undermine the infrastructure needed to support growth in Warkworth given it is seeking urban zoning earlier than anticipated in the FULSS.

5.1.5. National environmental standards or regulations

98. Under section 44A of the RMA, local authorities must observe national environmental standards in its district/ region. No rule or provision may be duplicated or be in conflict with a national environmental standard or regulation. Table 5 below summarises the national environmental standards or regulations relevant to PPC25.

Table 5: National statements and regulations relevant to PPC25

Relevant Act/ Policy/ Plan	Matters
National Environmental Standard on assessing and managing contaminants into soil to protect human health	The National Environmental Standard on assessing and managing contaminants into soil to protect human health applies a nationally consistent framework for assessing subdivision, development and use on land that is contaminated or potentially contaminated.

99. An Environmental Assessment was prepared for PPC25 by Babbage which found that apart from 11 Sanderson Road (the abattoir) was unlikely that soil contamination will prevent the use of the land for the proposed purposes within the plan area¹⁵. Further detailed investigated of the land within the PPC25 not included in the above PSI will require a PSI in the future as when the land changes land use or is subdivided. The NES will provide a suitable framework for this process.

5.1.6. Auckland Unitary Plan

100. When preparing or changing a district plan, a council must give effect to any Regional Policy Statement (RPS).¹⁶ The RPS objectives and policies that are relevant to PPC25 are identified in the 'Objectives and Policies Assessment Table'¹⁷ that is appended to the s32 evaluation report.

101. At a high level, PPC25 does give effect to a number of the key objectives and policies of the RPS. In particular, PPC25 provides for:

- Containment of urbanisation within the Rural Urban Boundary (RUB) (B2.2.1(4));
- A compact urban form (B2.2.2(7));
- Residential intensification adjacent to centres, corridors and public transport facilities (B2.4.1(3));

¹⁴ Amended zoning sought under Submission 23 from Turnstone Capital Ltd refer Appendix 4

¹⁵ Environmental Site Investigation, prepared by Babbage and dated 23/1/19 refer Appendix 2.

¹⁶ s75(3)(c) RMA

¹⁷ Refer to attachment 20 of the s32 Application within Appendix 2 of the Hearing Agenda

- An increase in housing capacity (B2.4.1(4));
- Protection of areas of significant indigenous biodiversity values from subdivision and development (B7.2.1(1)); and
- Enhancement of some areas of degraded freshwater systems (B7.3.1(1)).

102. However, there are a number of areas where PPC25 falls short of giving effect to RPS objectives and policies and, in several instances, is inconsistent with the regional policy framework. In particular:

- PPC25 does not ensure that future urban development on the land is adequately serviced with infrastructure prior to, or at the same time as, residential intensification (B2.4.2(6));
- PPC25 does not ensure that infrastructure planning and land use planning are integrated to service growth efficiently (B3.2.1(5));
- PPC25 does not ensure that transport infrastructure is designed, located and managed to integrate with adjacent land uses (B3.3.2(4)(a));
- PPC25 does not ensure that transport infrastructure is planned, funded and staged to integrate with urban growth (B3.3.2(5)(a)); and
- PPC25 does not avoid the permanent loss of streams (including ephemeral streams) and wetlands and their margins, where practicable alternatives exist (B7.3.2(4)).

103. Overall, I consider that PPC25 does not give effect sufficiently to the objectives and policies of the RPS. Most notably, significant uncertainties about the form and funding of infrastructure mean that PPC25 cannot demonstrate that it appropriately provides for the integration of land use and infrastructure to support urban growth. That is a fundamental requirement of the RPS that applies to the planning of new urban areas.

104. Issues relating to district objectives and policies, including those arising under the various zones that are proposed, are discussed in response to the points raised by submitters, in section 10 of this report.

5.1.7. The Auckland Plan

105. In considering a plan change, a territorial authority must have regard to plans and strategies prepared under other Acts.

106. The Auckland Plan, prepared under section 79 of the Local Government (Auckland Council) Act 2009 is a relevant strategy document that council should have regard to in the preparation of PPC25, pursuant to section 74(2)(b) of the RMA. Table 6 summarises the relevant sections of the Auckland Plan to PPC25.

Table 6: Relevant sections of the Auckland Plan June 2018

Relevant Plan	Outcome	Matters
Auckland Plan	Maori identity and wellbeing	Recognise and provide for Te Tiriti o Waitangi outcomes (Direction 2)
Auckland Plan	Homes and places	Develop a quality compact urban form to accommodate Auckland's growth (Direction 1) Accelerate the construction homes that meets Aucklanders' changing needs and preferences

		<p>(Direction 2)</p> <p>Provide sufficient public places and spaces that are inclusive, accessible and contribute to urban living (Direction 4)</p> <p>Accelerate quality development at scale that improves housing choices (Focus area 1). With a fundamental requirement for long-term success including 'making the right decision about development location and sequencing and 'coordinating investment in infrastructure'.</p> <p>Create urban spaces for the future, focusing investment in areas of highest population density and greatest need (Focus area 5)</p>
Auckland Plan	Opportunity and Prosperity	<p>Create the conditions for a resilient economy through innovation, employment growth and raised productivity (Direction 1).</p> <p>Ensure regulatory planning and other mechanism support business, innovation and productivity growth (Focus area 2)</p>
Auckland Plan	Transport and access	<p>Create an integrated transport system connecting people, places, goods and services (Direction 1)</p> <p>Increase genuine travel choices for a healthy, vibrant and equitable Auckland (Direction 2)</p> <p>Maximise safety and environmental protection (Direction 3)</p> <p>Make walking, cycling and public transport preferred choices for many more Aucklanders (Focus area 4)</p> <p>Better integrate land-use and transport decisions (Focus area 5)</p>
Auckland Plan	Environment and cultural heritage	<p>Ensure the environment is valued and care for (Direction 1)</p> <p>Use Auckland's growth and development to protect and enhance the environment (Direction 3)</p> <p>Focus on restoring environments and Auckland grows (Focus area 2)</p> <p>Account fully for the past and future impacts of growth (Focus area 3)</p>

107. Auckland Plan identified Warkworth as a rural node and satellite town which serves the rural catchment of the northern part of Auckland. It references that the growth will require investment in supporting infrastructure and identifies that a structure plan will identify staging/ timing of development and the mix and location of uses.

108. Key focus areas relevant to the consideration of PPC25 are promoting walking and cycling, restoration of environments as areas are urbanised and coordinating infrastructure. There are precinct provisions that can assist in ensuring that all of these areas are achieved though the last matter will be reliant on an amended ITA being agreed and the delivery, funding and alignment of WLR been known.

5.1.8. Any relevant management plans and strategies prepared under any other Act

109. Other relevant plans and strategies considered under PC25 is summarised in Table 7 below.

Table 7: Other Relevant Plans and Strategies

Relevant Act/ Policy/ Plan	Section	Matters
10 Year Budget 2018-2025 (Long Term Plan)	Volume 2: Our detailed budgets, strategies and policies	Planned transport, water supply and wastewater Infrastructure relevant to PPC25 area includes: <ul style="list-style-type: none"> - Matakana Link Road; - Future urban area growth related initiatives (decade 2); - NZTA initiatives Puhoi to Warkworth; - Warkworth water supply upgrades; and - Snells Beach sub-regional treatment plant and new transmission line from Warkworth.
Future Land Supply Strategy 2017	The Programme – sequencing of the future urban areas	Warkworth North encompasses the PPC25 area and is identified as being ‘development ready’ from 2022. There are 2,300 anticipated dwellings and the anticipated employment (jobs) is grouped by all decade one Future urban areas at 27,250.
Auckland Transport Alignment Project 2018	ATAP Package Detail	Greenfield Transport Infrastructure <i>“In Warkworth, around 4,600 new homes are expected to be built over the next 30 years, of which 1,000 are expected over the next decade. Key investments include the Matakana Link Road and the Western Collector”.</i>
Regional Land Transport Plan 2018-2028	Addressing Auckland Challenges	Supporting Growth Program to support future urban areas Corridor Improvements – Puhoi to Warkworth and Matakana link Road
	Inter-regional Priorities	SH1 to Whangarei
Rodney Local Board Plan 2017	Five focus outcomes	Outcome: We can get around easily and safely Outcome: Communities are influential and empowered Outcome: Parks and sports facilities that everyone can enjoy Outcomes: Our harbours, waterways and environment are cared for, protected and healthy

6. ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

110. Clause 22 of Schedule 1 to the RMA requires private plan changes to include an assessment of environmental effects that are anticipated by the Plan Change, taking into account the Fourth Schedule of the RMA.
111. An assessment of actual and potential effects on the environment (“AEE”) is included in the Section 32 Evaluation Report. The submitted Plan Change request identifies and evaluates the actual and potential effects of its intended future implementation, and those effects are summarised and evaluated below.
112. It is noted that the relief sought in TCL’s extensive submission would, if granted, significantly alter the form of the Plan Change and the effects that would arise as a consequence. However, the following assessment of effects addresses only the proposed Plan Change as notified. Some further assessment of the potential effects of relief sought by TCL and other submitters is contained in section 10 of this s42A report where submissions and further submissions are addressed.

6.1. Land use and urban design effects

Application

113. The effects arising from PPC25’s proposed land use and urban design are summarised in Section 9.2 of the s32 evaluation report¹⁸ and addressed in the Neighbourhood Design Statement (‘NDS’), prepared by Pacific Environments NZ Limited (PENZL)¹⁹ for TCL.
114. The NDS identifies a number of design principles that have been derived in response to the constraints and opportunities that are present in the PPC25 land. These design principles are summarised as follows:
- Acknowledge the challenging topography;
 - Keep and protect stands of trees and waterways;
 - Appreciate natural areas by putting roads and public places along their edges;
 - Connect the Western Collector;
 - Provide a well-connected Local Centre;
 - Create a contained and hierarchical horizontal mix of uses; and
 - Create a legible multi-modal movement network.
115. The NDS explains the rationale for the proposed zoning pattern that is adopted in PPC25. It notes that zones have been allocated largely in response to the topography and other physical constraints, along with consideration of internal and external edges, and existing urban context. In particular, the NDS states that the steep (exceeding 12.5%) contour of parts of the land have made it primarily suitable for housing, with much of it precluding large floorplate buildings that are typical in industrial zones.
116. The overall layout of PPC25 is also influenced by the desire to retain areas of bush and some waterways. It is noted that retention of waterways and vegetated areas prevents changes to ground levels at these locations, and precludes bulk earthworks that would be required to generate widespread land suitable for industrial uses.

¹⁸ Refer the s32 Application within Appendix 2 of the Hearing Agenda

¹⁹ Refer to attachment 10 of the s32 Application within Appendix 2 of the Hearing Agenda

117. Residential zones are allocated to provide a variety of density and offer choice, with an increase in residential density adjacent to the proposed Neighbourhood Centre. Where high density residential areas adjoin the proposed WLR they are proposed to be accessed by vehicles using rear loaded lanes, with the main pedestrian access from the Western Link road frontage. The NDS states that the residential zones end where the steeply sloping land changes to flatter land, that is viable for business use. Transitions between zones are managed in a number of instances through the use of landscaped green buffers comprising existing wetland or watercourses.
118. The WLR is proposed to define the edge of the residential area to the west of it, and a higher intensity residential and mixed-use area to the east. The higher density residential area is intended to act as a buffer to the current light industry activity located on the eastern side of the Mahurangi River tributary.
119. The area of Light Industry zone proposed for the northern part of the PPC25 land has been proposed as it mirrors the similarly zoned land existing on the opposite side of State Highway 1, and because of its direct accessibility to the proposed motorway. That general principle has been applied to the proposed area of Light Industry zoned land immediately to the south, between the WLR and the existing Hudson Road Light Industry land. Although that land is somewhat steeper, the proximity to both the existing zoned land and the proposed motorway justify its proposed zoning.

Peer Review

120. The urban design rationale and related effects of PPC25 have been reviewed by Lisa Mein, of Mein Urban Design + Planning (MUDP) and Stephen Brown of Brown NZ Ltd²⁰ has considered the landscape effects of PPC25 for the Council.
121. The MUDP review reaches a number of conclusions in relation to the urban design aspects of PPC25 as notified, summarised as follows:
- The Western Link road will form a significant barrier and potentially give rise to an unconnected island of residential development between its eastern edge and the western side of the stream corridor;
 - The lack of clarity around the future alignment and typology of the Western Link Road affects the outcomes for any zoning approach, such that the location of this road must be confirmed and designated prior to finalising the zoning around it;
 - The area of Light Industry zone adjacent to State Highway 1 is supported provided that PPC25 provisions require the establishment of an area of amenity planting to avoid the low amenity industrial appearance at the northern gateway to Warkworth;
 - The Neighbourhood Centre would be better located on the western side of the Western Link road, rather than between that road and the stream;
 - The type of zoning next to the stream at the bottom of the valley is less important than the need for a continuous network of linear open space in this location, with good connections and points of activation. Provisions that require this outcome should be included in PPC25;
 - The mixed housing zones are capable of producing better integrated residential environments than the Single House zone, and the increases proposed in PPC25 to the proportion of higher density residential zones is supported; and

²⁰ Refer to Appendix 6 of the Hearing Agenda

- PPC25 should include a subdivision overlay in the properties along the boundary to the Viv Davie-Martin Drive area, providing for a larger minimum site size, and an identified area for a planted buffer.

Comments

122. A number of issues are raised in relation to the allocation of land uses across the PPC25 area.
123. A fundamental issue, highlighted as well by Ms Mein, is that it is difficult to arrive at an appropriate zoning distribution for the central and eastern part of the site until the precise location of the Western Link road is confirmed. In my opinion, the depth of land that exists between the road alignment and the Mahurangi River tributary will be a factor that influences decisions as to the most appropriate zoning in this location. For example, a particularly narrow or particularly wide strip of intervening land might not be suitable for industrial uses (due to block depth, topography, and interface issues) and residential zoning might be preferred as a consequence.
124. As a result, I do not consider that an informed decision can be made about the zoning in this area of the land at the current time. My view in the circumstances is that consideration of PPC25 is deferred until there is certainty about the alignment and typology of the Western Link road, which is a pivotal factor in determining the way in which the PPC25 land should be developed.
125. I support the PPC25 proposal to establish Light Industry zone in the northern part of the land, adjacent to State Highway 1. This land is of a relatively easy contour, and benefits from the ready access to arterial freight routes. There is also a synergy with the existing industrial land that it would face, on the opposite side of State Highway 1.
126. I do accept that the placement of industrial land in this location brings with it some compromises in terms of the amenity of this 'gateway' into the town. To a certain extent, this is an existing situation as the northern side of State Highway 1 is zoned and partially developed for industrial purposes and that is unlikely to change. However, I agree with Ms Mein and Mr Brown that there would be significant benefit in including provisions in PPC25 that require a planted amenity buffer along the interface of the Light Industry zone with State Highway 1 to enhance this primary entrance into Warkworth.
127. I support the provision of a 0.3ha Neighbourhood Centre zone within the PPC25 area, although I note that its exact position is again unable to be accurately determined until the alignment of the Western Link road is confirmed. Ms Mein raises a question as to whether this commercial area would be better placed on the western side of the arterial route, so that it is better able to serve the residential community without the road acting as an access barrier. I can see some merit in that suggestion although, once again, it is difficult to reach a firm view on this matter without knowing the depth and nature of zoning proposed and the design parameters of the road.
128. PPC25 differs from the WSP with regard to the intensity of residential zoning that is applied across the land, with significantly greater use of the Mixed Housing Urban and Suburban zones in preference to the Single House zone. This approach is generally supported by Ms Mein from an urban design perspective. I am also comfortable with this approach, on the basis that it provides for a more efficient use of serviced urban land, and given that PPC25 is largely seeking to substitute Mixed Housing Suburban zone in place of Single House zone.

129. While the former zone provides for greater density of development, I note that a number of the key development standards of the two zones are similar (same two storey building height, building coverage differs by 5%) so the overall form and mass of buildings may not be substantially different. I also accept to a degree the applicant's argument that more intensive development will assist in funding ground stability methodologies that will assist in improving the development feasibility of some of the steeper slopes. For these reasons, I support the distribution of residential zones proposed under PPC25 for the western half of the land.
130. I note Ms Mein's opinion that there should be an overlay in place along the western boundary of PPC25 where it adjoins sites accessed from Viv Davie-Martin Drive. She considers that the overlay should limit site sizes along the boundary and provide for a planted buffer. I am not persuaded that this is necessary. The dwellings on the adjacent Viv Martin Davie Drive properties are set back from the PPC25 boundary, and have sufficient land area to establish screen planting if desired. The land on both sides of the PPC25 western boundary is currently identified as Future Urban zone, so there has been a clear signal in planning documents that the PPC25 land will be urbanised in coming years. In my opinion, there are no particular reverse sensitivity effects to be addressed from residential dwellings on larger lots adjoining residential dwellings on smaller lots within an urban area.
131. If the Commissioners are minded to provide some form of transition to the boundary of the Viv Davie-Martin Drive properties, then I would suggest that a 30m deep overlay requiring a 600m² minimum net lot size could be established along that part of the boundary where Mixed Housing Suburban zone is proposed. This would provide for 20m wide sites fronting a road where topography allowed, or back lots of similar width if it was not feasible to construct a road in this general location. **Figure 9** illustrates the 30m depth along a portion of the western boundary of PPC25.



Figure 9: Illustration of 30m depth of overlay requiring 600m² minimum net site area

132. The remaining zoning issue relates to the zone to be applied to the land adjacent to Falls Road, west of Hudson Road and generally to the south of Sanderson Road. The WSP identifies this land as Light Industry zone whereas PPC25 proposes to zone this

area as Mixed Housing Suburban zone. The land in question is illustrated in **Figure 10** below.

133. Ms Mein does not favour a residential zone in this location, primarily because of the existing Light Industry zone to the north that accommodates Watercare Services Limited's bulk water treatment facility and a storage yard. TCL considers that the land is not suitable for industrial activities because it is steep.
134. While I accept that the contour of the land may be challenging for the development of industrial activities, a carefully considered and finer-grained industrial development proposal is likely to be achievable. This would alleviate potential issues of reverse sensitivity with existing industrial uses. The land is also well contained by roads to the north, east and south, and by the planted stream corridor to the west, and would provide a logical extension to the ribbon of industrial land adjacent to Hudson Road. I agree with Ms Mein that some specific precinct provisions may have merit to manage any amenity effects on residential uses on the southern side of Falls Road, and to address potential reverse sensitivity issues across this interface. Though that said the same zoning scenario occurs along Hudson Road at present with LIZ on one side and SHZ on the other and the existing AUP (OP) does provide some existing standards in this regard.



Figure 10: PPC25 proposed zoning of land adjacent to Falls Road

6.2. Transport effects

Application

135. Transportation effects of PPC25 are summarised in Section 9.5 of the s32 evaluation report²¹ and discussed in more detail in the Integrated Transport Assessment (ITA) prepared by Harrison Grierson Consultants Ltd.²²
136. The focus of the ITA is on the following matters:

- The design and location of the potential Western Link road;

²¹ Refer to the s32 Application within Appendix 2 of the Hearing Agenda

²² Refer to attachment 13 of the s32 Application within Appendix 2 of the Hearing Agenda

- Whether any upgrades to the surrounding road network are required to enable development, taking into account the potential trips generated within the PPC25 area; and
- The appropriateness of the future local road network within the PPC25 area.

137. The s32 evaluation report notes that the Western Link road is a planned arterial road that is intended to alleviate traffic congestion within Warkworth by providing an alternative north-south route to State Highway 1. The road is intended to have limited access points, reinforcing its primary role as an arterial road that conveys traffic efficiently. Precinct Plan 1 from PPC25 illustrates the intended alignment of the “Indicative Western Link Road”, as shown in **Figure 11**, below.

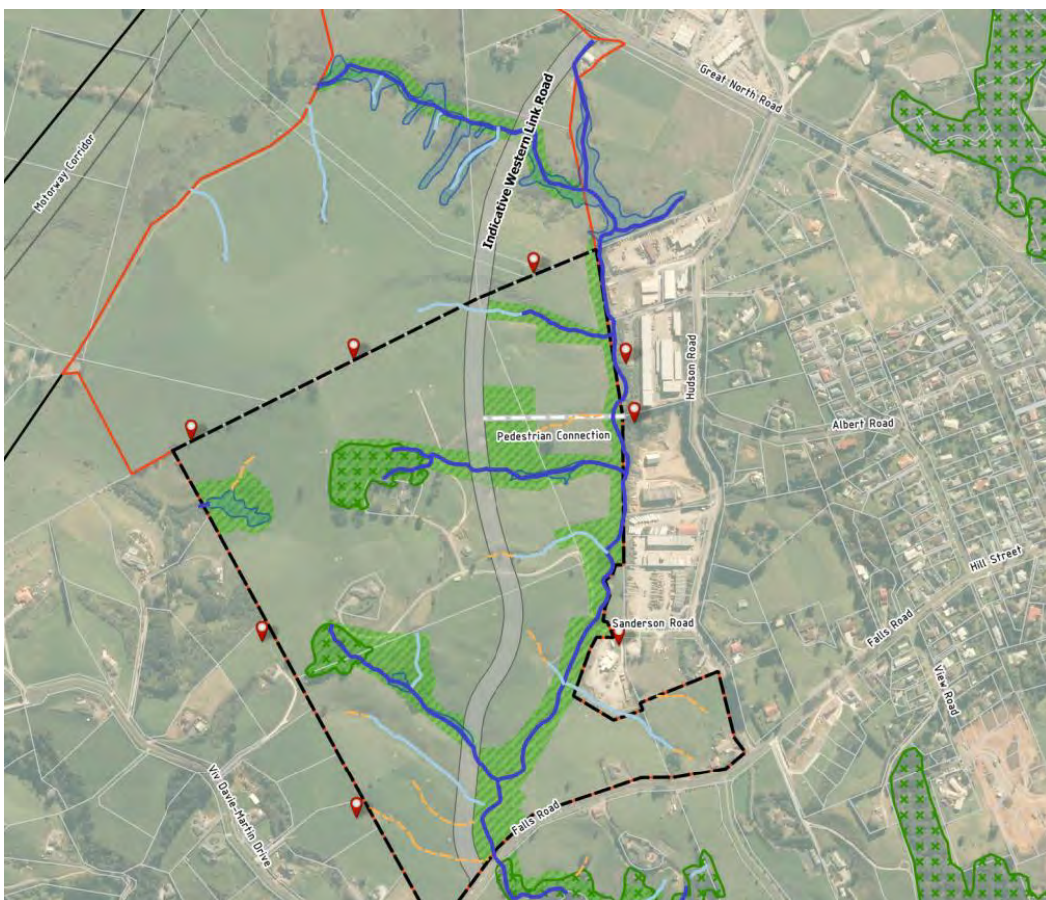


Figure 11: Indicative alignment of Western Link road (from Precinct Plan 1, PPC25)

138. The PPC25 documentation acknowledges that the alignment and design of the Western Link road has not been confirmed by Auckland Transport at the current time. The s32 evaluation report states that the Western Link road will be established on the land as development progresses, funded jointly by TCL and Auckland Transport.
139. The ITA assesses impacts on the surrounding road network, including nearby key intersections, based on information that Harrison Grierson were supplied by Auckland Transport. The ITA recommends that traffic signals be installed at the intersection of the Western Link road with Falls Road and Mansel Drive, but states that no other upgrades to the surrounding transport network are required.
140. The form and function of the local road network, within the PPC25 area, is not determined at this stage. The s32 evaluation report notes that this part of the transport

network is proposed to be secured through resource consents required under the Precinct provisions.

Peer review

141. The transport effects of PPC25 have been reviewed for the Council by Martin Peake, of Progressive Transport Solutions (PTS)²³.
142. PTS considers that the ITA that underpins PPC25 is deficient, as it does not provide sufficient information and analysis on traffic effects. In particular, PTS raises the following key deficiencies:
 - No detail is provided as to the forecast trips to be generated by the proposed zoning;
 - Analysis is based on traffic model data that has not been updated or refined for this specific proposal or the current proposed land uses within Warkworth as set out in the WSP (or earlier drafts);
 - There is insufficient assessment of the traffic effects of PPC25 on the wider road network, including link capacities and intersection operation; and
 - No analysis is provided of the staged proposed development and requirements for supporting transport infrastructure.
143. In respect of the first two concerns, PTS notes that the trip generation figures and transport modelling appear to be based on the zoning distribution and residential density signalled in the WSP and Future Urban Land Supply Strategy (FULSS), and has not been updated with data derived from the current proposals under PPC25. PTS considers that this casts doubt on the accuracy of the transport analysis undertaken for PPC25, and may underestimate the degree of mitigation that would be required in the network by way of upgrades.
144. PTS also points out several potential deficiencies and unclear assumptions relating to the intersection analysis for the Western Link road intersections at Falls Road/Mansel Drive in the south and State Highway 1 in the north. In addition, PTS notes that the traffic effects of staging are not properly addressed in the ITA.
145. In terms of proposed roads, the PTS report notes that the alignment of the Western Link road is not confirmed and the road is not funded. The alignment shown in the PPC25 Precinct Plan 1 is not consistent with either the indicative alignment shown on the WSP or the alignment currently being investigated by the Strategic Growth Alliance (SGA).
146. For the reasons set out in its assessment, PTS considers that it is not possible to support PPC25 from a traffic and transport perspective.

Comment

147. Transport is clearly a key issue in respect of PPC25 and is a matter of contention between the applicant and several of the transport organisations that have made submissions.
148. Having carefully read the ITA and the review carried out by PTS, I am of the opinion that there is insufficient information available to confidently assess the transport-

²³ Refer to Appendix 6 of the Hearing Agenda

related effects of PPC25 or determine the appropriate mitigation measures that might be required to address any such effects. That situation has arisen because the ITA is deficient in several key respects, as outlined in the PTS report.

149. I understand that TCL acknowledges these issues and is attempting to remedy some of the key matters in advance of the hearing. However, at the time of preparing this s42A report there remain deficiencies in the ITA that has been submitted with PPC25 and I am only able to make a recommendation based on the information that is available. I reserve the opportunity to reconsider this matter if further information is provided through the applicant's evidence or at the hearing.
150. That said, it does appear that some of the outstanding transport issues will be difficult for the Applicant to fully address. For example, the intersection of the Western Link road and State Highway 1 will need to respond to the finalised position of the Matakana Link road. The location at which the Matakana Link road will intersect with State Highway 1 has yet to be fully determined, and may not be resolved in advance of the hearing. Likewise, it is doubtful that sufficient time exists between now and the hearing to determine such issues as the specific alignment of the Western Link road and the mechanism for funding it.
151. Moreover, a comprehensive and complete ITA may simply give rise to further questions and implications that are not currently apparent. In particular, it is clear to me that many of the issues to be determined in the PPC25 area are directly related to the alignment of the Western Link road. Confirmation of the road alignment is likely to influence the appropriateness of the zoning that is applied either side of it, the location of the Neighbourhood Centre zone, and so on. Addressing the deficiencies in the ITA prior to the hearing may create other issues to be determined.
152. It is also noted that the northern part of the Western Link road would need to be established on land that is outside of TCL's control. If the northern part of the PPC25 land was not developed until some years after the TCL landholding, the substantial proportion of traffic arising from the development would be required to use Falls Road and Mansel Road to the south, which collectively may not have the ability to accommodate such traffic in a safe and efficient manner without prior upgrade. That potential outcome lends support to the Council's stated approach of comprehensively planning and funding key infrastructure so that it is in place and operating effectively when needed.
153. There is little more that can be said at this stage in respect of transportation effects, as the paucity of information does not enable a proper assessment. I agree with Mr Peake that it is not possible to support PPC25 at the current time from a traffic and transport perspective.

6.3. Economic effects

Application

154. The anticipated economic effects of PPC25 are summarised in Section 9.1 of the s32 evaluation report and addressed more fully in the economic assessment report prepared by McDermott Consultants Ltd.²⁴
155. PPC25 proposes an area of Neighbourhood Centre zone of approximately 0.3ha located in the north-eastern part of the Plan Change area, positioned to front the

²⁴ Refer to attachment 9 of the s32 Application within Appendix 2 of the Hearing Agenda

anticipated future alignment of the Western Link road. Surrounding land is identified as Mixed Housing Urban zone, graduating through to Single House zone in the western and southern parts of the Plan Change area. Light Industry zone is proposed to occupy the northernmost part of the Plan Change area, adjacent to State Highway 1 and the Western Link road, together with an area closer to Falls Road in the south.

156. The s32 evaluation report considers the zoning pattern that is proposed and reaches a conclusion that the proposed mix of residential and business zones will have positive effects on the environment from a social and economic well-being perspective.
157. The McDermott report reaches a number of conclusions in respect of the economic effects of PPC25:
- In terms of residential capacity, PPC25 would contribute between 1,000 and 1,100 dwellings towards the target of 2,300²⁵ that is identified for Warkworth North;
 - This number of dwellings could accommodate around 3,000 people, which would boost the local work force by up to 1,300 people;
 - The area of Neighbourhood Centre zone (3,000m²) that is proposed will provide for a range of commercial activities to support the future community, within a walkable distance;
 - The proposed Neighbourhood Centre is appropriately located and sized so that it will not detract from the amenity and vitality of other centres in Warkworth, which serve different communities and functions;
 - The reduced area of Light Industry zone within the PPC25 area (relative to the extent identified for the land in the WSP) is supported, on the basis that it is not an efficient use of the land due to the predominantly steep contour and presence of natural features. It is also stated that significant earthworks would be required to make the land suitable for industrial uses, that there would likely be low market attractiveness for the land relative to other locations in Warkworth, and that there is already a 20 to 30 year supply of industrial land in Warkworth.
158. The s32A evaluation report states that PPC25 provides for an appropriate distribution of residential and employment uses on the land, sufficient to align with Council's intention for Warkworth to operate as a self-sufficient satellite town. It is concluded that the proposed mix of residential and business zoning will have positive effects on the environment from a social and economic well-being perspective.

Peer review

159. The economic aspects of the PPC25 have been reviewed for the Council by M.E Consulting (M.E).²⁶ The M.E report provides a comparison of the business zoning proposed under the WSP and that included within PPC25, and concludes that the zoning configuration and extent is similar.
160. In respect of the extent of Light Industry zone, M.E notes that PPC25 proposes approximately 13ha of LIZ compared to 20ha that is proposed through the WSP. M.E disagrees with the Applicant's rationale for the reduction in Light Industry zone land within the PPC25 area, and considers that the WSP Light Industry zone provision is not excessive in the context of future demand for employment opportunities and the role Warkworth will play in the sub-regional economy.

²⁵ Future Urban Land Supply Strategy, July 2017, p26

²⁶ Refer to Appendix 6 of the Hearing Agenda

161. M.E considers that the Neighbourhood Centre proposed is an appropriate zone type, and is in a suitable location to provide for the needs of the local community in the PPC25 area. M.E identifies that there is some potentially conflicting comment in the PPC25 s32 evaluation report that appears to support a Local Centre zone within the PPC25 area. That outcome is not provided for in the PPC25 zoning map but is sought through the TCL submission, so is discussed further in the part of this s42A report that addresses the submissions received.
162. M.E concludes that the proposed Neighbourhood Centre will have positive effects and will support the centres hierarchy contained in the AUP.
163. M.E has also considered the differences in the residential zoning pattern between PPC25 and the WSP. PPC25 seeks to increase the area of Mixed Housing Urban zone and Mixed Housing Suburban zone, with a corresponding decrease in the extent of Single House zone. M.E notes that, from an economic perspective, the only potential concern is that the higher number of possible households present in Warkworth will have implications for the employment per household ratio that Council is wanting to achieve across Warkworth as a whole. That targeted employment ratio is sought in order to ensure that Warkworth can operate largely as a self-sufficient satellite town.

Comment

164. I agree that the proposed area of Neighbourhood Centre zone is appropriate, both in terms of size and general location. All of the expert opinion suggests that its economic effects will be positive, and it will sit comfortably within the existing and proposed hierarchy of centres in Warkworth.
165. PPC25 provides for a different configuration of residential land to that identified under the WSP. This is illustrated in **Figure 12**, below. PPC25 proposes to maintain the Single House zone to the south of Falls Road, but contract it into the western corner of the land to the north of Falls Road. The Mixed Housing Urban zone expands slightly, but remains focused around the proposed Neighbourhood Centre zone. The Mixed Housing Suburban zone expands to replace the reduced Single House zone.
166. There will inevitably be potential for a level of fluidity between the location of zone boundaries where those are not defined by natural features or constraints, existing development, or existing cadastral boundaries. The expectation is that there will be a graduation from higher density housing adjacent to transport options and centres, through to lower density housing at the edges of the urban area.
167. The general principle is respected in both the WSP and PPC25, with the main difference being that the Mixed Housing Suburban 'band' is expanded to the west to replace more of the Single House zone.
168. Having considered the economic reports, together with other relevant evidence (in particular, the geotechnical assessments), I am relatively comfortable with the proposed residential zoning pattern for the following reasons:
 - In principle, and with all other matters being equal, it is sound planning practice to enable efficient use of the resource provided by serviced residential land;
 - There do not appear to be any particular geotechnical or environmental constraints that would prevent the increased area of Mixed Housing Suburban land from being developed in an appropriate manner; and

- Most, if not all, of the expanded band of Mixed Housing Suburban zoning will be situated within a five-minute walk of the Western Link road, which is anticipated to be served by a regular bus service.

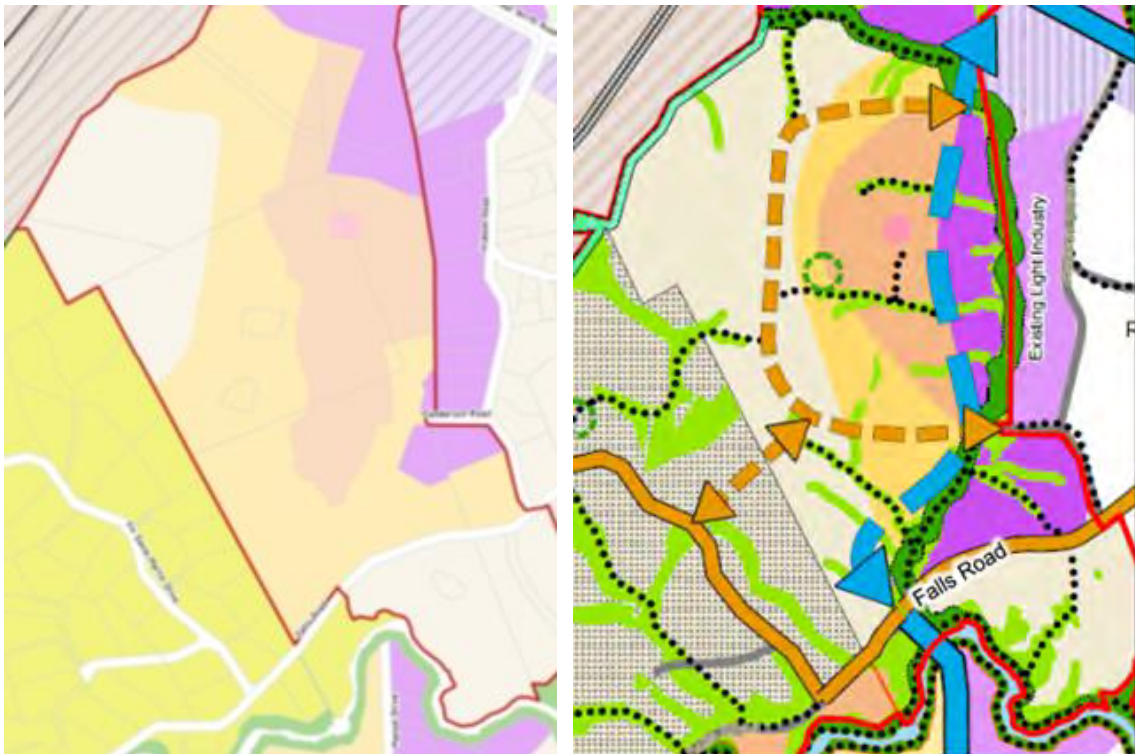


Figure 12: Comparison of residential land identified in PPC25 (left) and WSP (right)

169. There are also disparities between PPC25 and the WSP in respect of the extent and location of the Light Industry zone. The differences are illustrated in **Figure 12** above. Having considered the available evidence and the WSP, I am of the opinion that some further industrial land should be provided by PPC25.
170. The Light Industrial zone in the northern part of the PPC25 area is consistent between the two documents and is a logical planning outcome given the proposed supermarket in that location, the relatively gentle contour of the land, and the proximity to State Highway 1.
171. PPC25 provides an expanded area of Light Industry zone immediately south of that, but replaces the industrial land to the south of the proposed Neighbourhood Centre with Mixed Housing Urban zone adjacent to the stream. Whilst, I consider that there is urban design merit in the zoning through this area as notified, the actual best zoning response will depend on the final alignment of the Western Link road. As a consequence, I am of the opinion that at this stage based on the need for industry land within the WSP that this work should take primacy on this matter.
172. I am of the opinion that the existing industrial land to the south of Sanderson Road should also be extended through to Falls Road (as far west as the stream and Mansell Drive), as provided for in the WSP. That appears to me to be a logical land use given existing development, and will assist with more closely matching the ratio of employment land and residential land that was anticipated under the WSP.
173. I do note that the location of boundaries between all the different zones within the PPC25 area will be influenced by the location of the Western Link road, as this may be

used as the demarcation point between different zones. For reasons that are discussed more fully in the transport-related sections of this s42A report, the precise location of that road is yet to be determined. As a consequence, it is not possible in my view to arrive at fully defined zone boundaries at this stage.

6.4. Landscape effects

Application

174. Effects on landscape are addressed in Section 9.4 of the s32 evaluation report and discussed in more detail in the landscape assessment prepared by Mike Farrow of Littoralis Landscape Architecture (LLA).²⁷
175. The LLA assessment identifies key landscape outcomes as being to perpetuate the broad profile of the terrain and ridgeline, retain and protect any significant areas of indigenous vegetation, and maintain and enhance primary riparian corridors. In the context of these outcomes, landscape considerations included
- Retaining the broad topography of the PPC25 area, particularly the Stubbs Farm ridgeline;
 - Enabling roads to be orientated primarily across the natural contour rather than perpendicular to it;
 - Conserving and integrating the most intact pockets and belts of indigenous vegetation;
 - Acknowledging the best-developed natural watercourses and emphasising these as a structuring element;
 - Concentrating the highest densities of potential development in the lower-lying topography;
 - Configuring the layout of the PPC25 area to optimise opportunities for high-quality urban environments, strong landscape identity and high levels of amenity; and
 - Integrating, where practicable, the edges of the PPC25 area with adjoining areas so that natural patterns and open space corridors can continue seamlessly and be strengthened where possible.
176. The LLA assessment considers that PPC25 is consistent with these landscape considerations. In respect of zoning patterns, the assessment supports PPC25's provision for lower density residential use on the steeper and more visible areas, which are considered to more easily integrate with the landscape through the use of smaller building footprints and landscaping.

Peer review

177. The Applicant's landscape assessment has been reviewed by Stephen Brown of Brown NZ Ltd.²⁸ Mr Brown has also considered the landscape effects of PPC25 more generally.
178. At a high level, Mr Brown considers that the effects of PPC25 on the landscapes and features within and near Warkworth are generally acceptable. He considers that any such effects would have a very limited impact on the amenity enjoyed by existing

²⁷ Refer to attachment 11 of the s32 Application within Appendix 2 of the Hearing Agenda

²⁸ Refer to Appendix 6 of the Hearing Agenda

residents when considered in the context of the outcomes anticipated by the AUP and the WSP.

179. Mr Brown supports the proposals under PPC25 to protect and enhance the significant elements of the stream network, and considers that this will result in beneficial effects.
180. However, Mr Brown's review does identify two areas of concern with PPC25 in its current form.
181. Firstly, he considers that the proposal for industrial development adjacent to State Highway 1 has the potential to create an unattractive gateway at the northern edge of Warkworth. He is of the opinion that a planted landscape buffer is required along this frontage of the land in order to adequately manage potential adverse visual amenity effects that may arise from industrial development. He supports a setback and planting buffer, along the lines of that proposed in the WSP. This is a position supported also by Ms Mein's specialist review.

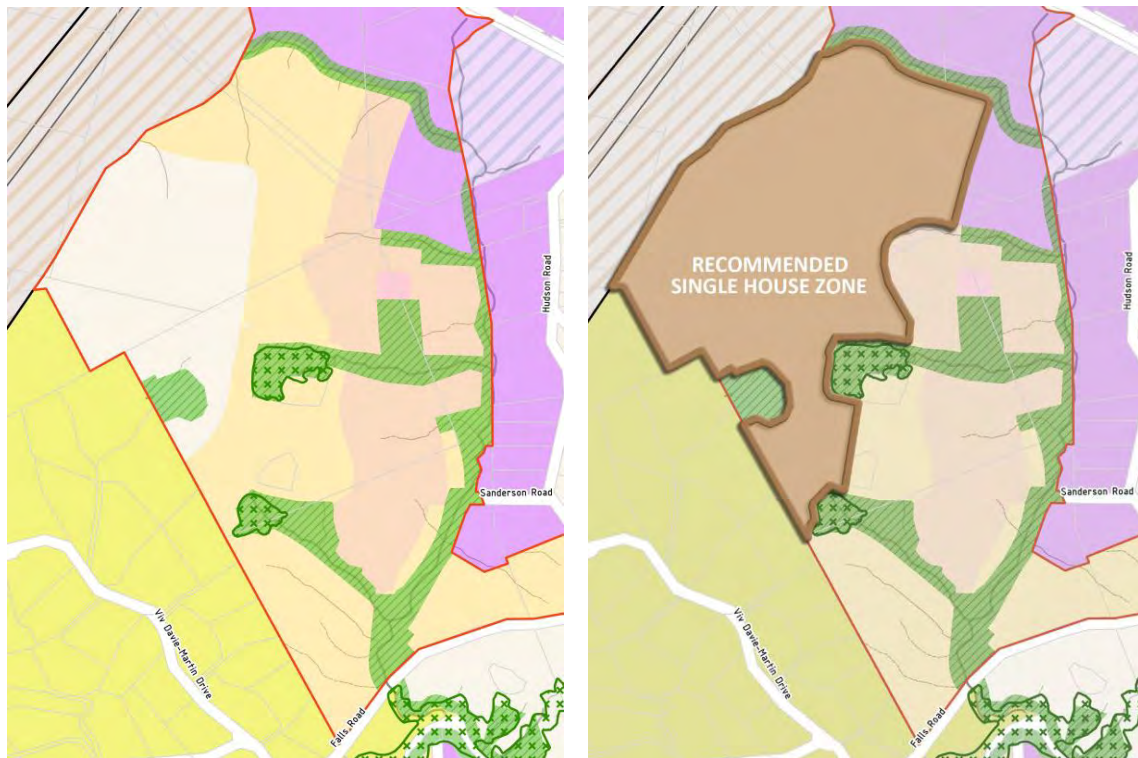


Figure 13: PPC25 Single House zone (left) and Stephen Brown's proposal (right)

182. Secondly, Mr Brown is concerned with the PPC25 proposals for more intensive housing in the north-western part of the land, close to the alignment of the motorway currently under construction and in the area on and adjacent to the ridgeline that extends from Viv Davie-Martin Drive. Related to this is a concern that there would be higher density housing below this land abutting the area of proposed Light Industry land. Mr Brown does not support the establishment of higher density residential zones in this part of the site as they would expose a greater number of residents to the motorway corridor and to the land intended for industrial development.
183. To address these reserve sensitivity effects, Mr Brown proposes a larger area of Single House zone relative to that proposed in PPC25. The extent of the Single House zone that he considers to be required is illustrated in **Figure 13** above.

Comment

184. I support PPC25's response to landscape issues in respect of the general intention to locate more intensive land uses on the valley floor, closer to the stream and the anticipated alignment of the future Western Link road. I also consider that there is significant benefit in the proposals to protect and enhance the elements of the stream network that are existing on the PPC25 land. Furthermore, there is logic to the aggregation of proposed Light Industry land adjacent to existing business uses and close to State Highway 1.
185. There are, however, two key landscape issues that are in contention.
186. The first of these relates to the management of visual amenity effects associated with the focus of industrial activities adjacent to State Highway 1. That location acts as the entrance to the town when approaching from the north, and I agree with Mr Brown that there is merit in seeking to prevent what he colourfully refers to as the "*Te Raparisation*" of this northern gateway. In my opinion, PPC25 should include specific provisions to require a planted and treed landscape screen as was intended by the WSP. I note that this was also supported by Ms Mein for urban design reasons.
187. The second contested landscape issue relates to the extent of Single House zone that should be retained in the north-western corner of the land. PPC25 proposes around approximately 12ha as shown in **Figure 13**. Mr Brown considers that this area should be roughly doubled to extend further down the slopes of the ridgeline and abut the Light Industry zone on the northern part of the PPC25 area.
188. I am satisfied that the approach taken by PPC25 is reasonable. In my opinion, it strikes an appropriate balance between the efficient use of land and the need to manage development impacts and reverse sensitivity. I agree that an area of Single House zone on the steeper land close to the motorway is a logical planning response, but I consider that it is unnecessary for that to extend too far down the slopes into the valley floor and I do not believe that a lower density zone is necessary to address reverse sensitivity issues adjacent to an industrial area²⁹.
189. In relation to this last point, the Light Industry zone in the northern part of the land is likely to be separated from the residential zones by the Western Link road (although the exact alignment of that is yet to be determined) and/ or the stream corridor. That would provide a separation of around 30m between industrial and residential activities. In addition, there are many instances in Auckland where residential zones are located adjacent to areas of Light Industry zone and generally higher density zones will be used in those situations. Certainly, the use of Single House zone as a buffer does not appear to be a recognised technique elsewhere in the AUP in these circumstances. The same can be said for the interface between Auckland's existing motorway system and adjoining residential land.
190. For these reasons, I do not consider that reverse sensitivity is a factor that supports the use of Single House zone within PPC25. While there may be some valid landscape and topographical reasons, those are only sufficient in my view to limit the Single House zone to the extent shown in notified PPC25 and no further expansion of that zone is warranted.

²⁹ It is noted that this assessment is based on the notified zoning and assessment of submissions that seek to reduce the SHZ further are addressed at section 10 of the report.

6.5. Ecology effects

Application

191. Ecological values in the PPC25 area and the effects of the urban development that is proposed are addressed in an ecological assessment prepared by Bioresearches.³⁰
192. The Bioresearches report concludes that, in general, the ecological values across the PPC25 area are of low to moderate value due to the former pastoral farming that has occurred on the land. The report notes that the significant vegetation values on the land are restricted to two relatively small patches of native forest (areas 1 and 3 in **Figure 14**) and a strip of riparian vegetation along the tributary of the Mahurangi River south of Falls Road. Bioresearches considers that the two small patches of native forest would meet the Significant Ecological Area (SEA) criteria under the AUP.
193. It is proposed that these areas of significant vegetation will be retained, either within areas to vest as public land or protected on private land through consent notices imposed at the time of subdivision.



Figure 14: Vegetated areas within the northern area of the PPC25 land

194. Bioresearches notes that the ecological values of watercourses on the land vary considerably, but acknowledges that the watercourses have potential value. It is stated that all those with high potential value will be avoided, restored and protected. While some intermittent watercourses will be removed to accommodate urban development, Bioresearches considers that this can be mitigated at the time of earthworks and subdivision consents through the use of mitigation planting and off-setting.

³⁰ Refer to attachment 14 of the s32 Application within Appendix 2 of the Hearing Agenda

195. Bioresearches considers that ecological effects can be mitigated through riparian planting and fencing to restore watercourses, and by the use of structures like arched culverts to reduce alterations to the streambed. It is stated that these measures would improve water quality and instream habitat.

Peer review

196. Council's ecological review has been undertaken in two separate specialist assessments – covering freshwater ecology (Jason Smith)³¹ and terrestrial ecology (Rue Statham)³².

197. The freshwater ecology review identifies a number of concerns with PPC25, related in particular to the intention to reclaim a number of intermittent watercourses and the provision that the Precinct makes to enable that outcome. Mr Smith considers that amendments are required to the proposed Precinct provisions of PPC25, where they seek to facilitate stream reclamation. He proposes a number of specific amendments in his assessment.

198. Mr Smith considers the approach adopted in PPC25 to be inconsistent with the direction provided through the provisions of the National Policy Statement: Freshwater Management and the AUP. Mr Smith states that those statutory planning documents provide clear direction around minimising the loss of all freshwater systems, not just streams of existing high ecological values, and enhancing those streams where functions and values have become degraded. In Mr Smith's opinion, consideration of specific activities such as reclamation of intermittent streams and addressing of effects that would arise is more appropriately considered at the resource consent stage. The AUP contains sufficient provisions to address any stream works that might be proposed, and Mr Smith considers that PPC25 should not contain specific provisions that circumvent normal resource consent procedures.

199. Mr Statham's review focuses on terrestrial ecology, but includes wetland habitats. He accepts that PPC25 has correctly identified the forest remnants, but considers that there are more natural wetlands on the land than were expressly identified or acknowledged in PPC25.

200. Mr Statham is also of the view (like Mr Smith) that the PPC25 Precinct provisions are written to enable development outcomes that may not be consistent with the AUP or the WSP, and he has suggested some amendments to address his concerns. Subject to those amendments to the Precinct provisions, Mr Statham finds no biodiversity focused reasons why the PPC25 land could not be appropriately re-zoned to enable urban development.

Comment

201. It is apparent to me that the ecological effects of urban development on the PPC25 land could be appropriately managed through precinct provisions and under the current rules and standards of the AUP.

202. I agree with both Mr Smith and Mr Statham that the Precinct provisions should not enable a lesser standard of ecological response to stream reclamation and other related matters than that which would generally be expected under the AUP. For this

³¹ Refer to Appendix 6 of the Hearing Agenda

³² Refer to Appendix 6 of the Hearing Agenda

reason, I would not support such provisions in the Precinct and consider that a better approach is to let land development impacts be assessed and determined in the normal way under the relevant provisions of the AUP.

6.6. Stormwater, Flooding and Servicing effects

Application

203. The effects of PPC25 that relate to stormwater, flooding and servicing are summarised in Section 9.7 of the s32 evaluation report and discussed in more detail in the Land Development Report (LDR) prepared by Chester Ltd.³³
204. PPC25 proposes to address effects in relation to flooding and stormwater quality through the existing rules and standards of the AUP (set out in Chapter E36 and E9 respectively). Stormwater would be collected and conveyed in a piped network for discharge into the streams on the land directly or via detention ponds. In order to manage potential effects from instream erosion and scour, PPC25 proposes to apply the Stormwater Management Area – Flow 1 controls to the PPC25 area. These controls set out a range of requirements for the retention and detention of stormwater.
205. The LDR sets out a proposed preferred option for wastewater servicing, which has been agreed in principle with Watercare Services Limited. That option involves the installation of a new pump station to convey wastewater to a connection point into the network that will access the wastewater treatment plant at Snells Beach, which will be operational in 2022. An interim solution, prior to 2022, would convey wastewater to the existing Warkworth wastewater treatment plant. That plant may require upgrades to service the development until the treatment plant at Snells Beach is complete.
206. The LDR notes that existing water supply infrastructure can be extended into the PPC25 land to service future development.

Peer review

207. The stormwater and flooding effects arising from PPC25 are considered by Paula Vincent of Healthy Waters.³⁴
208. Ms Vincent outlines a number of concerns with PPC25 in respect of these matters. She considers that some of the proposed Precinct provisions are inconsistent with the rules in the AUP, and undermine achievement of the policies of the Regional Policy Statement and the delivery of the WSP. Ms Vincent notes that the provisions do not promote best practice in stormwater management or water sensitive design.
209. The Healthy Waters review also states that the information provided in the Stormwater Management Plan (SMP) is inadequate and, in its current form, should not be included in the PPC25 precinct provisions. Ms Vincent notes that once the SMP forms part of an operative PPC25 it cannot be altered without a further Schedule 1 RMA process. She considers that such a situation would be inappropriate given that the SMP is inconsistent with new performance requirements for greenfield developments within the Auckland Council's region wide Network Discharge Consent that commences in October 2019, and does not achieve best practice as set out in GD04.

³³ Refer to attachment 15 of the s32 Application within Appendix 2 of the Hearing Agenda

³⁴ Refer to Appendix 6 of the Hearing Agenda

210. With regard to flooding, Ms Vincent notes that no flood attenuation is provided through PPC25 and the Chester LDR has not taken adequate account of future development within the wider upstream catchment in its assessment of peak flood levels. Furthermore, Healthy Waters advise that there is insufficient capacity at the Falls Bridge for the five-year storm at Maximum Probable Development and no mitigation is proposed through the PPC25 development area.
211. Watercare Services Limited has reviewed the wastewater disposal and water supply reticulation arrangements and has confirmed in principle that the land can be serviced as described in the LDR.

Comment

212. Having reviewed the s32 evaluation report and the supporting technical assessments, together with the Council's peer reviews, I consider that there would need to be amendments to the Precinct provisions and the anticipated development arrangements in order to manage stormwater and flooding effects to an acceptable level.
213. Specifically, the stormwater management approach would need to be amended to achieve the performance standards relating to discharges that are authorised under Council's region wide Network Discharge Consent. While the effects of flooding on future development on the land can generally be managed under the AUP Chapter E39 provisions, flood attenuation measures would be required in order to address flooding effects that would arise downstream (particularly at the Falls Road bridge) and at adjacent sites as a result of urbanisation of the land.
214. It is likely that most of these matters could be addressed with amendments to the Precinct provisions or the SMP, although some are related to deficiencies in the information that has been provided (such as inadequate consideration of future development within the wider upstream catchment in the assessment of peak flood levels). Without the information that is required to address flooding impacts, it is difficult to conclude that the Precinct provisions are fit for purpose and will effectively mitigate adverse effects that may arise.

6.7. Geotechnical effects

Application

215. Geotechnical effects are addressed at Section 9.11 of the s32 evaluation report and in the geotechnical report prepared by KGA Geotechnical Limited.³⁵
216. The KGA report concludes that the ground conditions present in the land are suitable for the type of development that is proposed through PPC25. It is acknowledged that detailed geotechnical investigations will be required as part of future resource consent applications. The KGA report states that the land conditions are generally suitable for urban development, subject to appropriate management through the resource consent process.

Peer review

217. Council's peer review of the geotechnical engineering information was undertaken by Ross Roberts. Mr Roberts does not raise any particular concerns with the conclusions

³⁵ Refer to attachment 18 of the s32 Application within Appendix 2 of the Hearing Agenda

of KGA in respect of geotechnical conditions or the methodology that was used in the investigation.

218. With regard to residential densities, Mr Roberts notes that stability for residential areas of the site can be achieved but would require more modification to the landform through earthworks in areas where slopes are steeper and less stable.

Comment

219. There does not appear to be any particular contention in respect of geotechnical matters. All of the land within PPC25 can be developed for urban purposes but more earthworks, drainage and retaining walls may be required in some areas of the land. This is relevant to the consideration of the appropriate residential zonings to be applied to the PPC25 area. From my review of the KGA report and Mr Robert's specialist review, I could not identify any specific geotechnical constraint that would prevent parts of the Single House zone signalled in the WSP from being replaced with Mixed Housing Suburban zone.

6.8. Other effects

220. There are some other environmental and cultural effects that were discussed in the s32 evaluation report, including heritage and archaeology, soil contamination, and effects on Maori spiritual and cultural values.
221. The latter effects are discussed below in the Mana Whenua consultation section of this s42A report, and in the section that addresses the submission received from Ngāti Manuhuri.
222. In respects of soil contamination, and heritage and archaeology effects, there is nothing in the material supporting PPC25 or submissions that identifies any significant effects.

7. CONSULTATION

223. A Consultation Report³⁶ is attached to the plan change request and outlines the consultation undertaken with a number of parties, including adjacent landowners, iwi, local board, various stakeholders and other interest groups.

7.1. Mana Whenua

224. The applicant circulated the PPC application to 10 Mana Whenua groups recognised as having authority in the area in 15 June 2018³⁷ to determine which iwi groups wished to engage with the project and take part in a site visit. The outcomes of this consultation in terms of responds is outlined in the Consultation Report attached within Appendix 6 of the PPC Request².

³⁶ Consultation Report within attachment 7 of the Private Plan Change Request, prepared by Barkers and Associates and dated 29 June 2018

³⁷ Refer section 4.1 of the Consultation Report within attachment 7 of the Private Plan Change Request, prepared by Barkers and Associates

225. These Mana Whenua groups align with Auckland Council's online facility for determining relevant iwi interests³⁸, being:

- Ngāi Tai Ki Tāmaki
- Ngāti Manuhiri
- Ngāti Pāoa
- Ngāti Te Ata
- Ngāti Wai
- Ngāti Whanaunga
- Ngāti Whātua o Kaipara
- Ngāti Whātua Orākei
- Te Kawerau a Maki
- Te Runanga o Ngāti Whātua

226. A site visit was held with both Ngāti Manuhiri and Te Kawerau A Maki and both mana whenua groups have prepared Cultural Values Assessments (CVA)³⁹. These CVA are discussed in the s32 assessment report⁴⁰ with the key matters highlighted in terms of areas of concern:

- Degradation of the waterways;
- Loss of habitat;
- Stormwater runoff and treatment being designed in consultation with an enhancement program for the waterways;

227. Ngāti Manuhiri have lodged a submission⁴¹ as part of the notification of the PPC25. The submission seeks decisions to accept PPC25 subject to ensuring that the mana whenua values are incorporated into the precinct provisions.

7.2. Rodney Local Board

228. The Rodney Local Board was briefed by staff from North West & Islands Planning on 22 November 2019. Feedback at the time was that the Rodney Local Board does not support the private plan change request. At this time, they considered it could undermine the draft Warkworth Structure Plan and result in a future land use pattern which is not necessarily best placed or scaled to serve the long-term future of Warkworth.

8. NOTIFICATION AND SUBMISSIONS

8.1. Notification details

229. Details of the notification timeframes and number of submissions received is outlined below:

Date of public notification for submissions	16 May 2019

³⁸ <https://www.aucklandcouncil.govt.nz/building-and-consents/understanding-building-consents-process/prepare-application/prepare-resource-consent-application/Pages/find-hapu-iwi-contacts-for-your-area.aspx>

³⁹ Appendix 7 of the Private Plan Change Request

⁴⁰ Section 9.9 of the s32 Assessment Report

⁴¹ Refer submission 29 within Appendix 4 of this report and submissions points 29.1-3

Closing date for submissions	5 July 2019
Number of submissions received	35
Date of public notification for further submissions	9
Closing date for further submissions	12 September 2019
Number of further submissions received	9

230. There was one late submission⁴². Copies of the submissions are attached as **Appendix 4** to this report.

231. The location of submitters relative to the PPC25 land has been mapped onto an aerial photograph of the site and the wider area, and is attached in **Appendix 3** to this report.

9. LEGAL AND STATUTORY CONTEXT RELEVANT TO SUBMISSIONS

232. It is noted that one of the submissions (being submission 23) by Turnstone Capital Limited (the Applicant) seeks relief to 'fundamentally change'⁴³ the zoning sought by PPC25. Some members of the public may have chosen not to engage in the process on the basis that they were comfortable with the notified zoning and have not reviewed the submission made by TCL. However, it is for this reason that there is a further submission period and, on this basis, it is considered that due process has been followed.

10. ANALYSIS OF SUBMISSIONS AND FURTHER SUBMISSIONS

233. The following sections address the submissions received on PPC25. The format used includes a discussion of the relief sought in the submissions, and a recommendation to the Hearing Commissioners in terms of accepting or rejecting the submissions.

234. It is noted that for the various recommendations on the submission below, where there is a relevant further submission then this should be determined accordingly.

235. The approach to the analysis below will firstly outline the TCL submission on PPC25 and then consider all other submissions. The approach adopted addresses submissions that raise the same issues by grouping them under a number of themes and topic headings:

- Submissions on Traffic and Transport Matters
- Submissions on Zoning Approach
- Submissions on Infrastructure Delivery and Funding
- Submissions on Urban Design Matters
- Submissions on Streams, Ecology and Cultural Matters
- Submissions on Stormwater and Flooding
- Submissions on Other Matters
- Submissions supporting PC25 with no amendments

⁴² Submission no. 37 from Mahurangi Action Incorporated received the 8th August 2019

⁴³ Refer submission 2 within Appendix 4.

236. The ordering of assessing the above submissions follows the same general order as the preceding effects assessment, and highlights the pivotal matters raised in considering the merits of PPC25.

10.1. Turnstone Submission

237. The PPC25 submission process is somewhat unusual, adding an additional layer of complexity and potential confusion to submitters, in that the submission lodged by Turnstone on its own PPC25 seeks relief for ‘fundamentally changes’⁴⁴ to the zoning sought by the notified PPC.

238. Turnstone identifies in the submission that the reason for the extent of relief sought is that their PPC25 application was prepared prior to the WSP being notified and adopted hence it is responding to this document.

239. A comparison of the zone differences between PPC25 as notified and the relief sought by the TCL submission is included in **Table 8** below for ease of reference. A copy of the zoning map attached to the submission is included in **Figure 15** below.

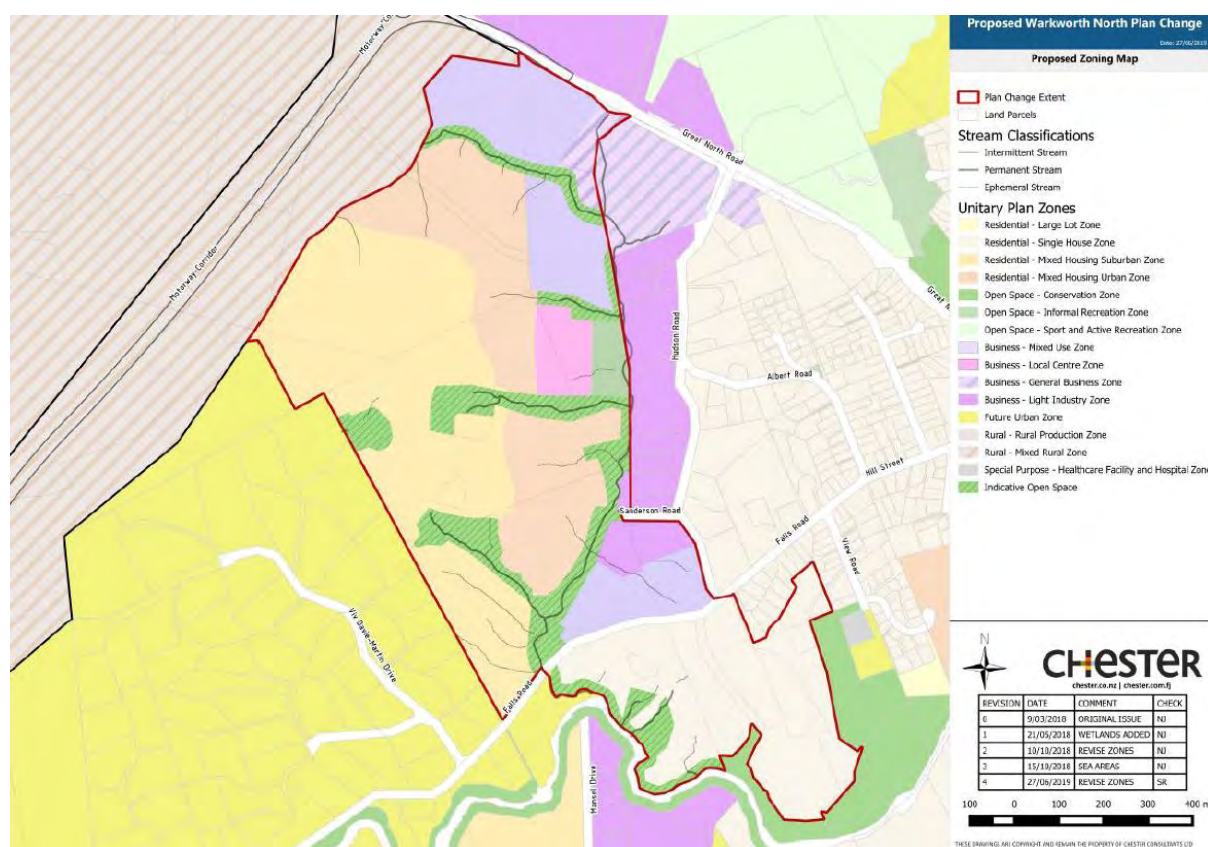


Figure 15: Proposed Zoning Map attached to Submission 23 from Turnstone Capital Ltd

⁴⁴ Refer page 2 of submission 23 within Appendix 4.

Table 8: Comparison of the PPC25 (as notified) and Turnstone Capital Ltd Submission 23

PC25 (As Notified)	Turnstone submission
Business Zones	
Light Industry zone	
13.1 ha of Light Industry zone fronting SH1 and off Sanderson Road	Light Industry only provided at Sanderson Road on land not owned by TCL.
Heavy Industry zone	
Not provided for	Not provided for
General Business zone	
Outside of PC area	Small new area of GB zone extended north to the future alignment of the Western link road
Business Mixed use zone	
Not provided for	3 areas totalling 16.3 ha <ul style="list-style-type: none"> - Large area adjacent to SH1 - Adjacent to top (northern section) of Hudson Road, opposite existing Light Industry zone - From NE corner of Hudson Road and Falls Road and along Falls Road frontage roughly to the stream.
Neighbourhood centre zone	
3000m ² centre provided in central location surrounded by Mixed Housing Urban zone	Not provided for
Local centre zone	
Not provided for	New Local centre zone of 5.7ha <p>Moved to closer to Hudson Road boundary. Open space land to the east and south, Business – Mixed Use to the North and Mixed Housing Urban to the west.</p>
Residential	
Provide for 1000-1200 dwellings	Not known.
Single House zone	
2 areas: <ol style="list-style-type: none"> 1. In western corner of site abutting motorway corridor and adjacent north-eastern section of Viv Davie-Martin Drive. 2. South of Falls Road 	Only provided south of Falls Road
Mixed Housing Suburban zone	
3 areas: <ol style="list-style-type: none"> 1. Middle ring between SH and MHU 2. Along part of Falls Road frontage 3. To west of Sanderson Road and lower (southern section) of Hudson Road 	In one large wedge running from motorway boundary to Falls Road. Includes all of land previously zoned SH

Mixed Housing Urban zone	
Centrally located between MHU and Light Industry zones. Neighbourhood centre toward top (northern section)	One large central wedge running from Motorway to stream near Falls Road. SH to south, Business MU to north, east and south. Also, Local Centre to the east
Open Space Conservation zone	
No provided for but shown in precinct plan 2 as indicative open space and SEAs	6 areas of open space Conservation zone provided along 5 stream fingers and one area near Viv Davie-Martin Drive
Open Space Informal Recreation zone	
Not provided for but indicative open space areas shown on Overlay map and Precinct Plan 1	1 area provided between the Local Centre and Hudson Road industry

10.2. Submissions on Traffic and Transport Matters

10.2.1. Adequacy of the ITA and Assessment of Traffic Effects

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
16.1	Auckland Transport	Sufficient additional information (including modelling) is provided to assess transport effects.	FS03 – Support FS04 - Oppose	Accept
19.3	Summerset Villages (Warkworth) Ltd	Consideration of the cumulative and increased traffic effects and potential mitigation measures and their limitations on Mansell Drive in terms of WLR, PC25 and wider WSP.	FS02 - Support	Accept
22.5	NZTA	Provide a revised ITA with the methodology/ content being developed and agreed with both NZTA and AT to ensure that effects on the transport system are appropriately managed and mitigated.	FS02-Support	Accept
24.2 24.3	Warkworth Area Liaison	Amend the ITA to correct errors and omissions. Amend traffic predictors on to align with the staging for further developments in Warkworth.	FS02 – Support in part FS03 – Support in Part	Accept

240. All the submissions above express concerns related to the adequacy of the ITA⁴⁵ submitted as part of the notified plan change. There are further submissions from both NZTA and AT providing reciprocal support to each other and support in part for the Warkworth Area Liaison submission. TCL does oppose the AT submission though this is not clear given it is understood that the Applicant is seeking to respond to these concerns, however, any further information was not available prior to the completion of this report.

⁴⁵ Refer attachment 13 of the s32 Application within Appendix 2 of the Hearing Agenda

241. The ITA is integral to understand the potential traffic effects of PPC25, and it directly informs the most appropriate approach to the urbanisation of the land in terms of zoning and layout. The outputs from the ITA will then guide other decisions for the land in terms of zoning, roading layout, timing and delivery of any transport upgrades, and precinct provisions.
242. The fast pace at which PPC25 is being advanced means that the application documents may not be consistent with the work completed in the recently WSP and by SGA. This means that the latest ITA prepared by the Applicant from May 2019 precedes the more recent work completed as part of the WSP. There has been no update to the transport reporting to support the Turnstone submission, which seeks alternative zonings⁴⁶ on the land which would alter the densities achieved within the plan change.

Discussion

243. These submissions all have a common theme, and identify that all roading authorities and other parties have significant concerns about the adequacy of the transport assessments in the PPC25 application. Further, the additional up-zoning sought by TCL as part of its submission is not assessed at all in the present transport assessment. This assessment is essential to any consideration of the merits of PPC25 and, without it, a proper assessment of the proposal is limited.
244. Mr Martin Peake outlines in his assessment that an ITA was prepared to inform the WSP and that this was prepared by the SGA, which comprises AT, NZTA and Auckland Council. This work identified a number of measures that any ITA for subsequent plan changes would need to capture.
245. In terms of the current ITA prepared to support the notified PPC25, Mr Peake has identified in his specialist reporting that:

“(ITA) provides insufficient analysis to be able to determine the effects of the plans change and identify measures required to avoid, remedy or mitigate those effects.

It is considered that the ITA fails to:

- *Identify the forecast trip generation or traffic distribution from PPC 25 including how this compares to either the Future Urban Land Supply Strategy (FULSS) zoning for the area or the Warkworth Structure Plan (final or draft versions)*
- *Provide robust traffic modelling analysis to determine the traffic effects of the plan change on either the immediate or wider transport network including intersection and link capacity*
- *Identify mitigation works needed to address the effects of the plan change (other than the provision of the intersections at either end of the Western Link Road)*
- *Determine the timing / staging of transport infrastructure required to support the plan change, the cost of such measures and who would be responsible for providing those measures⁴⁷*

⁴⁶ See Turnstone submission 23 within Appendix 4

⁴⁷ Refer, page 22 of specialist memo, prepared by Martin Peake dated 23 September 2019 within Appendix 6

246. This is a position supported by all the submissions noted above, which express concerns related to the adequacy of the ITA submitted as part of the notified plan change. It is understood that the Applicant is seeking to respond to these concerns prior to the hearing.
247. The ITA is integral to informing the best approach to the urbanisation of the land and the outcomes it produces will then guide other decisions for the site in terms of zoning, layout, timing and delivery of any upgrades.
248. On this basis I support the relief sought by the submissions. I consider that the ITA is inadequate for both the notified PPC25 and for the relief sought by the submission from TCL. This is of concern leading into a hearing with covers a range of submission points on a number of matters, many of which are influenced by the outcomes of this transport assessment. I note that, even if an adequate ITA can be produced prior to the hearing, it will be difficult for the Council and other parties to respond to that in a meaningful way given time constraints.

Recommendations on Submissions

249. That **submissions 16.1, 19.3, 22.5, 24.2 and 24.3 be accepted** for the reasons outlined above.

10.2.2. Delivery and timing of Transport Infrastructure

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
16.2 16.3	Auckland Transport	Amend the precinct to include the land south of Falls Road within PPC25 and require the upgrading of Falls Road to an urban road standard with subdivision and development.	FS04 – Oppose	Accept
16.4 16.5	Auckland Transport	Amend the precinct to include the land at 9-11 Sanderson Rd and 76-78 and 86 Hudson Road which is proposed to be rezoned to BLIZ and require the upgrading of Sanderson Road to an urban road standard with subdivision and development.	FS04 - Oppose	Accept
16.25	Auckland Transport	Amend precinct to require upgrading of the Mansell Drive/ Falls Road intersection, including signalisation.	FS04- Oppose	Accept
16.26	Auckland Transport	Additional provisions include objectives and policies to ensure delivery of infrastructure organise development. Additional provisions may include triggers, staging, or clear assessment and consenting processes.	FS03 - Support FS04 - Oppose	Accept

27.3	A and S Haycock	Coordinate development with a good public transport system.	FS03 – Support in part	Accept in part
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250. Submissions above express concerns related to the need to secure the necessary upgrades, alongside identified trigger points for the PPC25 area to ensure that they are delivered in a timely manner.
251. The further submission by TCL opposes the AT submissions and identifies that in terms of submission point 16.25 that the the existing AUP(OP) provides a framework to consider such matters. In terms of submission point 16.26, it is opposed on the basis that the FULSS confirms that the area will be development ready by 2022⁴⁸ with all necessary infrastructure in place, and in any event the Applicant is working with AT to ensure delivery.

Discussion

252. The AT submission raises concerns about the need to ensure that subdivision and development will be co-ordinated with the delivery of transport infrastructure and services, including connections to the wider network. The ability to know what infrastructure and what additional connections may or may not be required is dependent on the outcomes from the ITA. However, at the time of preparing this report the ITA was considered to be inadequate. As a result, the ability to understand what mitigation works are needed to support PPC25 and the timing/staging and funding of any required infrastructure is unknown.
253. The need to ensure the integration of any required transport upgrades with development across the PPC25 area is good planning practice. It provides greater certainty to all parties as to when infrastructure needs to be put in place. However, this needs to be supported by a clear understanding of proposed funding for any upgrades and who will be responsible for delivering them.
254. Mr Peake outlines in his assessment that he supports an approach whereby any mitigation measures or transport infrastructure required to support PPC25 are incorporated into the precinct provisions. He acknowledges that (given the inadequacy of the ITA) the exact measures required and any timing for delivery is not yet known.
255. I note the further submission by TCL on the FULSS requirements, but it is important to bear in mind that the rezoning is being sought earlier than the 2022 timeframe indicated by Council and via a privately initiated plan making process. This puts the onus to resolve these matters on the Applicant, as it is their plan change. It is therefore of concern that these matters remain unresolved, although it is understood that a further ITA is being prepared and that the Applicant is engaging with AT and NZTA.
256. AT identifies within submission points 16.2, 16.3, 16.4 and 16.5 the need for the precinct to cover the full PPC25 land.
257. In respect of submission point 16.25, I note that at page 36 of the s32 evaluation report it identifies that the ITA recommends the signalisation of the intersection at Falls Road and Mansel Drive to ensure optimal pedestrian and cyclist safety⁴⁹. It is not clear why

⁴⁸ Future Urban Land Supply Strategy, July 2017, p18 states 'from' not 'by' for Warkworth North

⁴⁹ Page 36, s32 Report, prepared by Barkers and Associates, dated January 2019

the relief sought by AT to ensure this is delivered is opposed by TCL, particularly when its own documents recommend it occurs.

258. To rely on the subsequent consenting process is not in my mind the best approach. Rather, clarity about the necessary infrastructure to support a new growth area should be inherent in the precinct provisions rather than being addressed in the future in a piecemeal fashion. Ultimately the timing, estimated costings and funding share for this infrastructure will be identified and agreed via the new ITA that is in the process of being completed. However, I am of the opinion that these outputs once agreed should be incorporated into any precinct produced for the PPC25 area. I acknowledge that there are discussions on cost share that may need to be discussed on various items, however it is best to have these discussions at the outset once the outputs from the ITA are agreed.
259. I disagree with TCL that there is not a need for more specific transport provisions in terms of delivery of upgrades with trigger points, and that reliance should be placed on the subsequent consenting process to manage this matter. Whilst the number of upgrades necessary to support PPC25 are not yet known, given the inadequacies of the current ITA, however, it is anticipated that there will be upgrades required including improving existing roads, upgrades to intersections, and provision of the WLR. If these upgrades are not captured in the Precinct provisions then the requirements will not be clear to any future developer within the PPC25 area (noting that land ownership may change). Furthermore, Chapter E27 of the AUP(OP) identifies that the traffic generation assessments under E27.6.1(2)(b):

“do not apply where development is being undertaken in accordance with a consent or provisions approved on the basis of an Integrated Transport Assessment where the land use and the associated trip generation and transport effects are the same or similar in character, intensity and scale to those identified in the previous assessment”

Consequently, given that PPC25 is seeking new provisions and I am recommending additional provisions and extension of the precinct, then if PPC25 is adopted the requirements of E27 will not apply to traffic generation under subsequent consents.

260. Putting aside the matter of the adequacy of the ITA, I consider that the precinct provisions should clearly identify any transport upgrades and staging requirements. For example, the Mansel Drive intersection upgrade, and upgrades to Sanderson Road and Hudson Road should be signalled for establishment by the completion of a certain level of development. This is a sound planning approach and one that is seen in other AUP precincts⁵⁰. I agree with the position and relief sought by AT and other submitters in this regard.

Recommendations on Submissions

261. That **submissions 16.2, 16.3, 16.4, 16.5, 16.25, 16.26 and 27.3 be accepted** for the reasons outlined above. Until an adequate ITA is agreed it is not yet known what transport upgrades or mitigation are required and the necessary timing and staging for delivery. Once this is known then it would be recommended that precinct provisions are prepared to capture these matters.

⁵⁰ I610Redhills and I544 Wainui Precincts, AUP(OP)

10.2.3. Alignment and Cross Section of Western Link Road

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
7.2	P Sullivan	Relocate the indicative Western Link Road to the eastern boundary of the property at 27 State Highway 1.	FS01 - Oppose FS02 - Support in Part FS03 – Oppose FS04 – Support in part FS07 – Oppose	Reject
12.9	Auckland Council	Amend the route alignment of the Western Link Road to that finally proposed by the Supporting Growth Alliance.	FS01 - Oppose FS02 – Support FS04 – Oppose FS07 – Support	Accept
13.4	Tyne Trust	Confirm the alignment of the WLR and specify an access point to the submitters land.	FS01 - Oppose FS02 – Oppose FS03 – Oppose FS04 – Support	Reject
14.4	Goatley Holdings	Supports the indicative alignment as shown	FS01 - Oppose FS02 – Support in part FS07 - Oppose	Reject
15.2	Warkworth Holdings Ltd	Amend precinct to include a control which fixes the location of the WLR within 100m of its intersection with SH1 to the north east and Falls Road and aligns with the WLR identifies in the Precinct Plan 1.	FS02 – Oppose FS03 – Oppose FS04 – Support FS07 - Support	Reject
16.24	Auckland Transport	Delete precinct plan 3 cross section of the WLR and instead replace with text identified width/ components required.	FS04 - Oppose	Accept
17.1	W and H Massey	Show WLR fully extended throughout site and completed before development begins.	FS02 – Support in part FS03 – Oppose FS07 – Oppose	Accept in part
22.3	NZTA	Amend precinct to refer to the new road alignment as Western Link Road.	FS02 – Support FS04 – Support	Accept
22.4	NZTA	Amend precinct plans to allow for flexibility as to the approximate location of the connections of the proposed WLR to SH1 and Falls Road.	FS01 - Oppose FS02 – Support FS04 – Support FS07 - Oppose	Accept
24.1	Warkworth Area Liaison Group	Design WLR to include provision for public transport	FS02 – Support in part	Accept
24.4	Warkworth Area Liaison Group	Development of the PC25 area shall not proceed until the WLR is completed preferably as a 4 lane road.	FS02 - Support in part FS03 – Support in part FS04 – Oppose FS07 - Oppose	Accept in part

27.2	A and S Haycock	Construct the WLR as soon as possible.	FS02 – Support in part FS07 - Oppose	Accept in part
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262. Submissions cover a range of different viewpoints about the alignment, delivery and timing of the alignment of the Western Link Road (WLR). Though they are all common in the desire to have the link road, the submissions relate to where it should be situated.
263. In the further submissions there are a range of opposing and supporting propositions from different parties and I note the TCL further submission seeks to amend the location again. In terms of the further submission by Middle Hill Ltd as Trustee to Tyne Trust it was not clear in their further submission⁵¹ opposition or support for the different submission points so I have attempted to identify this above though they may wish to clarify this at the hearing.

Discussion

264. The preceding sections of this report has discussed the alignment of the WLR and identified the pivotal nature it has on the zoning approach to the area. Given the zoning of the site is being progressed earlier than the FULSS intended, it has been progressing while the SGA is still determining the best approach to the alignment and I note that there is currently no allocated funding to deliver it.
265. To my knowledge, no parties disagree with the fact that the location of the WLR is critical to informing the place making and zoning approach to the wider PPC25 area.
266. The WLR is intended to be a limited access road. It will have pedestrian and cycle facilities along its length and public transport will use it in the form of buses. The SGA is currently investigating the alignment and form of the WLR and there is the potential that the WLR may be constructed in stages - firstly as a collector and then as an arterial. Mr Peake identifies that the ITA does not assess the different alignments within the WSP and PPC25 though it is acknowledged that this may have occurred due to the fact the ITA preceded the release of the WSP.
267. The alignment is informed by a number of factors including topography, geotechnical matters, location of watercourses, and the best approaches to land uses that may occur either side. Furthermore, connection into the recently consented MLR to the north will dictate the intersection position to the north, although I note that there have been a number of subsequent appeals and a mediation process through the Environment Court is currently underway. The MLR is funded and once the appeals are resolved construction will commence.
268. From reading the submissions above, I agree with the relief sought by NZTA and AT that currently any alignment of the connection at SH1 and Falls Road will need to be flexible given the separate appeal process underway. Consequently, any requests for the connection to be confirmed in (or away from) a specific location is premature and cannot be agreed given the northern connection point will be dictated by the appeals relating to the MLR. To seek to agree the exact connection point without these appeals being resolved would, in my opinion, be unwise.

⁵¹ In terms of the WLR submissions FS07 by Middle Trust Ltd on behalf Trustee for Tyne Trust "Our position remains that the Wester Link Road should intersect with the Matakana Link Road" refer Appendix 4.

269. In terms of the WLR alignment within the site, the final position will impact on the zoning approach either side of the WLR corridor, particularly to the east adjacent to Hudson Road dependent on the amount of residual land. Consequently, I am of the view that more certainty from the SGA in this regard is needed to allow the PPC25 to progress. In the absence of this, a situation could arise where the residual land is not sufficient to achieve a practical industrial zone and alternative zonings would then need to be considered (such as those sought within the notified PPC25).

270. Indeed, the WSP identifies the importance of the alignment on the rationale for zoning to the east of the WLR where it states:

“Any refinement/shift in the alignment of the Western Link Road through the detailed investigation for the designation will have flow on effects on the zoning as the road is used as the method to separate the industrial land from the residential land.”⁵²

271. A number of submissions seek to have certainty on the WLR route and then also seek to require development to not proceed until the WLR is built⁵³. However, this relief is not realistic in my opinion and a better approach is to await confirmation of the corridor and connection location and funding arrangements before PPC25 can proceed. For these reasons the submissions are only accepted in part being in respect of having certainty of the WLR alignment.

Recommendations on Submissions

272. That **submissions 7.1, 13.4, 14.4, and 15.2 be rejected** for the reasons outlined above.

273. That **submissions 12.9, 16.24, 22.3, 22.4 and 24.1 be accepted** for the reasons outlined above.

274. That **submissions 17.1, 24.4 and 27.2 be accepted in part** for the reasons outlined above.

10.2.4. Precinct Road Connections and Internal Road Layout

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
2.3	C and C Ranum	Remove references to the indicative road linkages to Viv Davie Martin Drive, particularly the one by 12 Viv and convert to cul-de-sacs.	FS02 – Oppose FS04 – Support in part FS05 - Support	Reject
3.2	R White	Delete the indicative road linkages to the Viv Davie Martin Drive area	FS02 – Oppose FS04 – Support in part FS07 - Oppose	Reject
8.1	R Brereton	Replace all connecting roads with cul-de-sacs that terminate at the boundary to Vivi Davie Martin Drive area	FS02 – Oppose FS04 – Support in part FS05 – Support	Reject
11.1	R and M Sikora	Provide new road	FS02 – Support	Reject

⁵² Page 48, adopted Warkworth Structure Plan, June 2019

⁵³ Submissions 17.1 and 24.4 refer Appendix 4.

		connections through to Viv Davie-Martin Drive on bare land and not through developed properties	in part FS04 – Support in part FS05 – Support Part	
12.11	Auckland Council	Amend Precinct Plan 1 to show an indicative layout for the 'potential future road connections'	FS02 – Support FS04 – Support FS05 – Oppose FS07 – Support	Accept
12.12	Auckland Council	Amend to include a collector road as shown in the WSP which includes separated walking and cycling provision	FS02 - Support FS04 – Oppose in part	Accept
16.18	Auckland Transport	Amend precinct plan to show indicative locations for collector roads and to require the provision of cycle facilities and vehicle access controls along the collector.	FS04 – Support FS07 – Support	Accept
21.1	D Oliver	Remove future roads to Viv Davie Martin and convert to cul-de-sacs.	FS02 - Oppose FS04 – Support in part FS05 – Support FS07 – Oppose	Reject
23.2	Turnstone Capital Ltd	Amend precinct plan 1 by deleting one of the indicative road connections through to Viv- Davie-Martin Drive.	FS02 – Oppose FS03 – Oppose FS05 _ Oppose in part	Accept

275. Submissions noted above relate to all other non-WLR road networks, connections and form in respect of the PPC25 area. Some submissions are seeking the removal of road connections, whilst others are seeking that additional connections are shown. There are a variety of further submissions either supporting or opposing the relief sought above.
276. In its further submission, TCL supports and opposes a variety of them, though principally supports the indication of collector roads, provision of cycle facilities and access controls to these roads. It is not clear if TCL's support is only in respect to the Stubbs Farm portion of the site rather than the whole PPC25 area.
277. The further submission from AT opposes the relief sought by TCL under 23.2 above as whilst it supports retaining the connection as amended it identifies that the precinct provisions need to be more robust in respect of "future road connections". NZTA also opposes the deletion of the linkage under submission point 23.2 above as it states that provision of future linkages is required for a resilient transport system.

Discussion

278. At present the road network shown within the PPC25 area is that shown on the precinct plan, and is limited to the potential road connections within the Stubbs Farm site (Sub-precinct A) and the indicative network as shown on the stormwater management precinct plans. The latest version of this is attached to the TCL submission within **Appendix 4** and included in **Figure 16** below. The latest ITA does not appear to include a plan of the indicative internal road network for PPC25. Though a layout appears to be shown on an overlain WSP plan attached to TCL submission. Consequently, it is not possible to clearly understand the alternative location or layout of the collector loop to allow a comparison to the network as shown on the WSP.

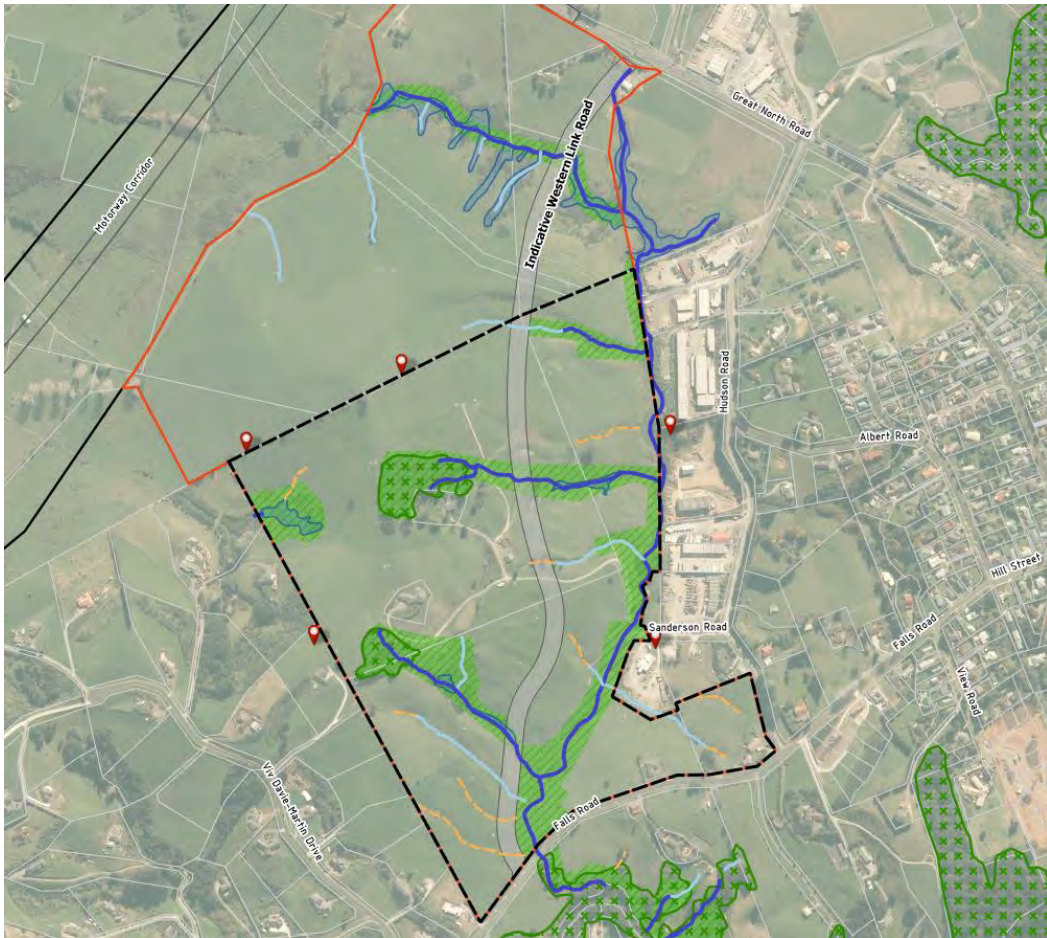


Figure 16: Potential Road Connections Proposed Precinct Plan 1 (Source: Submission 23, Turnstone Capital Ltd)

279. A road network plan was included with the SGA ITA which informed the adopted WSP (refer **Figure 17** below). This aligns with what is included on the WSP document.
280. Both AT and Auckland Council submissions seek that the internal road network be shown on the precinct plan and as raised in other submission topics for the precinct to be applied to the full PPC25 area, not just the Stubbs Farm portion of the site. These submissions are supported by NZTA in the further submissions where they state that *“the provision of linkages will help provide for a resilient and multi-modal transport system”*.
281. All submissions have been reviewed by Mr Peake who supports the positions outlined by Auckland Council and AT above. The assessment identifies that anticipated roads with a collector function should be included on a precinct plan as indicative to give a likely pattern of roading on the site. Furthermore, provisions should be included that describe the potential cross section of the roads. I agree with the assessment made by Mr Peake.



Figure 17: Attachment C: Figure 36 Proposed Transport Network Map, Supporting Growth Alliance ITA, WSP

282. A number of submissions have been made from Viv Davie Martin Drive residents seeking the removal of the potential road connections shown on precinct plan 1. It is noted that the notified PPC25 included two future connections, whereas submission 23 from TCL seeks to remove one of these connections. It is not entirely clear on the further submission from NZTA in opposition to the relief sought by TCL to only provide one connection, as the SGA ITA only identifies one.
283. The concerns raised in the submissions relate to a desire to only provide for cul-de-sacs in the same position and that connections are not critical to the network and give uncertainty to the local residents of Viv-Davie-Martin Drive. I acknowledge these concerns but, given the WSP identifies that the Viv Davie Martin Drive area will be rezoned (albeit in one of the latter stages of Council initiated plan changes), a well-connected network will be necessary to achieve this.
284. Consequently, if a potential connection is not signalled now prior to any urbanisation of the PPC25 area then this outcome could be precluded in the future and the future outcomes for this area limited as a result. This would not be a position supported by

the RPS⁵⁴ and the need to use land efficiently and integrate land uses. The ultimate number and location of connections will in part depend on the final form of any rezoning of the Viv Davie Martin Drive area, and would generally need to have a landowner willing to facilitate development in order for it to occur. However, if it is precluded from the outset then trying to achieve it after urbanisation would likely be more disruptive and costly.

285. Notwithstanding the above I do agree that only one connection needs to be safeguarded or provided for, and that both of the two shown in the notified PPC25 are not necessary. This would align with the ITA undertaken by SGA that informed the WSP. On this basis, I support the relief sought by AT and Auckland Council to maintain a connection as outlined by the WSP.

Recommendations on Submissions

286. That submissions **2.3, 3.2, 8.1, 11.1 and 21.1 be rejected** in so far as they sought to have no connections to Viv Davie Martin Drive for the reasons identified above. Notwithstanding the above I do accept the removal of one connection to Viv Davie Martin Drive below.

287. That **submissions 12.11, 12.12, 16.18 and 23.2 be accepted** for the reasons identified above. An amended precinct plan that encompasses the whole PPC25 area needs to be updated to illustrate the potential road connections (including only one connection to Viv Davie Martin Drive), the collector roads, and the WLR⁵⁵.

10.2.5. Transport Related Precinct Provisions

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
9.4	Dr I Topham	Streetscape design to include grassed berms between road and footpath, street trees and dedicated cycle areas	FS02 – Support in part FS04 -Oppose	Accept in part
10.4	B Woolsey	Provide adequate off-street parking for housing	FS04 – Support in principle	Reject
16.6 16.7 16.8	Auckland Transport	Delete some and add new objectives and policies to the precinct	FS01 – Oppose FS03 – Support FS04 – Support in part	Accept
16.9 16.10 16.11	Auckland Transport	Amend activity table of precinct to add clarity and amend activity status.	FS04 – Support in part	Accept
16.12	Auckland Transport	Delete rule I5.5 Notification	FS03 – Support FS04 – Support in part	Accept
16.13 16.14	Auckland Transport	Amend Standards 11.6.1	FS04 – Support	Accept
16.15	Auckland Transport	Amend Standard I1.6.3	FS04 – Support in part	Accept
16.16	Auckland Transport	Additional standard for limited access to the WLR	FS03 – Support FS04 – Support in part	Accept
16.17	Auckland Transport	Additional standard for limited access to SH1	FS03 – Support FS04 – Support in part	Accept

⁵⁴ RPS policy reference B2.2.2.(2) and B3.3.2.(1)

⁵⁵ The WLR needs to be shown as agreed by SGA as recommended at section 10.2.3 of this report.

		(apart from the WLR connection)		
16.19	Auckland Transport	Amend precinct to allow for the temporary park n ride in the northern part of the PC25 area.	FS03 – Support FS04 – Support in part	Reject
16.20	Auckland Transport	Amend the precinct plan to add provisions which discourage or restrict cul-de-sacs.	FS04 – Oppose	Reject
16.21	Auckland Transport	Amend subdivision assessment under I1.8 to be more robust in terms of transport outcomes	FS03 – Support FS04 – Oppose	Reject
16.27	Auckland Transport	Amend Assessment Criteria and special information requirements to ensure impact of heavy construction vehicles assessed.	FS04 – Oppose	Reject
22.2	NZTA	Amend precinct plan to identify a vehicle assess restriction to SH1.	FS01 – Oppose ⁵⁶ FS02 – Support FS04 – Support	Accept
22.6 22.7 22.8	NZTA	Seeks amendments to a number of objectives	FS02 – Support in part FS04 - Support	Accept
22.9 22.10 22.11	NZTA	Amend the activity table.	FS02 – Support/ Support in part FS04 – Support	Accept
22.12 22.13	NZTA	Delete notification rule I1.5.(a) and I15.(1)	FS02 – Support FS04 – Support in part	Accept
22.14	NZTA	Amend Standard I16.1. Standard WLR	FS02 – Support FS04 – Support	Accept
22.15 22.16	NZTA	Amend matters for discretion and assessment criteria.	FS02 – Support in part FS04 – Support FS05 – Support in part	Accept

288. These submissions seek relief to add a number of transport related precinct provisions in terms of precinct description, objectives, policies, standards, matters for discretion and assessment criteria. The majority of these submission points are raised by AT and NZTA as the roading authorities.

289. Through the further submissions process TCL has identified submissions that they support and oppose, with differing relief as outlined in the table above.

Discussion

290. The majority of the relief sought above from AT and NZTA in respect of the transport related matters within the precinct provisions has been supported via TCL's further submissions. I agree with the majority of these changes and considered that they make the framework more robust. Therefore, I recommend that they should be

⁵⁶ The further submission from Warkworth Properties Ltd is not clear on the submission point it is opposed to from the NZTA submission.

included. However, there are a number of matters which are not supported by TCL which I consider in turn below.

291. Submission point 9.4 is seeking relief in terms of the streetscape design relating to berm provision, street trees and dedicated cycle ways. There are elements of this that will be determined by the various AT design documents such as ATCOP and by the preference of the Council Parks Department. On this basis, some elements of the streetscape design do not need specific provisions. However, I agree that there are other elements of the streetscape where there is merit in having some site-specific provisions, such as for the identified separated cycling along the collector routes. This is a position supported by Mr Peake's assessment.⁵⁷
292. Submission point 10.4 seeks relief that adequate off-street parking is provided. The AUP(OP) provides parking requirements under Chapter E27 for different land uses and zones. It is considered that these were well tested via the IHP process for the AUP and can be relied upon for future development. On this basis I do not support the relief sought as the AUP(OP) already addresses this matter.
293. The notification provisions 11.5. proposed within the PPC25 precinct are not supported by AT or NZTA as these provisions seek to prevent notification if the WLR is not constructed in accordance with the precinct plan and cross section. Given the level of interest in the alignment of this road and the pivotal nature of it in terms of other planning matters, I support the relief sought by AT and NZTA and do not consider the provisions are appropriate.
294. The need to have limited access to SH1, WLR and the new internal collector roads are all identified in the submissions above. TCL appears to support these in principle, though identifies whether for the arterial roads (being WLR and SH1) a provision is necessary given the underlying vehicle access restrictions of Chapter E27 which require consent for new crossings on arterial roads identified on the planning maps⁵⁸. It is not clear why NZTA and AT are not comfortable with these underlying provisions. It may be because WLR will be staged, so will be a collector road initially and therefore not subject to E27 unless the planning maps are undated to show it as an arterial as part of the PPC25, or it may be just to more clearly confirm that access is to limited given the importance and status of the road corridors at these points. This is something that both parties may wish to elaborate further on at the hearing.
295. My opinion on the matter generally is that if a level of control is already provided for within the AUP(OP) then, unless there are site specific circumstances, the AUP should be relied upon. That said, I am aware of other precincts which have similar provisions and it could be argued that this gives clarity to any reader of the precinct plan. Certainly, in respect to any future collector roads, there is a need for there to be an access control given the desire to have separated cycling which the AUP would not provide at present. Given the clear site specific need to restrict access along SH1, WLR and the new collectors I support the limited access provisions sought by NZTA and AT.
296. On the submission points raised by AT at 16.20 and 16.21, the AUP(OP) already allows for the consideration of these matters via the subdivision process and in particular reference to policies E38.3.(10), (11) and (15). These provisions will ensure a connected road network and block layout. Therefore, based on the information to date I do not agree that additional provisions are necessary.

⁵⁷ Page 9, Specialist Memo, prepared by Martin Peak and dated 23 September 2019

⁵⁸ E27.6.4.1(c)

297. In terms of construction impact on existing roads (raised by AT under submission point 16.27) I agree with TCL that the consenting process will manage this via conditions of consent.
298. Submission point 16.19 seeks relief to identify a park n ride in the northern part of the PPC25 area. It is not clear where this would be located, nor is there clarity about the timing and the exact amendment that would be sought to the precinct. AT may wish to elaborate on this further at the hearing. However, at this stage I do not have enough information to be able to establish if this is necessary and I note that AT has powers of designation that would normally be the mechanism used to provide for such public works.

Recommendations on Submissions

299. That **submissions 10.4, 16.16, 16.17, 16.19, 16.20, 16.21, and 16.27 be rejected** for the reasons identified above, as the AUP already provides a framework for the majority of these matters. In respect to the park n ride it is not clear what AT is seeking and further exploration at the hearing is necessary. I acknowledge that access controls are needed for SH1 and WLR. However, it is not clear on the basis of the information before me why the AUP(OP) Chapter E27 does not provide a sufficient framework for managing access.
300. That **submissions 9.4, 16.6 to 16.17 (inclusive), 22.2 and 22.6 to 22.16 (inclusive) be accepted** for the reasons identified above. Amended precinct plan provisions will need to be prepared and this is identified in **Appendix 5** below. Further discussion on the need for access control can be addressed by the submitter at the hearing.

10.2.6. Pedestrian Cyclist Routes

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
8.4	R Brereton	Support additional plantings with walk/ cycleways connecting to the existing A & P showgrounds and Mansel Drive	FS04 – Support in part	Accept
12.8	Auckland Council	Include pedestrian connections as shown on the Warkworth Structure Plan or similar with provisions stating they will be provided by the developer	FS02 – Support FS03 – Support FS04 – Oppose	Accept
24.6	Warkworth Liaison Group	Confirm the proposed walkways and cycleways.	FS02 - Support	Accept

301. All submissions seek to ensure a walkway and cycleway network and connections are provided on the PPC25 land and, in particular, the Auckland Council submission seeks to ensure these are delivered by the developer.
302. The further submission by TCL identifies that the pedestrian connections are shown on the draft indicative Master Plan attached to the further submission as they relate to the

Stubbs Farm portion of the site. TCL contends that this outcome can be achieved by operation of the existing AUP provisions at the time of subdivision and/or development.

303. AT and NZTA both make further submissions in support of Council as pedestrian linkages will support a multi-modal transport system.

Discussion

304. There are a number of synergies between this topic and the matters raised regarding open space zoning, urban design and streams. The walking and cycling network as shown in both the further submission from TCL and the WSP rely on stream corridors and open space for the provision of walkways and cycling. The wider network and the ability for the site to connect into these will be important to ensure that the neighbourhood is well connected and therefore alternative transport modes are possible.



Figure 18: Warkworth Structure Plan - Active Transport Network (Source: adopted WSP, June 2019)

305. The widening works at SH1 will see the provision of cycle ways into Warkworth Town Centre and there is an aspiration to be able to connect the showgrounds to Mansel Drive⁵⁹.
306. The WSP identifies that an important aspect of infrastructure to support the new urbanised areas will be the need to prioritise:

⁵⁹ Refer Submission 8.4.

“active transport in Warkworth through a separated walking and cycling network providing connectivity to new and existing centres, employment areas, schools and public transport stations”⁶⁰

307. The greenway network for the area was incorporated into the WSP and is reproduced in part above in **Figure 18**. The approximate location of the PPC25 area is included on the figure and the plan illustrates the network sought, which includes walkways along the main stream and along the collector roads and WLR.
308. **Figure 18** above shows that the closest school in proximity to the site is Warkworth Primary School further up Hill Street so the connections through Falls Road and up into Hudson and Albert Road will be important to allow for alternative transport modes away from vehicle dependence. This would necessitate roading upgrades to Sanderson Road and Hudson Road to provide a crossing point from the PPC25 area and footpath/cycle facilities. Further, any ability to walk to the temporary park n ride facility in proximity to the site would require upgrades to the network. Therefore, the need to identify and provide for active modes in the precinct is important and it is anticipated that the new ITA that is being prepared will identify the upgrade works required to service the land in terms of these modes.
309. The Warkworth North Structure Plan prepared by TCL identifies ‘indicative’ pedestrian walkways along the stream and across to Sanderson Road (see **Appendix 2** and **Figure 2** above). It is noted that the WNSP does not include any indicative walkways on the northern part of the stream.
310. Mr Peake has recommended that the walking and cycling facilities are essential and are needed to achieved an integrated transport network on the site. The majority of these facilities will be provided on the new road network and the SGA ITA from the WSP identifies separated cycling facilities on both the WLR and the new collector roads. Consequently, Mr Peake recommends that the key cycling and walking routes should be shown on the precinct plan alongside suitable provisions for the precinct in terms of delivery. This position supports the relief sought by AT above and I agree that is it appropriate given the importance of having surety that the network will be delivered, and particularly important given some facilities will be provided via the open space networks alongside the streams.
311. In terms of urban design, Ms Mein identifies that there is limited detail within PPC25 on the location of roads, walking and cycling facilities. She agrees with the Auckland Council submission that an indicative layout should be included on the precinct plan to illustrate the high level of connectivity intended and this should be drawn into the objectives and policies of the precinct⁶¹.
312. TCL considers that the existing AUP provisions will enable achievement of the pedestrian network identified in the masterplan, presumably via the Chapter E27 and Chapter E38 subdivision provisions though the activity status and matters for discretion will guide the matters for consideration. The reliance on the AUP does mean that any works along the stream corridors would not necessarily be captured as the esplanade requirements within the AUP(OP) do not appear to require the provision of a walkway or pedestrian facility. This gap will be discussed in more detail below in terms of riparian enhancement submissions.

⁶⁰ Page 4 of the Warkworth Structure Plan, June 2019

⁶¹ Page 13, Urban Design Specialist Memo, prepare by Lisa Mein, dated 3rd October 2019

313. On the basis of all of the above I agree that a network of walking and cycle ways alongside precinct provisions for delivery, in particular along the main streams, should be identified on a precinct plan that covers the full PPC25 area in general accordance with WSP. This would sit alongside the earlier recommendation to identify the roading network layout on the precinct plan which was discussed in section 10.2.4.

Recommendations on Submissions

314. That submissions **8.4, 12.8 and 24.6 be accepted** for the reasons given above. This will require detail of these linkages being identified on a precinct plan and require supporting provisions.

10.3. Submissions on the Zoning Approach

315. It is important to bear in mind that, given the earlier submissions on transport and infrastructure related matters in section 10.2 above, the consideration of the best zoning approach is premature in my opinion given that the actual transport related effects are dependent on the density of the zonings sought. In principle the zoning amendment on its own may have merit but it is not yet known if the transport generation anticipated by the combination of proposed zoning is acceptable. Ultimately it is dependent on the transport matters being satisfactory resolved and cannot be considered in isolation from this position given the co-dependence that exists. It is understood that the applicant is currently preparing a subsequent or updated ITA, however this s42A report has had to consider the original ITA from May 2019.
316. Rather than outlining this position again under each theme below it is described here at the start of the zoning submission assessment section, but is an important factor in reaching any recommendations made below.

10.3.1. Submissions on the provision of a neighbourhood centre

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
2.5	C Ranum and Carly	Land identified as neighbourhood centre is zoned as local centre	FS02 – Oppose FS03 - Oppose	Reject
3.4	R White	Land identified as neighbourhood centre is zoned as local centre	FS02 - Oppose FS03- Oppose FS04 – Support	Reject
8.2	R Brereton	Confirm zoning of land for a neighbourhood centre		Accept
12.6	Auckland Council	Reduce the site of the proposed neighbourhood centre to no more than 1,500m ²	FS02- Support FS04 - Oppose	Accept
14.2	Goatley Holdings	Support provision of a LCZ rather than a NCZ	FS02 – Oppose FS03 – Oppose	Reject
23.1	Turnstone	Delete the Business - Neighbourhood Centre zone (3,000m ²) and zone the land as Residential - Mixed Housing Urban Delete part of the Residential - Mixed Housing Urban zone and	FS02 - Oppose FS03 - Oppose	Reject

		zone the land as Business - Local Centre (5.7ha) and Open Space - Informal Recreation		
26.2 30.2 32.2 33.2 34.2 35.2 36.2	A Rodgers D Mei T Walkington L A Rodger M A Rodgers N Rodgers S Liang	Confirm the zoning of a local centre from the Turnstone submission.	FS02 - Oppose FS03 - Oppose	Reject
37.1	Mahurangi Action Incorporated	Do not fundamentally alter the direction of the Warkworth Structure Plan without robust evidence demonstrating an overall better local and regional outcome is achieved.	FS03 – Support	Accept

317. The majority of submissions above are seeking to amend the zoning of the neighbourhood centre from the notified PPC25 to local centre as shown in submission 23. It appears that some submitters may have known about the submission that was being made by Turnstone. Auckland Council seeks to reduce the site of the proposed neighbourhood centre from 3,000m² to 1,500m² to align with the adopted WSP.

Discussion

318. The crux of the matters raised in the submissions is the importance of ensuring that the existing Warkworth Town centre continues to be the focal point for Warkworth. This is a central aspect of the recently adopted WSP. This approach seeks to maintain the primacy of the centre and the related hierarchy to ensure that the growth within the FUZ builds on the existing centre rather than undermines it. This is of particular importance given that PPC25 appears to move in a different direction to the WSP, and potentially undermines that document and the process of community engagement that gave rise to it.

319. I have read all the economic assessments from both TCL as part of the s32 evaluation report and the submission, those that supported the WSP, and the assessment provided by Mr Foy in reviewing PPC25. I note that the economic assessment by McDermott Consultants that supported the s32 evaluation report for the notified PPC25 states that the residential density proposed only warrants retail provision of between 1100-1300m² GFA.⁶² Furthermore, the s32 evaluation outlines a number of positive effects from such provision which would ensure that the retail opportunities would not detract from the Warkworth Town Centre⁶³. It is not entirely clear why the amended position is now sought by Turnstone, but it is apparent that the local centre sought through the submission is seeking to serve beyond the PPC25 area and raises questions about some of the objectives and policies assessment undertaken in the s32 evaluation.

320. Mr Foy identifies in his assessment that there is only a need for a centre that meets the day to day needs of the future residential community, and that the appropriate size of such a centre would be 3,000m² in land area and up to 1,500m² GFA. This aligns with the work undertaken to support the WSP. In terms of the extent of LCZ sought via the TCL submission, this would allow for a centre of some considerable size with a

⁶² Page 27, Warkworth North Proposed Plan Change: Economic Assessment, prepared by McDermott Consultants, January 2019

⁶³ Page 32, S32 Report, prepared by Barkers and Associates, dated 21 January 2019

GFA comparable to Albany Mega centre or the Silverdale centre.⁶⁴ Moreover, Mr Foy highlights that *“there has been no assessment undertaken in relation to the potential effects of any larger potential centre (e.g. the Local Centre proposed in the Turnstone submission).”*

321. Indeed, the relief sought by TCL to increase the size of the LCZ to around 5.5ha goes well beyond the direction of the WSP and is a 19-fold increase on the extent of neighbourhood centre zoning notified within PPC25. I disagree that the catchment area warrants this size of LCZ. Rather, the catchment size is such that the centre needs only to provide for retail facilities such as small convenience shops, and perhaps a café and healthcare facility. There are a number of permitted activities within the NCZ allowing for a flexible range of local convenience needs. The remainder of the servicing needs should be delivered by the existing town centre to ensure its function is reinforced rather than diluted. I appreciate the desire to achieve some community uses, however these do not rely on a LCZ. I note that the adjacent MHU zone sought under both the notified version of PPC25 and under the TCL submission anticipates non-residential community uses as a restricted discretionary activity⁶⁵ and indeed it is not uncommon to see community uses provided for on open space zoned land.
322. One matter that is not clear in the above assessments is whether the intensified residential zoning sought by TCL submission (if agreed as being appropriate) would warrant a small consequential increase to the 1,500m² GFA NCZ in order to support a larger residential community. This may be something that commissioners may want to explore with the relevant economic specialists at the hearing.
323. Putting aside the extent of centre zoning arguments above, the next most important factor in my opinion is ensuring that the centre is centrally located to the new neighbourhood or community that it is intended to serve and that any indicative extent of Open Space Zone (**‘OSZ’**) is located alongside the centre. Ms Mein raises this in her assessment and in particular identifies that whilst the TCL submission may have urban design merits in terms of vibrancy the ultimate form of WLR will result in a barrier separating any centre from the adjacent community. I agree with the concerns raised by Ms Mein in this regard and consider that the WLR needs to have certainty in terms of both alignment, form and cross section before the location of any centre can be determined. Consequently, this means that the zoning and discussions around it are premature in my view.
324. The submission made by Auckland Council raises concerns about the importance of maintaining the primacy of the town centre. I agree with these concerns and prefer the evidence of Mr Foy in this regard that supports the outcomes sought by the adopted WSP.

Recommendations on Submissions

325. That submissions **2.5, 3.4, 12.6, 14.2, 23.1, 26.2, 30.2, 32.2, 33.2, 34.2, 35.2 and 36.2** be rejected for the reasons identified above.
326. That submissions **8.2, 12.26 and 37.1** be accepted for the reasons identified above and that the NCZ as shown on the notified PPC is maintained in terms of area. The location of this zoning is dependent on the final alignment and form of the WLR which

⁶⁴ Page 5, Market Economics Specialist Memo, dated 20 September 2019

⁶⁵ Activity (A20) under Activity Table H5.4.1

is not yet known. Consequently, I reiterate my concern above that this means that the zoning and discussions around it are premature.

10.3.2. Submissions on the provision of business zoning across the PPC area

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
10.1	B Woolsey	Confirm Business- Light Industry zone is not extended over the stream from Hudson Road	FS07 – Oppose	Reject
11.2	R and M Sikora	Locate additional light commercial/ industry north of Warkworth or south of Woodcocks Road area.	FS03 – Support in part FS07 – Oppose	Reject
12.2	Auckland Council	Zone the land between the proposed new WLR and the Light Industry zoned land along Hudson Road to Falls Road as Light Industry	FS02 – Support FS03 – Support FS04 – Oppose FS07 – Oppose FS08 – Support	Accept
12.3	Auckland Council	No provision of the following business zones within the PC25 areas – General Business, Mixed Use or Business Park Zones.	FS02 – Support FS04 – Oppose FS07 – Oppose FS08 – Support	Accept
13.1	Middle Hill Ltd as Trustee to Tyne Trust	Rezone the land identified as Business; Light Industry zone as notified to Business Mixed Use zone	FS02 – Oppose FS03 – Support FS08 – Oppose	Reject
13.2	Middle Hill Ltd as Trustee to Tyne Trust	Rezone land identified as BLIZ to MHU.	FS02 – Oppose FS03 – Oppose FS08 – Oppose	Reject
14.1	Goatley Holdings	Oppose BLIZ in PPC25	FS03 – Oppose FS07 – Support FS08 – Oppose	Reject
15.1	Warkworth Holdings Ltd	Rezone portion of site from LIZ to MHU	FS02 – Oppose FS03 – Oppose FS04 – Support FS07 – Support FS08 – Oppose	Reject
16.1	Auckland Transport	Demonstrate that the differences in business zones land within PC25 compared to WSP will not impact on the ability for the Warkworth area to be self-sufficient for employment	FS03 – Support FS04 – Oppose	Accept
17.2	W and H Massey	Seek no industrial zoning to stream verges.	FS07 – Support FS08 – Oppose	Reject
20.1	Atlas Concrete	Reject PC25 or amend zoning to align with WSP particularly as it relates to 24 and 26 Hudson Road.	FS03 – Support FS04 – Oppose FS07 – Oppose	Accept
23.1	Turnstone	Delete the Light Industry zone, except for the two existing sites to the south of Sanderson Road, and zone the remaining land as Business - General Business (an extension of the existing live	FS02 – Oppose FS03 – Oppose FS07 – Support FS08 – Oppose	Reject

		zoning) and Business - Mixed Use zones		
		Delete the Residential - Mixed Housing Suburban zone, along the Falls Road frontage, east of the stream, and zone the land as Business - Mixed Use	FS02 – Oppose	Reject
24.5	Warkworth Area Liaison	Confirm the residential zoning on the land to the west of the Mahurangi River and the existing Hudson Road industrial land.	FS08 – Oppose	Reject
25.1	Forest and Bird Warkworth Area	Confirm residential zoning on the land to the west of the Mahurangi River and the existing Hudson Road industrial land.	FS08 – Oppose	Reject
27.1	A and S Haycock	Confirm residential zoning on the land to the west of the Mahurangi River and the existing Hudson Road industrial land as sought by submission 23.	FS08 – Oppose	Reject
26.2 30.2 32.2 33.2 34.2 35.2 36.2	A Rodgers D Mei T Walkington L A Rodger M A Rodgers N Rodgers S Liang	Confirm the BMU zone and MHSZ as sought in the Turnstone submission.	FS02 – Oppose FS03 – Oppose	Reject
37.1	Mahurangi Action Incorporated	Do not fundamentally alter the direction of the Warkworth Structure Plan without robust evidence demonstrating an overall better local and regional outcome is achieved.	FS03 – Support FS08 – Support	Accept

327. There are a number of submissions about the extent of business or employment zoning across the PPC25 area. This is also complicated by the Turnstone submission which seeks further relief to amend the employment zones from the notified version of the PPC by introducing the Business Mixed Use Zone ('**MUZ**') to replace the majority of LIZ across the site.

328. There are as expected a number of further submissions opposing and supporting the different relief matters sought. It is noted that AT and NZTA further submissions oppose given a supporting Integrated Transport Assessment has not been provided to assess the transport effects associated with the relief sought to amend the notified zonings. This matter is discussed at the start of section 10.3.

Discussion

Industrial Land Supply and Light Industry Zoning vs. Mixed Use Zoning

329. Like the discussion on the previous matters, the merits of the extent of LIZ have been traversed in depth earlier in this s42A report and the same arguments apply in considering the merits of the submissions made.

330. One of the planning principles of the WSP is to create ‘a place to live and work’⁶⁶ and to achieve this by providing a range of local employment areas within the FUZ to ensure that people are able to work and live locally rather than relying on commuting for work, and thereby allowing for Warkworth to be more self-sufficient.

331. In order to achieve this principle, the WSP has identified additional areas of industrial zoning comprising 66ha(gross)⁶⁷ and a number of small centres⁶⁸. The land that is suitable for such zoning has been considered and the WSP identifies that:

“new industrial areas are generally required to be located on relatively flat land, have efficient access to freight routes, and be efficiently served by infrastructure. Their location needs to also consider reverse sensitivity effects by not located close to sensitive activities (e.g. High density residential, schools)¹⁶ and not enabling sensitive activities to establish adjacent to industrial areas”⁶⁹

332. The portions of the site that have been identified as LIZ under the WSP (see **Figure 3** in section 1.6.2) are discussed in detail at section 3.3.5.1 of the WSP document and comprise 20ha. They have been chosen given the contour of the areas shown is relatively flat, the proximity to the motorway interchange currently under construction and the WSP identifies that:

“Adjoining new industrial land with established industrial areas limits the interface of the new industrial land with potentially sensitive used and allows industrial activities to co-locate”⁷⁰

333. The notified PPC25 identified 13ha of LIZ, which would then be reduced to 1.7ha under the relief sought by TCL, solely encompassing the two existing properties on Sanderson Road. The submission instead introduces the Business Mixed Use Zone (MUZ) with 16.3ha of land identified for this purpose and a small incremental increase in GBZ across the two properties adjacent to SH1.

334. The MUZ is a broad and flexible zone, with a number of permitted activities including dwellings, retail and service activities, and no specific mix of uses nor any specific standards that limit ground floor residential use.⁷¹ In practice therefore, it is possible to utilise the MUZ to provide purely for high density residential use. It is for these reasons that the zone description identifies that it is located in close proximity to the Town Centre zone and the public transport network, and that the sites provide a transition to residential uses. Consequently, a review of existing live-zoned areas of MUZ indicates that it is typically found adjacent to centre zones or higher intensity residential zones unless there is an adjacent character overlay.⁷² Given this flexibility in uses, there is the potential to get limited employment activities out of the MU zoning and it certainly cannot be relied on to achieve this.

335. Having read all the economic assessment that is available, the key considerations in making a recommendation on the relevant submissions is the need for Warkworth to be self-sufficient in terms of employment alongside supporting the existing town centre. I note from a review of the new zoning proposed by the WSP for the FUZ that approximately 915ha is identified as residential zones and only 66ha as employment

⁶⁶ Page 17, adopted Warkworth Structure Plan, June 2019

⁶⁷ Appendix 3, Yield Calculations, adopted Warkworth Structure Plan, June 2019

⁶⁸ Page 47, adopted Warkworth Structure Plan, June 2019

⁶⁹ Page 47, adopted Warkworth Structure Plan, June 2019

⁷⁰ Page 48, adopted Warkworth Structure Plan, June 2019

⁷¹ Refer H13.6 Standards, Chapter H13 Business, Mixed Use Zone, AUP (OP)

⁷² Great North Road interface along Ponsonby/ Grey Lynn/ Arch Hill Borders.

land (gross).⁷³ I acknowledge that there are additional employment areas that are already live zoned (including the existing Town Centre), however in my mind it places high importance on the need to carefully consider any proposal that seeks to reduce the future employment land supply, given that the overwhelming proportion of land to be released under the WSP is clearly for residential zoning.

336. Mr Foy identifies in his assessment that:

“It remains our opinion that the area of LIZ proposed in the WSP in total, and within the PPC25 specifically, is not excessive in the context of future demand for employment opportunities and the role Warkworth will play on the sub-regional economy, and so we disagree with PPC25’s position the LIZ provision in the WSP is excessive”⁷⁴.

337. Whilst I note the arguments put forward by the TCL economist, I prefer the evidence of Mr Foy and the outcomes sought by the adopted WSP. Those outcomes take account of the future growth of Warkworth and seek to manage long term employment supply rather than just the first release of FUZ zoned land.

338. The further submissions from AT and NZTA all raise concerns about changes to the employment land in terms of the impact of any loss of employment land on the transport assessments undertaken for the WSP, which seek to reduce commuting and allow for self-sufficiency.

339. Submission point 11.2 seeks relief to locate LIZ elsewhere either further north of Warkworth or at Woodcocks Road. PPC25 is privately initiated and needs to be considered on its merits, and cannot be extended to other sites that fall outside of the PPC25 area.

340. On the basis of the above and given the evidence of Mr Foy, as a matter of principle the need to align the employment land within PPC25 and the adopted WSP is integral to the ability for Warkworth to attain the self-sufficiency for growth it is seeking through the WSP.

Interface with Stream Corridor

341. A number of the submissions relate to the desire to achieve the outcome illustrated on the submissions made by TCL in terms of getting a better design outcome and relationship to the stream corridor. Other submitters (such as Atlas Concrete and Auckland Council) raise concerns about reverse sensitivity. In terms of the urban design outcomes this has been considered by Ms Mein who advises that:

“the critical issue in terms of the stream interface is having a well-defined, and accessible walkway (and possibly cycleway) adjacent to the stream with regenerative planting immediately adjacent to the stream”⁷⁵

Ms Mein goes on to identify that she supports the OSZ sought via the submission and the indicative open space network along the streams. However, she concludes that *“the type of zoning next to the open space network is less important”⁷⁶* and states that residential zoning on its own does not guarantee a positive outcome. Rather, PPC25

⁷³ Appendix 3, Yield Calculations, adopted Warkworth Structure Plan June 2019

⁷⁴ Page 7, Market Economics Specialist Memo, dated 20 September 2019

⁷⁵ Section 5, page 8, Specialist Urban Design Review, prepared by Lis Mein and dated 3 October 2019

⁷⁶ Section 5, page 8, Specialist Urban Design Review, prepared by Lis Mein and dated 3 October 2019

needs to provide for a well-connected network of linear open spaces and have precinct provisions to ensure that this eventuates.

342. My initial response generally in respect of a stream interface matter would be a preference for residential uses or the alignment of roads along at least one side. However, for this site it is not as simple as this, as one needs to refer back to the bigger picture of the WSP for guidance. Further, consideration needs to be given to the site characteristics which, as previously discussed, has a topography suitable for LIZ. There is a lack of flatter land generally in this part of the FUZ and the zoning response in this location will largely be driven by the alignment and form of the WLR.
343. At this stage the alignment, form and funding for the WLR are not known. Until this is established and agreed with the relevant parties⁷⁷ there is no clear understanding of the depth and form of the residual land adjacent to the stream. It is for these reasons that there is a sequence and process to land release and a need for comprehensive structure planning within the FUZ, to ensure all considerations are resolved to inform the zoning strategy. Indeed, the recently adopted WSP specifically identified the fact that the WLR alignment may impact on the zoning approach to this side of the stream.⁷⁸
344. On this basis I find any nuanced discussions around the best approach to zoning of this area of land to the west of the stream to be premature, as we do not yet know the alignment or form of the WLR. Whilst I agree that there is some urban design merit in the outcome sought via the submissions by TCL, I do not believe this can be considered in isolation from the discussion on the strategic land use planning for the entire FUZ area. I agree therefore with the arguments made by Ms Mein that the best approach to the stream interface does not necessarily rely on the zoning - rather the need to ensure the precinct delivers a well-connected stream corridor for walking/cycling and enhanced through planting and restoration, a response which would be required under either zoning scenario.

Reserve Sensitivity

345. The matter of reverse sensitivity is raised in submissions from both Auckland Council and Atlas Concrete (located at 24 and 26 Hudson Road)⁷⁹ who seek relief of amended zoning through this corridor to align with the WSP. Given the importance of retaining employment land in Warkworth, the matter of addressing reverse sensitivity issues is critical to maintaining the viability and operation of both existing uses and future employment land. I agree that insufficient information has been provided to adequately deal with this matter in terms of potential air quality and acoustic effects, and to inform the zoning approach under either the notified version of PPC25 or through the TCL submission. I would recommend that this matter needs to be analysed in more detail by the commissioners at the hearing.

Recommendations on Submissions

346. That submissions **10.1, 11.2, 13.1, 13.2, 14.1 15.1, 17.2, 23.1, 24.5, 25.1, 27.1, 26.2, 30.2, 32.2, 33.2, 34.2, 35.2 and 36.2** be rejected for the reasons identified above.

⁷⁷ NZTA, AT, Auckland Council and relevant land owners

⁷⁸ Section 3.3.5.1, page 48, adopted Warkworth Structure Plan June 2019

⁷⁹ Appendix 4 of the Report, Submission 20, Atlas Concrete

347. That submissions **12.2, 12.3, 16.1, 20.1 and 37.1 be accepted** for the reasons identified above and that the LIZ as shown on the WSP be amended on the PPC zoning and precinct plans. Notwithstanding this recommendation, the best fit for zoning across this portion of the site is dependent on the final alignment and form of the WLR which is not yet known (a fact which is identified in the adopted WSP)⁸⁰. Consequently, I reiterate my concern outlined at the start of the zoning submissions section that any discussions about zoning are in my mind premature until there is greater clarity on the quantum of land that will remain between the WLR and the stream.

10.3.3. Submissions on the provision of the remainder of residential zones across the PPC25 area

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
12.1	Auckland Council	Amend the provisions of PPC25 including zoning patterns to reflect the WSP.	FS06 - Support FS07 - Oppose FS08 - Support	Reject in part⁸¹
13.2	Middle Hill on behalf of Tyne Trust	Rezone land from MHSZ to MHUZ	FS02 - Oppose FS03 - Oppose	Accept
13.3	Middle Hill on behalf of Tyne Trust	Rezone land identified as SHZ to MHSZ	FS02 – Oppose FS03 - Oppose	Accept
14.3	Goatley Holdings	Supports the mix of zoning (MHUZ, MHSZ and SHZ) ⁸²		Accept in part⁸³
19.1	Summerset Villages (Warkworth) Ltd	Confirm the SHZ and MHSZ as shown on PPC25 maps.	FS07 - Oppose	Accept in part⁸⁴
23.1	Turnstone	Delete the Residential- Single House zone in the north -west and zone the land as Residential - Mixed Housing Suburban	FS02 – Oppose FS07 – Support	Accept in part⁸⁵

348. Submissions are seeking relief to either ‘up-zone’ the residential zonings, or to maintain them as notified or, in the case of the Auckland Council, align them with the WSP.

349. It is noted that any submissions which were seeking alterations from residential to employment zones, albeit to LIZ, MUZ or GBZ or vice versa, have been covered in the preceding section. Rather, the discussion below deals solely with submissions on residential zoning on land not anticipated as employment land in the WSP. In terms of the specific interface or transition relationship along the western boundary, these issues have also been dealt with separately above.

350. There are as expected a number of further submissions opposing and supporting the different relief matters sought. It is noted that AT and NZTA further submissions oppose given a supporting Integrated Transport Assessment has not been provided to

⁸⁰ Refer section 3.3.5.1 page 48, adopted Warkworth Structure Plan June 2019.

⁸¹ Note: This recommendation does not relate to any land identified as employment land by WSP.

⁸² Submission 14, Goatley Holdings it is assumed the residential zonings sought are based on the relief sought by submission 23 given submission prepared by Barkers and Associates.

⁸³ Note: This recommendation does not include any land identified as employment land by WSP.

⁸⁴ Note: This recommendation does not include any land identified as employment land by WSP.

⁸⁵ Note: This recommendation does not include any land identified as employment land by WSP.

assess the transport effects associated with the relief sought to amend the notified zonings. This matter is discussed at the start of section 10.3.

Discussion

351. Putting aside the transitional zone discussions to the western boundary, the main divergence from the residential zonings across the PPC25 area occur in terms of the ring of SHZ and the thin layer of MHS and central MHU which is situated around the neighbourhood centre. The WSP also identifies a new collector road which would connect with the WLR and Sanderson Road and it is understood would have a separated cycling facility.
352. The arguments put forward in the submissions seeking relief of up zoning give reference to the need to be efficient with land and the need to restrict low density sprawl from a climate change perspective, enabling a variety of housing typologies, and price points.⁸⁶ Submissions also raise that, in terms of the relationship of higher density to a motorway corridor, there are examples of medium/high-density housing along such interfaces with an example given of Hobsonville Point and the Upper Harbour Motorway.
353. The southern area of MHSZ and the SHZ to the south of Falls Road was supported by Summerset Villages, putting aside the portion of MUZ sought through the TCL submission, these areas remain unchanged in submission 23 and this aligns with the notified PPC25 zoning pattern. I agree this zoning through the southern side is a logical extension of the existing zoning and responses to topography and the Mahurangi stream corridor.
354. The position expressed in the Auckland Council submission focuses primarily on public transport accessibility, geotechnical constraints and proximity to the urban boundary. In terms of public transport accessibility, given the confirmation in other submissions⁸⁷ that public transport is anticipated for WLR and the proximity to the collector loop road I am generally comfortable with the public transport accessibility in terms of the residential zonings sought through the submissions, notwithstanding the issue of the adequacy of the ITA.
355. In respect of geotechnical matters, as outlined earlier I am more persuaded by the need to achieve the better design outcomes and integration possible under the MHSZ in terms of outcome. In my mind, the extent of geotechnical works, cost, market demand and typology approach will inform the final lot sizes sought. However, if the ability to achieve a better outcome is not enabled then the typical development approach of SHZ will in my experience be relatively underwhelming in a greenfield scenario. As such I consider that the MHSZ and MHUZ provides a better framework to allow for positive urban design outcomes and will enable a more efficient use of land in proximity to a good future green network, and with transport accessibility for a variety of modes including public transport.
356. Mr Brown has considered landscape matters with respect to the submission points raised and does not seek the retention of SHZ to the southern end of the PPC25 area in the gully that drops down towards Falls Road. The reasons given in his assessment are that some SHZ should be retained on the northern side of the PPC25 area to limit the viewing audience to the proposed motorway and provide for lower density zoning

⁸⁶ Submission 13, Middle Hill or Tyne Trust

⁸⁷ Submission 16 (AT) and 22 (NZTA)

alongside the LIZ areas. However, the WSP features other examples of MHS and MHU in proximity to industrial zoning, so has been taken as being acceptable interface (see Figures 16 and 19⁸⁸ from the WSP within Appendix 9).

357. Ms Mein has considered the urban design merits and finds on the other hand that the outcomes of the SHZ compared to the MHSZ/ MSHU are not as optimal, and is therefore comfortable in principle with the zoning sought by submission 23.
358. Another matter which is important is the provision of a collector loop road as shown on the WSP, though its provision is not signalled through PPC25 with no indicative layout provided in the ITA⁸⁹. It is recommended that greater clarity on this would be beneficial for the hearing. Assuming a collector road is indeed provided for and included on a precinct plan, something which AT seeks to have included along with clear requirements for separated cycling and limited access⁹⁰, this would really only be achievable in my mind with a zoning approach that encourages intensity along this corridor and allows for more intensive housing typologies that are more suited to rear loading.

Recommendations on Submissions

359. That submission **13.2, 13.3, 14.3, 19.1 and 23.1 be accepted** for the reasons outlined above. It is noted that this recommendation does not refer to any relief sought via other submissions to rezone land identified as employment land under the WSP (as that is discussed in previous sections of this report).
360. That submission **12.1 be rejected** as it relates to the residential zonings not identified as employment for the reasons outlined above, which in my opinion will allow for the more efficient use of land.

10.3.4. Submissions on the Residential Zoning approach to the western side of the PPC25 area

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
1.1	J and I Civil	Rezoning of land adjacent to boundary with 141 Carran Road	FS04 – Oppose	Reject
2.2	C Ranum and Carly	Amend Precinct Plan 1 to show a 6m wide strip of indicative open space along western boundary to the Viv Davie Martin Drive sites.	FS04 – Oppose	Reject
3.1	R White	Amend Precinct Plan 1 to show a 6m wide strip of indicative open space along western boundary to the Viv Davie Martin Drive sites, or zone large lot or open space	FS04 – Oppose	Reject
10.3	B Woolsey	Establish a green belt on the western boundary of the PPC25 area	FS04- Oppose	Reject
12.7	Auckland	Incorporate a transitional zoning	FS04 - Oppose	Reject

⁸⁸ Adopted Warkworth Structure Plan, June 2019 refer Appendix 9

⁸⁹ Refer attachment 13 within the s32 Application with Appendix 2

⁹⁰ Submission point 16.18 (AT) refer Appendix 4

	Council	approach along the PC25 boundary with the Viv Davie-Martin Drive area, providing for larger site size in the future.		
23.1	Turnstone	Delete the Residential- Single House zone in the north -west and zone the land as Residential - Mixed Housing Suburban	FS02/ 03 – Oppose FS07 - Support	Accept
26.1 30.1 32.1 33.1 34.1 35.1 36.1	A Rodgers D Mei T Walkington L A Rodger M A Rodgers N Rodgers S Liang	Amended zoning along the western boundary with three options including amended MHSZ to SHZ, Provide more green open space with higher density, or consistent application of MHS.	FS04 - Oppose	Reject

361. Submission 1.1 is seeking relief that open space zoning be provided along the shared boundary with Carran Road Farm, which adjoins the north western corner of the PPC25 area (see **Appendix 4**). The farm holding has been broken up by the new motorway corridor and it is not clear how access would be achieved to the site once the motorway is complete unless access provision is secured via the land owner agreements with NZTA.
362. Submissions 2.2, 3.1 and 10.3 are from residents of Viv-Davie Martin Drive and seek similar relief, being the provision of a 6m wide strip of indicative open space along the western boundary.
363. Submissions 26.1, 30.1, 32.1, 33.1, 34.1, 35.1 and 36.1 are from a separate group of residents of the northern end of Viv-Davie Martin Drive. They identify three options of relief related to the interface at the northern section of the shared western boundary, by amended zoning:
- Amend portions of MHSZ to SHZ;
 - Provide additional Open Space zoning with higher density residential zoning; or
 - Consistent application of MHSZ.
364. The Council submission⁹¹ seeks the application of a transitional zoning provided along the shared boundary as anticipated under the WSP⁹² which would see SHZ used more extensively along the shared western boundary of the PPC25 area.
365. Submission 23.1 from Turnstone seeks to change the entire length of zoning along the shared western boundary to MHSZ.
366. Further submissions have been received from Turnstone on all of the above submission points identifying opposition to the relief sought. In respect to submissions seeking a planted strip, the further submission identifies that following consultation with the property owners a 1.5m landscaped strip has been agreed and will be secured with a separate side agreement which will include a legal mechanism. No additional provisions are sought within the precinct.

⁹¹ Submission 12.7

⁹² Refer Adopted Warkworth Structure Plan, June 2019 refer Appendix 9

Discussion

367. There are a variety of views raised by submitters on the zoning approach to this northern and western interface area of the PPC25 area, with the common theme being to provide a transitional response to the neighbouring properties to the west.
368. The notified PPC25 seeks a portion of SHZ in the northern end of the PPC25 area and then MHSZ along the remainder of the boundary. This is sought to be altered with submission 23.1 then seeking to change it all to MHSZ (refer **Figure 15** above). Further submissions from Turnstone identify a number of separate side agreements that are being negotiated with some adjacent sites at Viv Davie Martin Drive to provide a narrow 1.5m vegetated strip.
369. The WSP identifies SHZ along this entire interface and discusses that this is a transition zone into the Viv Davie Martin Drive area, where it is identified that a potential overlay to limit minimum site areas might be used. The rationale given in the WSP for this transition is identified as:
- “The Single House zone is proposed as there are geotechnical constraints that preclude high density residential development. This area is also not close to a centre or any long-term public transport routes. The zoning also takes into account the steep topography of this area, which means the walking catchment to a centre or public transport is further restricted”⁹³ (emphasis added).*
370. Since the WSP was issued public transport is now anticipated along the WLR, with this being confirmed by the Supporting Growth Alliance⁹⁴, and in the AT and NZTA submissions. This would provide an improved connection into the long-term public transport network for future Warkworth and therefore (at least in terms of public transport accessibility) indicates that more intensive residential zoning may be appropriate. It is acknowledged though that this is just one of a number of considerations in assessing the suitability of the zoning pattern sought. Another limitation is in terms of geotechnical matters which have been discussed in the memo of Mr Roberts⁹⁵ who identifies that this portion of the site has relatively low stability and that more intensive zoning would require a greater extent of earthworks and thereby landform modification.
371. It is noted that submission 23 identifies that the site would be within walking distance to the park'n'ride facility. However, it is understood that this is a temporary site until the larger facility identified in the WSP is delivered. Furthermore, the indicative bus route⁹⁶ relies on a crossing point at Sanderson Road and would require an upgrade to Hudson Road to allow for a dedicated pedestrian facility. Neither of these upgrades are secured or delivered by the precinct. In my view little weight can be afforded to this proximity, instead what should be given consideration is the fact that the WLR will accommodate a public transport route and the western side of the PPC25 area would be within walking distance of the potential alignment and it is likely that any bus route would eventually service the collector road.

⁹³ Page 162, Warkworth Structure Plan, June 2019

⁹⁴ Refer <https://www.supportinggrowth.govt.nz/assets/2019-Launch-Website/a0e637acb9/Warkworth-Indicative-Strategic-Transport-Network.pdf>

⁹⁵ Specialist memo, prepared by Mr Roberts within Appendix 6.

⁹⁶ Page 7 of the Submission 23 from Turnstone Capital Ltd refer Appendix 4

372. Mr Brown has considered landscape matters in respect of the submission points raised and does not support the provision of a landscaped buffer, nor seeks the retention of SHZ along the entire shared boundary. Rather he finds that a portion of SHZ should be retained albeit to a smaller extent than that shown on the WSP. Ms Mein has considered the urban design merits and finds on the other hand that the outcomes of the SHZ compared to the MHSZ are not as optimal and is therefore comfortable with the zoning sought by submission 23.1 in principle, though she does support a landscape strip and an overlay for larger sizes along the shared boundary.
373. In terms of the provision of any buffer planting strip, setback or shelter belt I agree with Mr Brown's statement in this instance that it *"would be arbitrary and meaningless from a landscape stand point: it would serve no real purpose in the longer term."*⁹⁷. This area of the site has always been anticipated to be urbanised and in the future additional intensity will be enabled in the Viv Davie Martin Drive area. Whilst I acknowledge that this future intensity may not be to the full potential of the SHZ illustrated by the WSP it will be noticeable to these residents. The zone provisions of both the SHZ and the MHSZ will allow for setbacks, and given the orientation of the site it is likely that site layouts will feature private open space to the western afternoon sun.
374. Further, I would note that the areas of SEA sought across the PPC25 area alongside the existing covenanted areas of bush within the Viv Davie Martin Drive landholdings along this boundary will provide visual relief and provide an interface along and across parts of the boundary.
375. This portion of the site is not identified as having particular outstanding landscape characteristics. This is confirmed in the assessment by Mr Brown though I note his concerns about the visual audience and amenity of future residents in respect of the proximity and outlook across to the motorway corridor. In my opinion the interface with the motorway will always provide a strong edge to the PPC area, but the suitability of intensive housing in proximity to the motorway corridor has already been accepted in the wider WSP area along the rest of the corridor to the south and along the MLR to the north. I consider that the efficient use of land for urban purpose has priority in weighing up these matters and that a view towards MHSZ would not be that dissimilar to SHZ, in particular as they will both be urbanised landscapes. Furthermore, the key development standards of height, coverage and landscaping are near identical between the zones. Rather I would agree as outlined by Ms Mein that the outcomes from MHSZ achieve better integrated residential environments than the SHZ.
376. I do not consider that the geotechnical matters are so overwhelming that the better design outcomes and integration possible under the MHSZ are not achievable or practicable. Ultimately the extent of geotechnical works, cost, market demand and typology will inform the final lot sizes sought. Overall, I consider that the MHSZ provides a better framework to allow for this to occur and will enable a more efficient use of land. In my opinion this factor takes primacy when considering the outcomes sought by the RPS, which identifies land as a finite resource and seeks to ensure that land is efficiently used to ensure housing supply and a compact city approach.
377. Furthermore, there is the ability to include bespoke objectives and policies in the precinct provisions that would identify the need to minimise retaining and land modification throughout these areas and to highlight site-specific land characteristics.

⁹⁷ Page 15, Stephen Brown Landscape Assessment Memo, Sept 2019, refer Appendix 6

378. The relief sought by submission 1.1 is not supported from an urban design or landscape perspective given this part of the land is not located centrally nor adjacent to a centre and does not include an area of existing vegetation. Rather it is directly adjacent to the motorway corridor and at the bottom of the valley.

Recommendations on Submissions

379. That submissions **1.1, 2.2, 3.1, 10.3, 12.7, 26.1, 30.1, 32.1, 33.1, 34.1, 35.1 and 36.1 be rejected** for the reasons identified above.

380. That submission **23.1 be accepted** in so far as the zoning relates to this transitional area for the reasons identified above. It is noted that this recommendation does not refer to any relief sought via other submissions to rezone land identified as employment land under the WSP (as that is discussed in previous sections of this report).

10.3.5. Submissions on Open Space Zones

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
10.2	B Woolsey	Confirm Open Space Zone and proposed walkways	FS02 – Support in part	Accept in part
12.15	Auckland Council	Incorporate all of the WSP green network over PC25 area and add new provisions	FS02 – Support in part FS03 – Support FS04 – Support in part	Accept
12.25	Auckland Council	Amend Precinct Plan 1 to show 'indicative open space' only for land Council agrees will become public open space.	FS04 - Oppose	Accept
21.2	D Oliver	Support the public use areas including food areas, bush, river walks, outdoor cinema and playgrounds.		Accept in part
23.1	Turnstone	Replace the proposed land zones as notified and zone the land as shown in Attachment A. This includes provision of Open Space – Informal recreation zones		Reject

381. Submissions 10.2 and 12.15 are seeking that open space zoning be provided for along the stream corridors to allow for the identified walkways. Then submission 12.25 from Auckland Council seeks to amend Precinct Plan 1 to show indicative open space only for land Council agrees will become public open space.

382. TCL in submission 23 identifies two open space zones, one adjacent to the LCZ and another covering the streams and SEA areas. In respect to the latter it is identified as 'indicative',

383. The further submission from TCL opposes the Auckland Council relief under submission 12.25 it states private land can be zoned open space. Then in terms of

submission point 12.15 advises in principle supportive but opposes any changes to the precinct provisions.

Discussion

384. The submissions above can be separated into two areas, one covering the additional informal recreation zone (OSIRZ) sought adjacent to the LCZ and the other discussing the open space strategy for the streams.
385. Turnstone outlines in further submissions that there is the ability to zone open spaces without Council agreement. I agree that there is the ability to zone open space within a precinct but no compulsion for Council to accept or buy the land.
386. On the matter of the identification of OSIRZ adjacent to the LCZ, this is premature in my view given the uncertainty about the alignment of the WLR and consequential lack of clarity on the extent of land left over to be rezoned. Whilst I agree that aligning open space zones alongside neighbourhood or local centres in terms of synergy of uses has sound and well-founded urban design merit, the best zoning approach for this land remains unclear given the inadequacy of transport and economic based evidence. Consequently, if the centre was to move on site then the OSZ would also need to move.
387. Given this uncertainty, I consider that the approach outlined in the Auckland Council submission is the most flexible and pragmatic. Further, it follows the rule of thumb generally adopted in precincts within the AUP. Therefore, in the event commissioners are minded to approve PPC25 it is recommended that an indicative open space symbol similar to that shown on the WSP is included on the precinct plan alongside any identified neighbourhood centre and that the OSIRZ as sought under submission 23 is not identified.
388. In respect to the stream corridors I am comfortable with showing open space zoning along the streams as long as there is clarity on the extent to show. It is understood that the full esplanade take across the site is unknown, although having walked alongside some of the waterways on site it is clear that an esplanade reserve will be triggered. An assessment will ultimately need to be undertaken at time of subdivision.
389. Despite that, even if an open space zoning is not shown on the plan change zoning or precinct plan then this does not in any way pre-determine the approach to streams across the site. Rather, the AUP has a suite of provisions in respect to streams, and as discussed later in other submissions relief is sought to secure riparian enhancements.
390. The WSP and TCL appear relatively aligned in terms of principle of the green network rather it is whether it is included within the precinct or not. I consider that there is merit in including this particularly given the advice given by Ms Mein on the matter. On this basis I recommend that the green network as shown on the WSP is included on the precinct.

Recommendations on Submissions

391. That submissions **10.2, 21.2 and 23.1 be rejected** for the reasons identified above.

392. That submission **12.15 and 12.25 be accepted** for the reasons identified above and that the precinct plan 1 is amended to include an indicative open space zone circle similar to the adopted WSP and the green network is identified.

10.3.6. Zoning along the Motorway Boundary

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
13.6	Middle Hill on behalf of Tyne Trust	Provide for the land use zones within submission to extent within the designation boundary to the north in the event NZTA releases residual land back to the land owners.		Reject

393. Submission 13.6 is seeking relief that any final decisions on zoning alongside the PPC25 boundary with the NZTA motorway corridor are extended to capture any residual land that is released to owners.

Discussion

394. I appreciate the situation that the landowner is seeking to manage, particularly given it will potentially delay any release of land in proximity to this boundary. However, it is not to my understanding legally possible to extend a PPC area to include adjacent land not originally included in notification nor can I think of any provision that would allow for this to occur.

395. In my mind the simplest and most pragmatic way to manage the matter would be that in the event of residual land being passed back to the original owner non-complying consent is sought under the FUZ zoning. Residual land could be incorporated in any land development proposal with reliance placed on the live zoning that had been applied to the adjacent land as part of the assessment considerations.

Recommendations on Submissions

396. That submission **13.6 be rejected** for the reasons outlined above.

10.3.7. Update Plan Change Maps and Precinct Boundary

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
12.16	Auckland Council	Amend the precinct provisions to cover the entire PPC area.	FS02 – Support FS04 – Oppose	Accept
22.1	NZTA	Update PC25 maps to reflect the extent of the PPC area.		Accept

397. Submission 22.1 is seeking relief that the PPC25 maps are updated to ensure that they consistently show the correct land area within the red PPC25 boundary line. On a number of the maps the area to the south of Falls Road is not included.

398. The submission 12.16 from Auckland Council is seeking that the precinct covers the entire PPC25 area, rather than solely Stubbs Farm. The rationale for this is that a number of other precinct provisions are proposed within the submission that need to cover the entire site.

Discussion

399. On submission 22.1 it appears this is an error and should be updated prior to any formal decision on PPC25.

400. In terms of the precinct plan boundary I agree that, given the nature of relief sought in other submissions in respect of site wide precinct provisions (particularly regarding transport and infrastructure matters), that the precinct should cover the entire PPC25 area.

Recommendations on Submissions

401. That submission **12.16 and 22.1** be accepted for the reasons given above.

10.4. Infrastructure

10.4.1. Waste and Water Supply

Submissions and Further Submissions

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
18.1	Z Energy Ltd	Wastewater solution is appropriately designed to accommodate commercial wastewater loadings that can be generated from 1 Hudson Road.		Reject
19.2	Summerset Villages (Warkworth) Ltd	Relocate the proposed pumping station (WWPS – Location 1) and dry basin identified on the land to the north of the Summerset Falls Village away from village and on the applicants land.		Reject
31.1	Watercare Services Limited	Wastewater disposal from the PPC25 area must be connected to the public wastewater disposal and collection system.	Support – FS04	Accept
31.2	Watercare Services Limited	The applicant will at its cost design and construct any wastewater infrastructure required to enable the connection of Stage 1 of the proposal to the public wastewater disposal and collection system. Further, any local network water supply infrastructure to service the	Support – FS04	Accept

		plan area.		
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402. The above submissions all raise comments about the future wastewater and water networks to service the PPC25 area. The matters raised relate to delivery and staging,⁹⁸ location of the network (in particular the need for a pump station on Falls Road),⁹⁹ and the capacity of the network for commercial waste.¹⁰⁰
403. Watercare raises a neutral submission on PPC25 but seeks a number of decisions to ensure that the wastewater and water infrastructure servicing requirements for the PPC25 area are adequately captured and any potential effects suitably managed. The submission outlines the technical feasibility of the proposed water and wastewater servicing arrangement when assessed against the existing and planned water and wastewater network being delivered by Watercare.
404. The decisions sought by Summerset Villages (Warkworth) Ltd seeks the relocation of the pump station and dry basin required to service Stage 1 (being the area of SHZ at 223 Falls Road) to be located away from the Summerset Villages site.
405. Z Energy Ltd seeks that the wastewater system is designed to accommodate the network from the site at 1 Hudson Road.

Discussion

406. The future wastewater network at this point will feature a trunk line that runs down Hudson Road and along the road frontage of the site. The line and the network has been sized based on the WSP zonings which identified industrial zoning of the site. Given the expected size of the line at this point, I understand that this would provide sufficient capacity for the commercial waste from the site. PPC5 would necessitate a new connection to this future line.
407. It is understood that the portion of the line that runs down SH1 would need to be timed with the widening works being progressed by NZTA as part of the MLR and P2WK projects. It would be helpful for NZTA and Watercare to provide an update on this matter at the hearing, as it could impact on the timing for the delivery of the wastewater line to the PPC25 area.
408. Watercare confirms in the submission that the *“proposed water and wastewater capacity and servicing requirements have been adequately assessed as part of the proposal; subject to development occurring in accordance with the proposed staging conditions and infrastructure upgrades.”*¹⁰¹ On this basis the submission seeks decisions to ensure that PPC25 is required to be coordinated to align with the delivery of the infrastructure required to service it. Given that the infrastructure network is still not available for connection, it is recommended that precinct provisions should be included that identify this requirement whilst allowing for alternative solutions (such as those sought for stage 1) to be agreed via a consenting process. A number of other existing precincts have similar provisions and it is considered that this provides clarity for any person seeking to develop within the PPC25 area.

⁹⁸ Submission 31 from Watercare Services Ltd refer Appendix 4

⁹⁹ Submission 19 from Summerset Villages (Warkworth) Ltd refer Appendix 4

¹⁰⁰ Submission 18 from Z Energy refer Appendix 4

¹⁰¹ Page 3, Submission 31 from Watercare Services Ltd refer Appendix 4

409. In terms of the location of the potential future pump station and dry basin, this will require a separate resource consent for construction and operation of the pump station. This solution forms part of the resource consent application currently out for public notification for the 223 Falls Road site, with three options for the pump station location all of which are located within land owned by Turnstone.¹⁰² This separate notified consenting process will allow for detailed discussions about the design of the pump station. It is considered that this is the most suitable forum for discussions of the planning merits as it is this process that would physically determine the construction of the pump station.

Recommendations on Submissions

410. I recommend that submissions **31.1 and 31.2 be accepted** for the reason outlined above. Alterations are required to the precinct provisions as a result and are identified in **Appendix 5**.

411. I recommend that submissions **18.1 and 19.2 be rejected** for the reasons outlined above.

10.4.2. Staging Provisions

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
12.14	Auckland Council	Add new staging provisions to ensure development does not occur before the infrastructure required to service it is in place.	FS04 - Oppose FS07 - Support	Accept
13.5	Middle Hill on behalf of Tyne Trust	Include 63 State Highway 1 as part of the first stage of the development.	Support – FS04	Reject

412. The Auckland Council submission above raises matters in terms of ensuring staging provisions are required to ensure that development does not occur before required infrastructure has been put in place. The submission from the Middle Hill on behalf of Tyne Trust seeks to ensure that its land forms part of the first stage of development.

413. There is a further submission from Middle Hill on behalf of Tyne Trust supporting the request to add staging provisions.

414. TCL identifies in the future submission on point 12.14 above that it is opposed on the basis that the FULSS confirms that the area will be development ready by 2022¹⁰³ with all necessary infrastructure in place, and in any event the Applicant is working with AT to ensure delivery.

Discussion

415. The staging identified in PPC25 comprises of eight stages and is identified on **Figure 19** below. The location of the Tyne Trust landholding is identified on the figure below

¹⁰² A non-complying subdivision and land use consent (BUN60339957) for a 51-lot fee simple subdivision at 223 Falls Road and Lot 1 DP 508375

¹⁰³ Future Urban Land Supply Strategy, July 2017, p18 states 'from' not 'by' for Warkworth North

(outlined in red on the plan) for ease of referencing, and is known as 63 State Highway 1 and encompasses 25.8 ha of land.

416. There are 16 separate owners of land across the PPC25 area. Given this, it is difficult to seek to set a rigid staging approach as landowners may be ready to progress development at different times. Alternatively, it is considered that precinct provisions which identify a set of trigger and upgrade requirements in terms of infrastructure delivery and set a framework for Council to consider alternative measures is more flexible than requiring a set staging approach. It is acknowledged as discussed in section 10.5.3 below that there is a need for an IFA to ensure that there is an equitable cost sharing agreement is in place, particularly given the multiple ownership across the northern area of the site where the WLR would enter the PPC25 land.

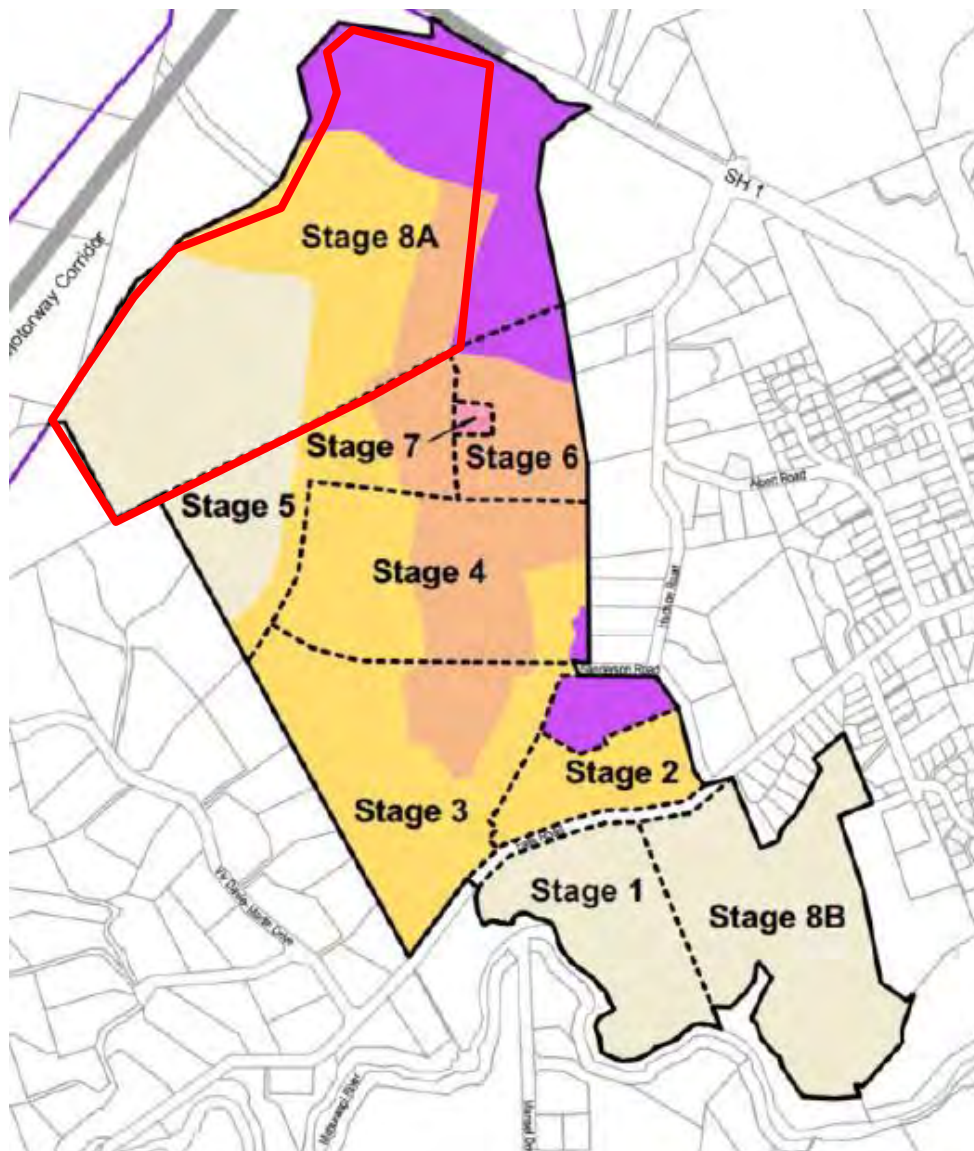


Figure 19: Staging of development across the PPC25 Area (Source: ITA, prepared by HG and dated May 2019 refer Appendix 1) **Note:** Red identifies approximately 63 State Highway 1.

417. Whilst wastewater and water servicing solutions are understood, and the timeframes for provision of these utilities are well known,¹⁰⁴ a similar understanding of the delivery of transport infrastructure and upgrades is not currently available. Consequently, there

¹⁰⁴ Refer submission 32 from Watercare Services Ltd within Appendix 4

is not an ability to prepare alternative precinct provisions to address these matters at the present time.

418. The request by Middle Hill on behalf of Tyne Trust to be within stage 1 is unnecessary. Rather, the timing for sites coming forward within the PPC25 area will be dependent on certainty on the transport upgrades in terms of location, timing and funding. Certainly, in respect of wastewater and water servicing, the network which PPC25 would be reliant on would not be in place until 2022 and it is unclear whether there are any temporary alternative measures to enable servicing any earlier.

Recommendations on Submissions

419. I recommend that submissions **12.14 be accepted** for the reason outlined above. Additional precinct provisions as a result are identified in **Appendix 5**, albeit that these provisions could not be written or finalised until the inadequacies of the ITA are resolved.
420. I recommend that submission **13.5 be rejected** for the reasons outlined above.

10.4.3. Infrastructure Funding

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
12.10	Auckland Council	Ensure funding for all infrastructure (including the Western Link Road) is finalised and for bulk infrastructure (including arterial and collector Roads) and Infrastructure Funding agreement is completed, before any approval of PC25	FS04 – Oppose	Accept
13.7	Middle Hill Ltd as Tyne Trust	Adoption of a comprehensive infrastructure funding and access agreement is required before development is allowed in the plan change area.	FS04 – Support	Accept

421. The submissions all seek to ensure that there are infrastructure funding agreements in place for PPC25 prior to development proceeding in the plan change area or (in respect of the Auckland Council submission) prior to any approval of PPC25.
422. TCL make further submissions on both of the submissions above and identify for the Auckland Council submission that they oppose it. TCL considers that infrastructure funding must be agreed prior to development not prior to zoning, but in any event have stated that they are working with both Auckland Transport and Watercare to ensure alignment between infrastructure delivery and development.
423. On the submission point raised by Middle Hill Ltd as Tyne Trust, TCL identify that it supports the need to have a comprehensive infrastructure funding agreement before development is allowed in the plan change area. I take from the further submissions that TCL does not have issue with the need to have an IFA in place but seeks more flexibility in respect of the timing of it.

Discussion

424. The full extent of required transport infrastructure is currently unknown. There is no funding set aside for the WLR and yet this link is pivotal in determining the land use approaches across the site.
425. Debating the timing of the physical signing of an IFA is in many ways academic, with the key problem at present being that there is actually no real clarity as to the terms, scope, cost, timing, funding or delivery mechanisms of the transport infrastructure. Consequently, it is not clear when the infrastructure needed to support the urbanisation of 99ha of land would be in place to align with development occurring.
426. I expect that there will be further discussion and debate about this matter alongside the outputs of the yet to be updated ITA at the hearing. On the information before me at present I take a conservative view and recommend that the relief sought by both parties be accepted.

Recommendations on Submissions

427. That submission **12.10 and 13.7** be accepted for the reasons outlined above.

10.5. Urban Design Elements

10.5.1. Buffer Planting to Motorway and SH1 Interface

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
12.13	Auckland Council	Provide landscaping screening along the SH1 frontage and the motorway boundary, in the same manner as that proposed in the Warkworth Structure Plan	FS04 - Oppose	Accept in part

428. Submission 12.13 is seeking relief that the precinct be amended to include landscape screening along both the SH1 frontage and the interface to the northern motorway. This submission is derived from the references in the WSP¹⁰⁵ to buffer planting and is identified on a number of sites that adjoin the motorway corridor where the new motorway is currently under construction.
429. It is noted that TCL opposes this relief due to the fact that it would only be warranted if the land was zoned LIZ. (but is not warranted on the basis that TCL seek to replace the LIZ with MUZ.

Discussion

Gateway Treatment

430. The request for a buffer strip was identified during the preparation of the WSP, to ensure a suitable gateway treatment into the northern entrance to Warkworth Township.

¹⁰⁵ Refer adopted Warkworth Structure Plan, June 2019

431. Both Mr Brown and Ms Mein have considered this matter and supported the inclusion of a frontage landscape screening requirement along the frontage with SH1, and identify that it would include mature specimen native trees and require a significant setback. Ms Mein identifies that the treatment response would be supported by her irrespective of whether this part of the site was zoned LIZ or MUZ.
432. I agree with the assessments made by Mr Brown and Ms Mein in this regard and consider that the response along this interface is important to this northern entry in order to manage visual amenity effects.

Motorway Landscape Buffer

433. The references to the buffer planting, setback or other controls along the Ara Tuhono – Puhoi to Warkworth motorway corridor come from the WSP,¹⁰⁶ which outlines that such controls are intended to manage potential reverse sensitivity effects along this boundary.
434. It is noted that NZTA neither requests relief for a buffer nor supports the relief sought by Auckland Council.
435. I have viewed the landscaping plans for the designated motorway route from NZTA. These plans identify extensive planting between the motorway carriageway and the designation boundary that defines the northern boundary (refer **Appendix 10**). It is noted that the final landscape plans have not yet been submitted for approval for the SH1 widening works, although they are required to be consistent with the drawings included in the Puhoi to Warkworth Project. These drawings illustrate that the extent of landscaped area and setback is significant and, in my opinion, illustrates that a bespoke buffer standard is not necessary to ensure amenity to this part of the site.

Recommendations on Submission

436. That submission **12.13 be accepted in part** in so far as the need for a gateway landscape treatment to the LIZ along State Highway 1, but rejected in respect of any buffer planting to the motorway. In this instance, my recommendation would require additional precinct provisions including objectives and policies being included in the PPC. I have identified these in **Appendix 5** below.

10.5.2. Separation by Arterial Roads and Esplanade Reserves

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
12.4	Auckland Council	Provide separation between industrial and residential areas by using arterial roads and esplanade reserves	FS04 – Oppose FS08 – Support	Accept in part

437. Submission 12.4 seeks to address reserve sensitivity matters and to align the zoning approach across the PPC25 area to that taken in the WSP, which deliberately

¹⁰⁶ Page 29 of the adopted Warkworth Structure Plan, June 2019

sought to separate industrial and residential uses by either esplanade reserves or arterial roads.

438. The further submission from TCL identifies that it opposes this relief and sets out that it considers that green spaces and streams provide superior separation.

Discussion

439. The relief sought by this submission is intertwined with the approach to zoning throughout this corridor and the alignment of the WLR which has been discussed earlier. Appropriate zoning will be heavily influenced by the final alignment and form of the WLR and the depth of the area of residual land between the WLR and the stream. Consequently, in many ways discussion on this matter is academic given that proper consideration cannot occur until there is clarity on the WLR alignment and form and the discussion around employment land provision.
440. Ms Mein touches on this matter and talks about the fact that the precinct is quite silent on the matter of interfaces between industrial and residential zones in terms of the need for interface provisions, particularly in respect of streetscape and residential amenity and dealing with reverse sensitivity matters.
441. I consider that it can depend on the light industrial activities that might be in existence adjacent to a residential zone, and there are certainly existing live-zoned examples in the wider region which do not feature the separation sought by Auckland Council in its submission i.e. zoning along Hudson Road. Furthermore, the WSP identifies that the northern LIZ land is only separated by the stream corridor and an esplanade reserve, which raises questions about the relief sought. I agree that there are existing AUP provisions which need to be considered when assessing this matter.
442. To inform this assessment site specific information would be required in terms of air quality and acoustic matters, given the reverse sensitivity issues raised by Atlas Concrete in its submission. At present to my knowledge this matter is not really responded to in any great detail in terms of information supporting PPC25. This may be a matter that TCL wishes to expand on at the hearing.
443. While I can see merit in the arguments made by TCL in its submission, particularly given the inconsistencies in application of this in the existing WSP, I consider that more information needs to be provided on reverse sensitivity (given the concerns raised by Atlas Concrete¹⁰⁷). This would assist in confirming whether these separation measures are sufficient for separating industrial and residential zoning on site. Given this position, I recommend acceptance of the relief sought by Auckland Council at this stage.

Recommendations on Submissions

444. That submission **12.4 be accepted in part** in so far as there is insufficient information at present for the reasons identified above to inform the decision. I reserve the right to reconsider my position on this at the hearing.

¹⁰⁷ Refer submission 20 Atlas Concrete within Appendix 4

10.5.3. Urban Design Related Precinct Provisions

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
12.16	Auckland Council	Amend the precinct provisions to cover all of the plan change area and the precinct provisions cover the matters set out in section 3.5.3 of the WSP including fencing standards, interface management, separated cycle facilities, retention of mature trees and shelter belts, housing affordability, erosion and sediment controls, use of roads to increase vegetation cover and the mapping of unidentified wetlands	FS02 – Support in part FS04 - Oppose	Accept in Part

445. Submission 12.16 seeks to amend the precinct provisions to cover off a number of matters identified in section 3.5.3 of the WSP. AT provides a further submission in respect of the transport related provisions.
446. The further submission by TCL opposes this relief and identifies that the Auckland-wide, zone, overlay, regional and general rules of the AUP will apply to the PPC25 area. In the event of any error or omission in the AUP rules this should be resolved by way of Council plan change.

Discussion

447. It is not clear to me why the existing zoning or wider AUP (OP) provisions in terms of a number of matters (i.e. fencing, and erosion and sediment control) are not adequate to the future assessment of development proposals. In respect to housing affordability, it is also unclear which additional provisions would be sought, particularly given the residential zoning approach is this best mechanism to approach this matter within the existing AUP (OP) framework. This may be something that the Auckland Council as submitter wishes to expand on at the hearing.
448. I note that Ms Mein has addressed these requests in her assessment and finds that the proposed precinct provisions are silent on a number of matters in terms of outcomes sought. Her assessment touches on a number of measures which could be site specific in terms of interface controls, retaining wall approaches, streams, and detail of roading/ walking and cycling networks.
449. Having reviewed section 3.5.3 of the WSP I agree with TCL that a number of these matters are already captured in terms of either the existing AUP (OP) provisions via zones, overlays, or Auckland wide provisions, or in terms of stormwater via the separate SMP approval process and SMAF requirements. However, there are some matters where I agree with Ms Mein and the Auckland Council submission. Matters that I can see some merit in including based on site characteristics are the need for riparian planting, road and walking network, limited access controls on the collector loop or areas where separated cycling is proposed, and the gateway controls already discussed at the northern entrance to Warkworth.

Recommendations on Submissions

450. That submission **12.16 be accepted in part in so far** as it relates to riparian planting road and walking network, limited access controls on the collector loop or areas where separated cycling is proposed, and the gateway controls already discussed at the northern entrance to Warkworth the reasons identified above. I have identified these additional provisions in **Appendix 5** below.

10.6. Submissions on Streams, Ecology and Mana Whenua Matters

10.6.1. Stream Classifications, Esplanades, Riparian Planting and Precinct Provisions

Submissions and Further Submissions

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
7.1	P Sullivan	Do not provide for riparian planting of the watercourse at 27 State Highway 1		Reject
7.3	P Sullivan	Change the classification from a permanent to intermittent stream		Reject
12.5	Auckland Council	Reflect the approach for the creation of esplanade reserves and the vesting of land for open space contained in Warkworth Structure Plan	Oppose FS04	Accept
12.17	Auckland Council	Delete objective I1.2(c) and defer to the existing AUP (OP)	Oppose FS04	Accept
12.18	Auckland Council	Amend policy I1.3 Policy 4.	Support FS04	Accept
12.19	Auckland Council	Delete policy I1.3 Policy 5.	Oppose FS04	Accept
12.20	Auckland Council	Amend policy I1.3 Policy 6.	Support FS04	Accept
12.21	Auckland Council	Delete A3, A4, A5 from the Activity Table and defer to the AUP.	Oppose FS04	Accept
12.22-23	Auckland Council	Delete I6.2 Standards (2) and replace with standard to manage building and development within the stream protection area.	Oppose FS04	Accept
12.24	Auckland Council	Amend Precinct Plan 1 to show riparian margin protection areas for the intermittent streams as well as the permanent streams.	Oppose FS04	Accept
12.25	Auckland Council	Show the riparian margins of all permanent and intermittent streams as stream protection.	Oppose FS04	Accept in part
12.26	Auckland Council	Delete Precinct Plan 2	Oppose FS04	Accept
12.27-28	Auckland Council	Add a new rule regarding retaining walls or other structure to be installed outside of the riparian margin.	Oppose FS04	Reject

451. The submissions above express concerns related to the precinct approach to streams, though some of them are at a counterpoint to each other, with P Sullivan¹⁰⁸ seeking to prevent riparian planting and alter stream classifications as they relate to the site at 27 State Highway 1 and Auckland Council seeking to extend and broaden the precinct provision related to streams and amend the provisions to align with the WSP and the existing AUP (OP) framework¹⁰⁹.
452. In respect of submission 7.3 a report is referenced that was completed for the State Highway 1 designation from Warkworth to Puhoi in terms of stream classifications.
453. Further submissions have been made by Turnstone in respect of the relief sought with some matters supported and others opposed.

Discussion

454. The WSP outlines the approach to watercourses within the Warkworth Future Urban Zone area and identifies as a principle to *“Treat all the tributaries in the FUZ as being vital to the health of the Mahurangi River”*.¹¹⁰ A Green Network is shown in Figure 2 of the WSP that identifies areas to be restored with riparian planting, which will allow for ecological corridors to be created to connect the fragmented areas of native vegetation. The WSP also identifies that local mana whenua have also identified that these areas have cultural value.
455. The approach to other matters in submissions such as walkways and green open space networks relate to the submissions and need to be considered in the context of the other relief sought.
456. Section 6.1.4 of this report assessed the effects from PPC25 on freshwater ecology and outlined the assessments undertaken by both Turnstone and Council’s consultant freshwater specialist Mr Jason Smith.¹¹¹ Mr Smith finds that there are a number of inconsistencies and areas of concern in terms of freshwater approach to the site and the desire by the applicant to circumvent the existing framework for managing streams under the AUP (OP) framework. Turnstone contends via further submissions that the precinct provisions have been sought to replace the AUP framework to the limited extent necessary to achieve sustainable management of the area.
457. The existing AUP (OP) framework for managing instream effects from stream works is robust and comprehensive and there is not in my mind any unusual site characteristics which would warrant the need to have bespoke provisions. This position is also supported by the stream approach sought by the WSP. Indeed, Turnstone has already lodged a stream works consent application under this AUP (OP) framework and it is in the process of being considered by Council¹¹². The precinct provisions as notified would allow a number of identified stream reclamations without the need for a subsequent resource consent, which is unusual.
458. Turnstone identifies via further submissions that the approach to esplanade reserves on the site will be dependent on the RMA and AUP (OP) process. I agree that this is correct in terms of a formal esplanade reserve requirement which will depend on the

¹⁰⁸ Refer submission 7 within Appendix 4

¹⁰⁹ Refer submission 12 within Appendix 4

¹¹⁰ Refer page 17 of the Warkworth Structure Plan, Adopted June 2019

¹¹¹ Refer to Freshwater Specialist Memo, prepared by Mr Jason Smith, Morphem Environmental Ltd within Appendix 6

¹¹² Refer section 1.8.2 of the Hearing Report and Council Reference BUN60344551.

stream width during Annual Fullest Flow. However, in terms of the need for riparian planting, this is not limited to land subject to an esplanade requirement but rather can be identified for any intermittent and permanent stream. The WSP has identified a clear direction to plant out streams both intermittent and permanent and there are other precincts¹¹³ which have similar provisions that are highlighted through the Council submission. I therefore I agree with the relief sought in the Auckland Council submission points 12.17-12.26 above.

459. On submission 12.27 and 12.28 it is not clear why the existing AUP (OP) will not suitably manage retaining wall construction given the existing AUP (OP) riparian yard requirements within underlying zones. The Auckland Council may want to elaborate on this at the hearing.

460. In respect of the submission on the classification of the stream on 27 State Highway 1, this has been considered by Mr Smith who has found that:

“It is important to note that regardless of stream classification as either permanent or intermittent the same planning provisions in terms of the RMA, NZFPS:FM and AUP:OP apply. It is noted that the definitions used to classify streams as either permanent or intermittent have been updated since the referenced report was released”¹¹⁴.

461. On the basis of the assessment by Mr Smith I consider the relief sought by P Sullivan is not appropriate and a subsequent consenting process will suitably manage this matter.

Recommendations on Submissions

462. I recommend that **submissions 12.17-26 be accepted** for the reasons outlined above. A number of amendments to the precinct provisions would be required as a result these are identified in **Appendix 5**.

463. I recommend that **submission 12.27 and 12.28 be rejected** as insufficient information has been provided in the submission to identify why the AUP(OP) does not already manage this matter. I reserve the right to reconsider my position on this at the hearing.

464. I recommend that submissions **7.1 and 7.3 be rejected** for the reasons outlined above.

10.6.2. Ecological Assessment

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner’s Recommendation
9.2	Dr I Topham	Complete the ecological assessment including the ‘North Block’ area	FS04 - Oppose	Reject

¹¹³ I610Redhills Precinct

¹¹⁴ Refer to Freshwater Specialist Memo, prepared by Mr Jason Smith, Morphum Environmental Ltd within Appendix 6.

465. Submission 9.2 seeks relief in terms of the completion of an ecological assessment for the North Block area. It is not clear exactly which portion of the site this submission point relates to, but it is assumed to be the land holding of the submitter Middle Hill.
466. In its further submission TCL opposes this relief and identifies that an appropriate level of assessment has been undertaken to confirm zoning. There will be the ability to undertake further assessment at the subsequent consenting stage.

Discussion

467. During the site visit across this part of the land it was clear that the main ecological areas are based around freshwater bodies and any adjacent margins. The stream network connects into the motorway area of works, which can be appreciated on the Puhoi to Warkworth NZTA landscape plans within **Appendix 10**. My observations from site are confirmed in the assessments of Mr Statham¹¹⁵.
468. I agree with TCL that there is the ability to undertake further assessment at the subsequent development stage and Mr Statham, whilst acknowledging the gaps in the reporting, agrees that further ecological assessment would occur at the next stage of development. Consequently, I am comfortable to recommend declining the relief sought for PPC25 as I am content that the subsequent consenting process will manage this matter.

Recommendations on Submissions

469. That submission **9.2 be rejected** for the reason outlined above.

10.6.3. Mana Whenua Values

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
29.1	Manuhiri Kaitiaki Charitable Trust	Give consideration to the recommendations of the CVA provided by Ngāti Manuhiri to ensure mana whenua values are incorporated into the PC25 provisions.		Accept in part
29.2	Manuhiri Kaitiaki Charitable Trust	Incorporate principles of minimal land disturbance, protection of native vegetation, streams and habitats areas into the PPC25 to allow for net increased in biodiversity and water health outcomes.	FS04 - Oppose	Accept in part
29.3	Manuhiri Kaitiaki Charitable Trust	Ensure Ngāti Manuhiri engaged in the development process in terms of cultural monitoring and integration of cultural elements into the design of the development.		Reject

¹¹⁵ Section 3.12.3 of the Specialist Memo, prepared by Mr Rue Statham and dated 26th September 2019

470. The submissions made by Manuhiri Kaitiaki Charitable Trust seek to ensure that mana whenua values are incorporated into PPC25 as relevant and that they continue to be engaged in cultural monitoring and subsequent development on the site.
471. TCL identifies in further submissions that it opposes the relief sought under point 29.2 above, although it does not provide any reasons for this position.

Discussion

472. The CVA¹¹⁶ provided by Ngāti Manuhiri and attached to the PPC25 request identifies a number of matters of interest to them and makes a number of recommendations on a range of topics including whenua, water, air, biodiversity, waahi tapu and taonga, social, economic and cultural wellbeing and future management. The matters raised in the mana whenua recommendations do have relevance to the previous discussion on streams and riparian approaches and from my reading would support the arguments put forward by the Auckland Council.
473. Some of the recommendations and relief sought are already established by the AUP(OP) framework in terms of land remediation, sediment controls, stormwater approaches and accidental discovery protocols. On this basis I do not believe that additional precinct provisions are required in regard to some of the matters where relief is sought. However, there are some other recommendations which I consider should be considered more carefully in order to decide if they should be incorporated.
474. One such area would be the recommendations around the streams and the desire through the CVA to have riparian areas protected and enhanced. At present the AUP would only require this to occur as part of any mitigation for streams works. The subdivision provisions only require such features be identified but with no real clear guidance or requirement for enhancement planting.
475. Engagement with mana whenua going forward is supported, including cultural monitoring and engagement with the form and design of future development. However, this would need to be led by the developer. Consequently, I am unable to recommend specific precinct provisions in this regard though encourage TCL to maintain this relationship with mana whenua.

Recommendations on Submissions

476. That **submission 29.1 and 29.2 be accepted in part** as they relate to streams and riparian planting for the reasons outlined above.
477. That **submission 29.3 be rejected** for the reasons outlined above.

10.7. Submissions on Stormwater and Flooding

10.7.1. Flooding effects on adjacent sites

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
15.3	Warkworth	An assessment of flooding be	FS04 -	Accept

¹¹⁶ Cultural Values Assessment, prepared by Fiona McKenzie for Manuhiri Kaitiaki Charitable Trust, dated May 2017 refer attachment 8 of the s32 Application within Appendix 2

	Properties 2010 Ltd	undertaken and if required for provisions to be incorporated into PC25 to ensure no increase in flooding risk for the site known as Sec 4 SO 4766552.	Oppose	
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478. Submission 15.3 above expresses concerns related to the adequacy of the flooding assessment in respect to its property. A further submission was received from TCL advising that the AUP provides a sufficient framework for assessing flooding effects on the adjacent site at development stage.

Discussion

479. Healthy Waters has assessed the SMP provided as part of PPC25 as being inadequate in terms of the assessment of both stormwater and flooding effects.¹¹⁷ In particular, Ms Vincent notes that no flood attenuation is provided through PPC25 and that the Chester LDR has not taken adequate account of future development within the wider upstream catchment in its assessment of peak flood levels. Healthy Waters has recommended that the SMP is not included in PPC25 unless it is amended.

480. If PPC25 is rezoned as notified then any development within the plan change area would need to be undertaken in accordance with the global NDC which takes effect in October 2019. This would necessitate the provision of an SMP that has been accepted by Healthy Waters as suitable or a separate private discharge consent would be required. This SMP would have needed to have addressed flooding effects.

481. I would generally agree that the AUP provides a framework for dealing with flooding matters. However, given the opposition raised by Healthy Waters about the assessment of flooding from the wider upstream catchment that sits above this site then unless further information is provided, I agree that the relief should be accepted.

Recommendations on Submissions

482. I recommend that **submission 15.3 be accepted** for the reasons outlined above.

10.7.2. Precinct Provisions regarding Stormwater Matters

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
12.29	Auckland Council	A new standard regarding infiltration.	FS04 – Oppose	Reject
12.30	Auckland Council	Add a new objective and rule framework to ensure development is outside of 1% AEP flood plain including climate change.	FS04 – Oppose	Reject
12.31	Auckland Council	Add a new objective and rule framework that includes a rules that the Falls Road bridge is upgraded by the developer prior to the establishment of new	FS04 – Oppose	Reject

¹¹⁷ Refer memo prepared by Paula Vincent, Healthy Waters, Appendix 6

		impervious surfaces.		
12.32	Auckland Council	Add a new objective and rule framework that requires a flood sensitivity analysis prior to any developments	FS04 – Oppose	Reject
12.33	Auckland Council	Delete reference to DEQR.		Reject
12.34	Auckland Council	Delete reference to flooding in the discussion preceding table 11.		Reject
12.35	Auckland Council	Confirm the application of the SMAF overlay		Reject
12.36	Auckland Council	Add a new subdivision assessment criterion requiring assessment of the efficiency of stormwater devices that are to be vested including the full life cycle costs and consideration of the amalgamation		Reject
12.37	Auckland Council	Add new assessment criteria requiring specific assessment of roads at grades over 5% to enable rain gardens adjacent to the road corridor	FS02 – Support FS04 – Oppose	Reject
16.22	Auckland Transport	Amend precinct plan 2 to clarify stormwater management information in respect to roads.	FS04 – Support in part	Accept

483. Submissions above by Auckland Council and AT relate to stormwater controls sought via the precinct provisions. A further submission was received from TCL advising that the AUP provides a sufficient framework for assessing these matters.

484. For the Auckland Council submission points, it is clear from reading the full submission that the concerns have arisen due to concerns with the SMP lodged with PPC25.

Discussion

485. Healthy Waters has advised that the SMP proposed is not adequate and it has suggested that the SMP needs to be amended. Given that all of the Auckland Council submissions above are based on the SMP as lodged, it is possible that the amendments recommended by Healthy Waters would resolve a number of these matters or may raise more. Consequently, it would be premature on the basis of the lack of information to accept the relief sought at this stage as any amended SMP tabled may make the submission points redundant or introduce more matters.

486. Having said that, it is not clear from the submission from Auckland Council why both the SMP approval process (as part of the global NDC framework) and the existing AUP (OP) toolbox of stormwater provisions will not suitably manage some of these matters noted above. If there are site specific reasons why these additional provisions are required (perhaps due to soil conditions for example, which are not otherwise covered by the AUP(OP)) then I would see merit in their inclusion. However, at this stage and based on the information available I am not able to accept the elements of the relief sought although I do accept that the SMP is inadequate based on the advice

of Ms Vincent of Healthy Waters. Consequently, I recommend that those representing the Auckland Council submission may want to elaborate on this matter through evidence and at the hearing.

487. Under the assessment of other submissions Precinct Plan 2 has been recommended to be removed or amended. If it is to be retained by the Commissioners, then I would agree that the amendment above should be incorporated.

Recommendations on Submissions

488. That **submissions 12.29-12.37 be rejected**, in terms of the fact that based on the advice of Healthy Waters the SMP as lodged is inadequate so there may be no need to make the changes that are sought or further changes might be needed. Furthermore, it is not clear if these matters could not be suitably managed via the SMP approval process or the existing AUP provision. In the event that site specific bespoke provisions are suggested, then I would be comfortable with this. I suggest that further discussion of these issues occur via evidence or at the hearing itself.

489. I recommend that **submission 16.22 be accepted** if precinct plan 2 is to be retained by commissioners.

10.8. Other Submission Matters

10.8.1. Health Impact Assessment

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planner's Recommendation
9.1	Dr Isobel Topham	Provide a thorough health impact assessment for the PC areas and optimise the plan to promote human health.	FS04 – Oppose	Reject

490. The submission seeks a health impact assessment. A further submission was received from Turnstone advising that such an assessment is not required for rezoning land in the manner proposed.

Discussion

491. Appendix 1¹¹⁸ of the AUP(OP) does identify that a Health Impact Assessment may be required for the assessment of a Structure Plan process that informs a plan change. It is noted that the WSP has a section on health and wellbeing.¹¹⁹ This section identifies healthcare infrastructure provision needed to support the growth of Warkworth and identifies a number of health and wellbeing impacts from the WSP in terms of the provisions of the green network that encourage active transport modes in benefiting public health and managing boundary issues.

492. Given the size of PPC25 area and the work undertaken under the WSP and the way this informs a number of other matters particularly in terms of the green network. I do not consider a Health Impact Assessment is necessary to determine the plan change.

¹¹⁸ Section 1.5 of Appendix 1, Structure Plan Guidelines., AUP(OP)

¹¹⁹ Section 3.3.8.7, adopted WSP, June 2019

Though it does have a relationship back to the green and pedestrian/ cycling networks sought in other submissions.

Recommendations on Submissions

493. I recommend that **submission 9.1 be rejected** for the reasons outlined above.

10.9. Submissions seeking acceptance of PPC25 with no amendments

Sub. No.	Name of Submitter	Summary of the Relief Sought by the Submitter	Further Submissions	Planners Recommendation
4.1	Maxine Hatfull	Accept the plan modification	FS07 – Support	Reject
5.1	Ma and Pa Commercial Ltd	Accept the plan modification	FS07 – Support	Reject

Discussion

494. Both submission 4.1 and 5.1 seek that PPC25 be accepted on the basis that the proposal will allow for additional housing and business growth. Furthermore, submission 5.1 identifies that the improved accessibility of the area making it more attractive to live outside of Auckland but work in the city¹²⁰.

495. Submission 4.1 identifies that the proposal would improve waterways, provide for walking and cycling tracks and the provision of the Western Link Road will support the local roading system.

496. The provision of the Western Link Road will be an important part of the future transport network for Warkworth. However, the final alignment of the link road is not yet known and the request to live zone the land is premature given the appeals underway for the NOR for the MLR and the SH1 widening. The alignment is integral to inform the best zoning response to the residual land left over between the boundary of the WLR and the stream.

497. It is agreed that the need to provide additional land for housing in an area of anticipated growth is important in terms of the constrained housing market in Auckland and constitutes a positive effect arising from the proposed PPC request. However, the RPS identifies¹²¹ that it is essential to manage the release of land and understand the extent of infrastructure (including upgrades to existing networks) that are required to support the new zoning. Extensive work has been undertaken to develop the WSP and PPC25 has not provided sufficient information and evidence to demonstrate that departures from this structure plan are appropriate.

Recommendations on submissions

498. That submission **4.1 and 5.1 be rejected** for the above reasons.

¹²⁰ Refer submission 4.

¹²¹ RPS Policy B2.2.2, AUP(OP)

11. CONCLUSIONS

499. It is clear that the overwhelming number of submissions seek that PPC25 be accepted, subject to amendments. However, in order to be able to form an informed view on the relief sought by a number of submissions it is critical to have sufficient information to do so, particularly on transport and economic matters, as these underpin the rationale for the most appropriate approach to zoning, transport design, layout and delivery. Without this information the rezoning sought is premature as it is critical that the first rezoning of Future Urban land in Warkworth does not undermine the extensive work and engagement that has been undertaken as part of the wider WSP and this needs to inform any decision made.
500. Having considered all the PPC25 documents submitted to date, alongside all of the submissions and having reviewed all the relevant statutory and non-statutory documents, I recommend that Private Plan Change 25 should be declined. However, in the event Commissioners are minded to approve PPC25 or further information is provided prior to the hearing that sufficiently resolves the inadequacies of information particularly in respect of transport, stormwater and economic matters, then a number of amendments to the precinct text and planning maps would be recommended.
501. It would normally be expected that the s42A report would include a tracked changes version of Precinct provisions as an appendix, in order to assist the Commissioners in their consideration of the Plan Change. I did commence that exercise but found that, in light of the fundamental issues highlighted elsewhere in this report, the amendments would have been widespread. More importantly, it became clear that there were too many unresolved issues to make the task worthwhile as there would almost certainly need to be further extensive changes as more information becomes available and matters are resolved. I have, however, made some general comments and observations on changes to the Precinct provisions, which are noted in **Appendix 5** to this report. It is noted that this issue identification does not replace the proposed precinct provision but identifies the matters where I consider deletions or additions are needed.

12. RECOMMENDATIONS

1. That, the Hearing Commissioners accept or reject submissions (and associated further submissions) as outlined in this report.
2. That, as a result of the recommendations on the submissions, that PPC25 be declined and the Auckland Unitary Plan not be amended given the inadequacy of the existing assessments in respect to transport, stormwater and economic assessments which support the private plan change. In the event Commissioners are minded to accept the plan change then I have made some comments and observations on the precinct provisions in **Appendix 5** to this report.

13. SIGNATORIES

	Name and title of signatories
Authors	Ila Daniels, Principal Planner, Campbell Brown Planning Ltd
Reviewer / Approver	Peter Vari, Team Leader Planning, North, West and Islands, Plans and Places

APPENDIX 1

APPLICATION MATERIAL

This appendix has not been re-produced and can be found council's website [here](#).

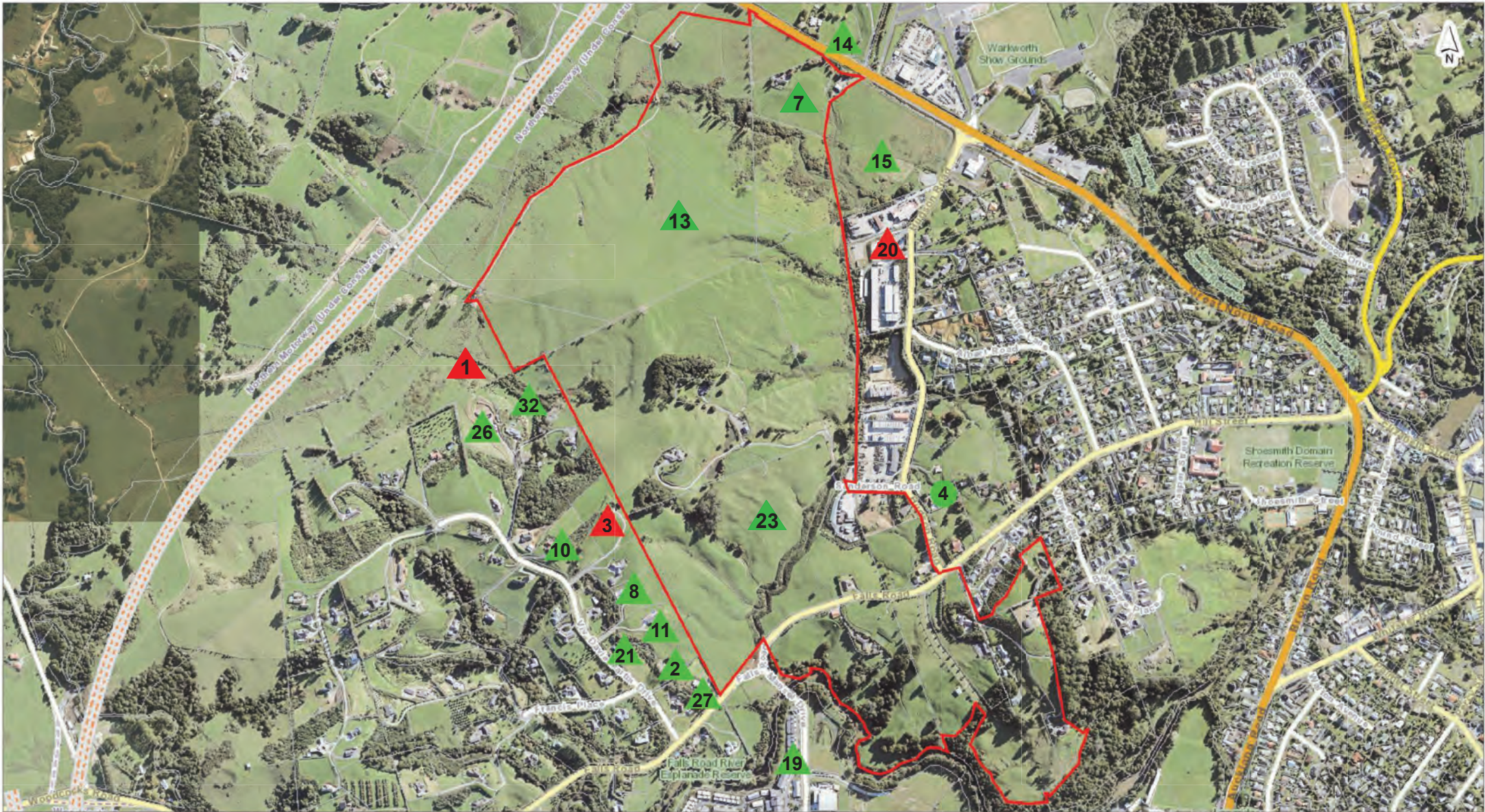
APPENDIX 2

APPLICANT'S SECTION 32 REPORT




This appendix has not been re-produced and can be found council's website [here](#).

APPENDIX 3

MAP OF SUBMITTER SITES



Key:

-  - Supports
-  - Supports with amendments
-  - Opposes or seeks amendments

Warkworth North PPC 25 Local Submissions

0 80 160 240

Meters

Scale @ A3
= 1:8,000

Date Printed:
26/09/2019



APPENDIX 5

COMMENTARY ON PRECINCT PROVISIONS

Appendix 5 – Comments on the Warkworth North Precinct Provisions

The following general comments and observations are made on the precinct provisions. It is anticipated that a formal track changed document would be prepared as directed by the commissioners following the receipt of the anticipated additional information identified within the s42A report, which is expected to be provided as part of the hearing and evidence exchange process.

It is noted that some of the matters below have been identified as being agreed in the further submissions from TCL in terms of the AT and NZTA submission comments, refer section 10 of the report.

1. PRECINCT PROVISIONS

1.1 Infrastructure

1.1.1. Wastewater

Standard(s) should be added regarding wastewater connections to the new bulk wastewater pipeline to Snells Beach unless an alternative mechanism agreed. Needs to cover full PPC25 area not just Warkworth North Precinct.

1.2 Transport Matters

1.2.1 Western Link Road

Standard should be added for delivery and route protection of the indicative WLR.

1.2.2 Transport Upgrades¹

Anticipated that a number of upgrades will be identified with a staging or trigger point that development/ and or subdivision needs to meet based on dwelling numbers or capacity of land that is subdivided. Potential upgrades anticipated may include:

- Formation of Sanderson Road to an urban standard
- Formation of Hudson Road to an urban standard
- Formation of Falls Road to an urban standard
- Mansel Drive Intersection

¹ Dependent on the outcomes of an agreed ITA

- Pedestrian connection to Sanderson Road

1.1.2. Roads

Provision of design parameters cross sections as outlined by AT submission for the following:

- WLR.
- Collector with separated cycling provision.
- Additional standard for access limitation for WLR, SH1 and internal Collector Road

1.2.3 Pedestrian

- Provision of walkways in accordance with precinct plan, may be linked to a staging plan.
- Pedestrian and cycle paths shall be provided along both sides of all permanent streams and one side of intermittent streams.

1.3 Stream Matters

1.3.1 Deletion of Proposed Stream Provisions

Delete the stream activities from the Activity Table and rely on Chapter E3.

1.3.2 Riparian Requirements

Add a riparian planting requirement for permanent and intermittent streams, including need to be planted in accordance with Council approved landscape plan, eco-sourced native vegetation, density of 10,000 plants per hectare and riparian margins must be offered to Council for vesting.

1.4 Local Centre

1.4.1 GFA Limitation

Standard regarding the 1,500m² GFA limitation.

1.5 Urban Design

1.5.1 Urban Design Standards Recommended by TCL

Retain Urban Design Specialist Requirements proposed by TCL.

1.5.2 Gateway Treatment to SH1

Provision for a setback and landscape buffer including extensive specimen tree planting.

1.6 Notification

Delete the notification exemptions identified by TCL within the precinct as drafted.

2. PRECINCT PLANS

- Amend Precinct Plan 1 to extend it to cover the full PPC25 area, in particular the land to the south of Falls Road.
- Amend Precinct Plan 1 to show the following:
 - Show flexibility for WLR and intersection at SH1 as requested by AT/NZTA;
 - Alignment of WLR through site as identified by SGA, though highlight as indicative;
 - Add an indicative road alignment for collector roads;
 - Delete one of the potential road linkages to Viv Davie Martin Drive to retain the connection identified in submission 23;
 - Add a vehicle access limitation to SH1, WLR and internal collectors;
 - Add indicative pedestrian network;
 - Add indicative Open Space formal recreation in a similar location to the WSP;
 - Add green network to streams as shown on the WSP;
 - Show riparian margins of all permanent and intermittent streams.
- Delete Precinct Plan 2 – Warkworth North SWCMP – Streams
- Delete Precinct Plan 2 – Warkworth North SWCMP – Sub Precinct A (1 of 2)
- Delete Precinct Plan 3 – Road Sections and Road Stormwater Management

APPENDIX 6
SPECIALIST ASSESSMENTS

Memo

September 20, 2019

To: Ila Daniels
From: Liz Ennor, Policy Analyst, Community and Social Policy

Subject: Private Plan Change 25 Warkworth North – Community Facilities

Purpose

To provide community facilities specialist input into the S42 hearing report for Private Plan Change 25.

Introduction

The applicant proposes to rezone approximately 95 hectares of Future Urban zoned land in Warkworth North to a mixture of business and residential zones with provision for future open space zoning.

Submission 23 submitted by Turnstone Capital was the only submission that discussed community facilities.

This submission mentions:

- that the proposed expansion of the Business-Neighbourhood Centre to Business-Local Centre takes advantage of a well-connected location and provides greater choice for community facilities
- that the connection to both Albert Rd and Plan Change 25 will make the local centre a pivotal place and the available land gives opportunity for larger footplate amenity uses such as a swimming pool complex, and for significantly urban open space to be formed.

Auckland Council supports the opportunity for greater choice of community facility provision and site selection processes would determine locations for new facilities.

The Private Plan Change 25 rezoning proposals will not change the planned provision of Auckland Council community facilities within the Warkworth area. There is currently adequate aquatic and leisure provision given the current and forecast population, but drive times to access facilities are at the upper limit of the guidelines. Provision of additional aquatic space may be required in the medium-term to serve Warkworth and the surrounding area. There may be options to provide this through partnerships, or other innovative methods.

Auckland Council Investment

The Community Facilities Network Plan guides Auckland Council investment in the provision of community facilities. The plan focuses on having the right facility in the right place at the right time. The plan takes a regional approach to the planning and investment in facilities to prioritise competing demands across the region and aims to provide community access to facilities based on population thresholds which will vary depending on the nature of the catchment type and the function.

The Community Facilities Network Action Plan

The Community Facilities Network Action plan is a companion document to the network plan. It identifies actions and priorities required to address gaps, growth or fit for purpose issues across the community facilities network. Where these actions identify an unmet need, further work will be

required. This could include changes to the way services are provided, innovative ways of providing new services, or the provision of new facilities.

Community Facilities Network Action Plan actions in the medium term for the Warkworth area include:

- investigate the need for a multi-purpose community space in Warkworth
- investigate the need for expansion and refurbishment of Warkworth Library

Community Facilities Network Action Plan actions for the wider Rodney area include:

- investigate the feasibility and innovative opportunities to meet the need for a pool and leisure space in the Rodney area
- a needs assessment to assess whether the existing facilities are aligned to community needs in Rodney

Current Community Facility Provision in Warkworth

There are numerous community facilities in the Warkworth town centre area and within 30 minutes' drive from Warkworth. Existing council community facilities are mainly located within the existing 'live' zoned Warkworth area such as the Warkworth Town Hall, Masonic Hall, Warkworth Library and two venues for hire in Shoemith Domain. There are also nearby facilities in Snells Beach such as the Mahurangi East Library and Mahurangi East Community Centre.

Non-council facilities include five schools with pools with limited public access located in neighbouring areas, and community and recreation leases such as the Warkworth Showgrounds which provide sport and leisure opportunities and arts and cultural activities.

Future Facility Provision for Warkworth

The potential future housing density and residential population of the Warkworth Structure Plan area (Future Urban zone) is expected to reach around 7,600 dwellings with a potential 22,800 extra people by 2046.

Subject to the outcomes of the actions identified above, it is anticipated there will be adequate provision of library, arts and culture and community centre space to meet the forecast growth in Warkworth.

Memo (stage 1)

23 April 2018

To: Michele Perwick, Principal Planner

From: James Corbett, Principal Contaminated Land Specialist CLCLR

Subject: Private Plan Change – Warkworth North – Contamination - Further information assessment

1.0 Introduction

1.1 I have undertaken a preliminary assessment of the information supplied in relation to soil contamination effects.

1.2 In writing this memo, I have reviewed the following documents:

- Specialist Input Request (Land Contam) 20180405
- Briefing of Managers 20180329
- Warkworth North, Private Land Change Request, Section 32 Assessment Report, prepared for Turnstone Capital by B&A Urban & Environmental 21 March 2018
- Environmental Site Investigation Warkworth Structure Plan Change for Turnstone Capital by Babbage, 19/08/2017. (Sites limited).
- Appendix 17 Geotechnical

The review information did not include Preliminary Site Investigations below:

- 220 Falls Road, 102 Hudson Rd & 12 Sanderson Road, Preliminary Environmental Site Investigation, For SF Estate Ltd, Babbage 09/02/2017.
- 223 Falls Road, Warkworth, Preliminary Environmental Site Investigation, For SF Estate Ltd, Babbage 13/02/2017.

Sites also not included in the above documents: 14, 24, 26, 30, 60, 66 74, 76, 78 Hudson Road; Pt Lot 1 & 2 DP 180823 (Warkworth Cemetery); Sec 4 SO 476652 (Foodstuffs).

1.3 Review of the above documentation does not, in general, appear to raise any significant flags in relation to land contamination that precludes the proposed change of landuse to more sensitive landuse activities. That is, the land appears generally suitable for the intended land use, noting this does not preclude investigation as indicated below, small site clean-up of any small scale deposits discovered during land clearance and earthworks, and remediation of asbestos relating to buildings or structures that may be present.

1.4 The Environmental Site Investigation Warkworth Structure Plan Change for Turnstone Capital by Babbage, 19/08/2017, undertaken for limited sites, did not include site walkovers. This introduces some risk that surface and other features hidden by trees or shadows on aerials, or activities occurring in the gaps between aerial series have not been picked up through the desktop study. These features could however be picked up prior to land development as mentioned above in 1.3.

1.5 Further investigation of potential contamination is recommended relating to possible filling on Lot 2 DP 209013, and commercial and development activities that have been or are being undertaken on 11 Sanderson Road. The 220 Falls Road, 102 Hudson Rd & 12 Sanderson Road, Preliminary Environmental Site Investigation (For SF Estate Ltd,

Babbage 09/02/2017) indicates that cleanfill placed on 102 Hudson Road comprised organics and soil, which should be investigated, given the source of the soil was from Hudson Road alongside industrial land, and the fill was noted to have had excessive organic material which could pose an organic gas source.

1.6 Pursuant to clause 23 to the First Schedule of the Resource Management Act I seek the following further information:

#	Category of information	Specific Request	Reasons for request
1	Contamination	Provide further information to inform and support the Detailed Site Investigation on the nature, extent and timeframe of activities on the south western portion of Lot 2 DP 209013 which appears to be quarrying and/or filling.	<p>The Environmental Site Investigation has not identified potential HAIL activities occurring on the south western portion of Lot 2 DP 209013 adjacent the river and the northern end of 54 Woodcocks Road across the river. 2001-2006 aerials show activity occurring which appears to be quarrying and/or filling being undertaken, which are HAIL activities.</p> <p>The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>
2	Contamination	Provide detail on the scale and timeframe of historical commercial abattoir activity on 11 Sanderson Road (Lot 2 DP 37501) involving discharge of wastewater to land, including placement or disposal of any wastes or treated materials on site, the decommissioning method used for wastewater treatment facilities and structures, and any remedial works. Any filling activities, deposits or remediated areas should be identified on plan to scale.	<p>The Environmental Site Investigation has not provided sufficient information in relation to potential HAIL activities carried out on 11 Sanderson Road (Lot 2 DP 37501). In particular whether the commercial abattoir had any storage/use of fuels for boiler heat/steam generation, and the decommissioning of wastewater treatment ponds. The 2006 aerial (Auckland Council GIS) appears to show the outline of treatment ponds on the South West side of the site) which although unlikely to result in heavy metal or persistent chemical residues from the activity, if improperly desludged may contain organic materials which under breakdown may create gasses, potentially microorganism spores, or have non-engineered fill (contaminants, non-engineered).</p> <p>The potential effects are to human health, to receiving environment, or to structures from contaminants (e.g. corrosive ground conditions, gas, instability) from contaminated materials and deposits.</p>
3	Contamination	Provide information relating to HAIL associated with current or post-abattoir landuse activities including waste bin operations on 11 Sanderson Road (Lot 2 DP 37501). This should address vehicle maintenance and refuelling, bin cleaning, waste deposits, filling and stockpiling. Information on any consents or	<p>The Environmental Site Investigation has not provided sufficient evidence in relation to potential HAIL activities carried out on 11 Sanderson Road (Lot 2 DP 37501). Other potential waste disposal activities or deposits may have occurred on site relating to redevelopment and the current land use activity which appears to be commercial waste bin operations that historically have proven to have poor site management practices. The yard</p>

		approvals for the current landuse operation should be provided.	does not appear to be paved. Is there any Industrial Trade Processes consent required? The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.
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Advisory Notes

#	Category of Information	Advice	Reason for advice
1	Contamination	Development of the area will require Unexpected Discovery Protocols to be in place. Demolition of buildings will require survey for asbestos containing materials and if identified their safe removal, potentially extending to soil testing if they are external cladding/roofing and are in a deteriorated state. Refer Health and Safety at Work (Asbestos) Regulations 2016 and New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ 2017.	The Environmental Site Investigation has relied upon limited information that at its most recent appears to be property files, with analysis of 2011/12 aerials but no site walkover or interviews to ascertain current landuse activities. The potential for HAIL activities such as farm waste dumps, refuelling tanks, and potentially sheep dips have not been fully discounted.
2	Contamination	Should any new contaminating activities be undertaken on any of the properties (including 220 and 223 Falls Road, 102 Hudson Rd and 12 Sanderson Road) from the time of the completion of the investigations, then further investigation may be required.	The investigation stands at the time it was conducted, along with its caveats. Any new activities undertaken since the investigation will need to be assessed whether they are categorised as HAIL. It is understood that recent development of a water treatment facility by Watercare Services Limited (anecdotal, location not known) would likely involve the storage and use of hazardous substances and that this would need to be acknowledged and considered in terms of landuse planning.
3	Contamination	102 Sanderson Road cleanfilling activities should have validation sampling undertaken to demonstrate that soils are compliant with the soil contaminant standard for Commercial Industrial outdoor worker (unpaved) in view of the proposed Business Light Industry zoning. Test for asbestos in accordance with the New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ November 2017 for commercial and industrial landuse.	Review of the Environmental Site Investigation reports for 220 Falls Road, 102 Hudson Rd & 12 Sanderson Road, and 223 Falls Road), Warkworth (For SF Estate Ltd, Babbage) do not appear to indicate any HAIL activities having been undertaken. Cleanfilling was noted to have occurred on 102 Sanderson Road and while cleanfill itself is not HAIL, there is insufficient information to confirm or verify that the site received only cleanfill. Note the source of cleanfill soil was indicated in the report to have come from Hudson road widening, which is adjacent to a number of industrial activities which may be identified as HAIL. Excessive organic material content in the fill has been noted to be an issue in the past, however was not qualified in terms of placement, percentage, and depth of fill, or any quantitative validation of its removal provided. The breakdown of organic material could,

			under some circumstances, pose a risk as a source of methane and other gases.
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Warkworth North Private Plan Change

Thurs 24 May 2018 3.30-5pm Meeting Notes to discuss matters relating to Contamination with Mark Crooks, Environmental Scientist Babbage.

Refer Appendix 3 Advisory notes (Incorporating feedback M Crooks 11/06/2018 and verbal discussion with J Corbett 19/06/2018).

#	Category of Information	Advice	Reasons for Advice	Comments
38	Contamination	Provide further information to inform and support the Detailed Site Investigation on the nature, extent and timeframe of activities on the south western portion of Lot 2 DP 209013 which appears to be quarrying and/or filling.	<p>The Environmental Site Investigation has not identified potential HAIL activities occurring on the south western portion of Lot 2 DP 209013 adjacent the river and the northern end of 54 Woodcocks Road across the river. 2001-2006 aerials show activity occurring which appears to be quarrying and/or filling being undertaken, which are HAIL activities.</p> <p>The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>	<p>M. Crooks spoke to landowner Al Mason. Area used as topsoil screening area. Period approx. min. 2001-6. Hardfill placed onto ground. Sources unknown?</p> <p>ACTION</p> <ul style="list-style-type: none"> ➤ M. Crooks (Babbage Consultants Limited) has indicated that this could be checked as to the type of material (e.g. inspect with hand spade). ➤ If further investigation required e.g. if non-cleanfill, this can be deferred to time of earth works/development consent. <p>Imported topsoil screened and taken offsite.</p> <p>2001 Aerial – to north Pond- water supply, local material used to fill in.</p>
39	Contamination	Provide detailed information on scale and timeframe of historical commercial abattoir activity on 11 Sanderson Road (Lot 2 DP 37501) involving discharge of wastewater to land, including placement or disposal of any wastes or materials on site, the decommissioning used for wastewater treatment facilities and any remedial works. Any activities, deposits or remediated areas be identified on plan to scale.	<p>The Environmental Site Investigation has not identified potential HAIL activities occurring on the south western portion of Lot 2 DP 209013 adjacent the river and the northern end of 54 Woodcocks Road across the river. 2001-2006 aerials show activity occurring which appears to be quarrying and/or filling being undertaken, which are HAIL activities.</p> <p>The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>	<p>M. Crooks spoke to landowner Al Mason. Area used as topsoil screening area. Period approx. min. 2001-6. Hardfill placed onto ground. Sources unknown?</p> <p>ACTION</p> <ul style="list-style-type: none"> ➤ M. Crooks (Babbage Consultants Limited) has indicated that this could be checked as to the type of material (e.g. inspect with hand spade). ➤ If further investigation required e.g. if non-cleanfill, this can be deferred to time of earth works/development consent. <p>Imported topsoil screened and taken offsite.</p> <p>2001 Aerial – to north Pond- water supply, local material used to fill in.</p> <p>Propose that this land does not change land use i.e. remain as Business- light industry.</p> <p>No further information available.</p>

		<p>works. Any asbestos, particularly microcrystalline asbestos, (MCA) deposits identified should be identified on plan to treatment ponds on the South scale. The potential effects are to human health, to receiving environment, or to structures from contaminants (e.g. corrosive ground conditions, gas, instability) from contaminated materials and deposits.</p>	<p>M. Crooks thinks minimal land forming was undertaken post abattoir and pre-bin use.</p> <p>Abattoir, dairy, container storage, bins</p> <p>Pond in SW corner does not appear to be related to abattoir ~2001 – possibly earthworks (see 2008/2010 aerials).</p> <p>Note also waste treatment tanks further up site.</p> <p>Not intended any land use change.</p> <p>No issue – required under AUP/OP. Pre-Demolition survey also required.</p>
40	Contamination	<p>Provide information relating to HAIL associated with current or post-abattoir land use activities including waste bin operations on 11 Sanderson Road (Lot 2 DP 37501). This should address vehicle maintenance and refuelling, bin cleaning, waste deposits, filling and stockpiling. Information on any consents or approvals for the current land use operation should be provided</p>	<p>The Environmental Site Investigation has not provided sufficient evidence in relation to potential HAIL activities carried out on 11 Sanderson Road (Lot 2 DP 37501). Other potential waste disposal activities or deposits may have occurred on site relating to redevelopment and the current land use activity which appears to be commercial waste bin operations that historically have proven to have poor site management practices. The yard does not appear to be paved. Is there any Industrial Trade Processes consent required? The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>
41	Contamination	<p>Development of the area will require Unplanned Discovery Protocols to be in place. Demolition of buildings will require survey and asbestos containing materials and if identified their safe removal, potentially extending testing if they are external cladding/roofing are in a deteriorated state. Refer Health Safety at Work (Asbestos) Regulations 2016 and New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ 2017, deteriorated state. Refer Health and Safety</p>	<p>The investigation stands at the time it was conducted, along with its caveats. Any new activities undertaken since the investigation will need to be assessed whether they are categorised as HAIL.</p> <p>It is understood that recent development of a water treatment facility by Watercare Services Limited (anecdotal, location not known) would likely involve the storage and use of hazardous substances and that this</p>
42	Contamination	<p>Should any new contaminating activities be undertaken on any of the properties (including 220 and 223 Falls Road, 102 Hudson Rd and 12 Sanderson Road) from the time of the completion of the investigations, then further investigation may be required.</p>	<p>M. Crooks does not believe any major land use changes have occurred across the land, or any discharges.</p> <p>Subsequent site visits by M Crooks since the report have not provided any evidence that any changes in</p>

43	Contamination	<p>102 Sanderson Road clean-filling activities should have validation sampling undertaken to demonstrate that soils are compliant with the soil contaminant standard for Commercial Industrial outdoor worker (unpaved) in view of the proposed Business Light Industry zoning. Test for asbestos in accordance with the New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ November 2017 for commercial and industrial land use.</p>	<p>would need to be acknowledged and considered in terms of land use planning.</p>	<p>land use have occurred that would constitute new HAIL activities.</p>
		<p>Review of the Environmental Site Investigation reports for 220 Falls Road, 102 Hudson Rd & 12 Sanderson Road, and 223 Falls Road), Warkworth (For SF Estate Ltd, Babbage) do not appear to indicate any HAIL activities having been undertaken. Clean-filling was noted to have occurred on 102 Sanderson Road and while cleanfill itself is not HAIL, there is insufficient information to confirm or verify that the site received only cleanfill. Note the source of cleanfill soil was indicated in the report to have come from Hudson road widening, which is adjacent to a number of industrial activities which may be identified as HAIL. Excessive organic material content in the fill has been noted to be an issue in the past, however was not qualified in terms of placement, percentage, and depth of fill, or any quantitative validation of its removal provided.</p> <p>The breakdown of organic material could, under some circumstances, pose a risk as a source of methane and other gases.</p>	<p>102 Sanderson Rd incorrect. 102 Hudson Rd. Lot 2 DP 9212.</p> <p>Filling occurred under consent (Works Civil Construction). 600m3 1995, Rodney District Council. 71183.</p> <p>What meant by unclean fill was organic content and vegetation. Was removed and approved. Not demolition waste.</p> <p>Owner expects to check when site is developed during earthworks and employing Unexpected Discovery.</p> <p>M. Crooks to check when on site (e.g. inspect with hand spade).</p> <p>Small volume.</p> <p>Unlikely discharges from industrial sites as road platform is above gradient.</p> <p>ACTION</p> <ul style="list-style-type: none"> ➤ M. Crooks to visit sites in next week, take photos. ➤ If further investigation required, it will be deferred to time of earth works/development consent. 	

From: [James Corbett](#)
To: [Michele Perwick](#)
Cc: [Simon Court](#)
Subject: CLCLR Feedback to RFI Response to Auckland Council - WW North Plan Change
Date: Tuesday, 24 July 2018 3:10:00 PM
Attachments: [Att 1 - Contamination issues 2 201807.pdf](#)
[Att B - App 3 Advisory notes - Applicants response 20180706.pdf](#)

Hi Michele

Apologies – have discussed with Simon and response as below

CLCLR has no *additional* feedback apart from that above which has already been conveyed, noting proviso's:

The document referenced below contains discussion of contamination, the excerpts (with underlining and highlighting by me) – and I agree with the summary that there are no readily apparent contamination issues that prevent the land being developed for the proposed purposes - with the proviso that further investigation of identified areas (refer Att1 and Att B #38-43) may be required at the time of development. Goes without saying that areas not investigated require PSI and if required DSI.

[WworthNthPPC\Prep\Application as lodged App4 WW Nth Struct Plan](#)

WARKWORTH NORTH STRUCTURE PLAN | TURNSTONE CAPITAL | 27

Assessing and Managing Contaminants in Soil to Protect Human Health:

This NES is relevant and Preliminary Site Investigations (PSI) have been undertaken for the land areas within the Structure Plan area that are proposed to be developed in the first stage of development in conjunction with the private Plan Change request.

The PSI concludes that the activities undertaken on the site are not considered a significant risk and the proposed change of use would not create a risk to human health or the environment. On the basis of this, further investigations and consents under the NES or Unitary Plan are not required. Question this statement as Mark Crooks comments were made post-PSI. See also below. In summary it is unlikely that the soil contamination will present an issue for land within the Structure Plan area that would prevent the use of the land for the proposed purposes.

There are industrial activities in the industrial estate on Hudson Road that are within the Structure Plan area. The land uses occurring in this area are generally benign however there is a concrete batching plant consented on land in the northeast of the Industrial area in association with the Rhodes for Roads business. Further detailed investigations will be required to be undertaken on land areas that have not yet been subject to a Preliminary Site Investigation in the future if a change of use or subdivision was sought.

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7.17 CONTAMINATION

A Preliminary Site Investigation relating to soil contamination has been undertaken for the Structure Plan area. The report confirms that the previous land uses identified were not considered a significant risk to contaminate soil and no potential for contamination was identified that would likely create a risk to human health or the environment.

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7A.0 SUMMARY OF OPPORTUNITIES AND CONSTRAINTS

The opportunities and constraints associated with the Structure Plan are summarised as follows:

Site Conditions

- The site is primarily used for rural production activities and large portions are held in single ownership – there is a significant opportunity to achieve the integrated development of land within the timeframes specified in the FULSS.
- The site is reasonably steeply sloping, which constrains the potential for commercial activities, which require largely flat sites to accommodate large footprint buildings.
- Previous land uses have not given rise to site contamination issues that would limit potential future uses.

James Corbett | Team Leader Contaminated Land & Closed Landfills

Contaminated Land and Closed Landfills Team

From: Michele Perwick
Sent: Monday, 9 July 2018 12:24 PM
To: Vanita Ranchhod <Vanita.Ranchhod@aucklandcouncil.govt.nz>; James Corbett <James.Corbett@aucklandcouncil.govt.nz>; Ross Roberts <ross.roberts@aucklandcouncil.govt.nz>; Paula Vincent <Paula.Vincent@aucklandcouncil.govt.nz>; Liz Ennor <Liz.Ennor@aucklandcouncil.govt.nz>; Roma Leota <Roma.Leota@aucklandcouncil.govt.nz>; Rue Statham <Rue.Statham@aucklandcouncil.govt.nz>; Stephen Brown <stephen@brownltd.co.nz>; 'derek@me.co.nz' <derek@me.co.nz>; Katherine Dorofaeff (AT) <Katherine.Dorofaeff@at.govt.nz>; Ken Tomkins <Ken.Tomkins@aucklandcouncil.govt.nz>; Sarah Le Claire <sarah.leclaire@aucklandcouncil.govt.nz>; Jason Smith <jason.smith@aucklandcouncil.govt.nz>; Matthew Blaikie <matthew.blaikie@aucklandcouncil.govt.nz>
Cc: John Seward <john.seward1@aucklandcouncil.govt.nz>; IGotelli (Ilze) (ilze.gotelli@water.co.nz) <ilze.gotelli@water.co.nz>; Robert Brassey <Robert.Brassey@aucklandcouncil.govt.nz>; Megan Walker <megan.walker@aucklandcouncil.govt.nz>; David Hampson <David.Hampson@aucklandcouncil.govt.nz>
Subject: FW: RFI Response to Auckland Council - WW North Plan Change
Importance: High

Good morning everyone,

Turnstone's response to council's request for further information arrived in late last Friday afternoon.

Further information responses

Links to the RFI response are provided in the email below from Burnette O'Connor. In addition, I have set up a city wide folder for this PPC, which all internal council staff should have access to:

<U:\CityWide\Projects\WarkworthNorthPPC>

The updated material referenced in the links below has been transferred to this sub-folder:
<U:\CityWide\Projects\WarkworthNorthPPC\Preparation\Application 9 July 2018>

Please note that the updated material refers to attachments and appendices. They do appear to duplicate each other. The attachments relate to the RFI and the appendices to the formal PPC request application.

The following documents do not seem to have been updated and can be found at:
<U:\CityWide\Projects\WarkworthNorthPPC\U:\CityWide\Projects\WarkworthNorthPPC\Preparation\Application as lodged>

- Appendix 2 list of affected parties
- Appendix 3 Legal Opinion
- Appendix 4 Warkworth North Structure Plan
- Appendix 5 Warkworth Spatial Plan 2017
- Appendix 7.2 Ngati Manuhiri CIA
- Appendix 10.1 and 10.2 Landscape and Visual Assessment
- Appendix 15 Heritage and Archaeology

I have asked Burnette to confirm this list.

Copies of our original RFI can be found at:
<\\aklc.govt.nz\Shared\CityWide\Projects\WarkworthNorthPPC\Preparation\Advice>

Next steps

1. No additional input is required from Watercare or the Heritage specialists.
2. David and John I understand you are acting for Jason and Ross who are on leave at the moment. Could you please arrange for someone to review their area or let me know if they will be back in time

to carry out a review

3. Can everyone else please review the further information received for your area of expertise. Stephen, you may wish to also review the updated information to determine if any of the changes outlined by Turnstone would impact on landscape and amenity matters.
4. The RMA requires we respond to the applicant within 15 working days of receiving the information from the applicant (i.e. by Friday 27 July) with any requests for additional information or to advise if we are commissioning a report. It is important that I **receive your feedback by no later than Friday 20 July**. This allows time for me to meet and discuss any additional information requests with council specialists and consultants where there are any matters that may need a more comprehensive approach and to coordinate council's response.
5. In your review, determine whether the response now provides sufficient information to enable council to reasonably understand the nature of the private plan change request, its effects on the environment and the way in which any adverse effects on the environment may be mitigated. If not or if new information is now required, please complete the attached templates (as necessary) and send your feedback to me by Friday 20 July. Otherwise just email me confirming that sufficient information has now been provided. Remember Turnstone's do not need to respond to our advisory notes.
6. Liaise with Michele if it is considered necessary to commission a report. Please provide your reasoning.
7. Let me know if you can't access the CityWide folder.

Any queries come back to me.

Cheers Michele

Michele Perwick | Principal Planner
Planning North, West and Islands / Plans and Places
Mob 021 684 208 DDI 09 365 3910 Extn (49) 6910
Auckland Council, Level 23 135 Albert St, Auckland City
Visit our website: www.aucklandcouncil.govt.nz

From: Burnette O'Connor [<mailto:BurnetteO@barker.co.nz>]

Sent: Friday, 6 July 2018 3:08 p.m.

To: Michele Perwick

Cc: rod@turnstonecapital.co.nz; Jamie Peters; Kim Clementson; d.chapman@buckton.co.nz; nat@chester.co.nz; Steven Rankin; Tom Palastanga; Jacqui McCord; Grant Neill; David Mitchell; Mike Farrow; Dylan van Winkel; Mark Delaney; Mark Crooks; ellen@aahk.com; Phil McDermott; jon@stylesgroup.co.nz

Subject: RFI Response to Auckland Council - WW North Plan Change

Dear Michele,

Thank you for taking the time to talk yesterday. By way of clarification we believe that we have fulfilled all of the RFI request from Council as explained in the attached letter. We are however waiting on an acoustic assessment which will be available next week. The matters relating to reverse sensitivity of land adjacent to the motorway corridor have been addressed and do not specifically rely upon the acoustic assessment but this is being provided as a matter of technical completeness.

Further technical reports as detailed in the letter will be updated once we have a response from Council to the RFI information.

The RFI Response can be found in the following link:

<https://barkernz->

my.sharepoint.com/:f:/g/person/fernb_barker_co_nz/Es6ixpMJfGhKtO3AaLmaDf4BGmZfq157uMykpgby-1b15A?e=eqJDmf

The updated s32 and relevant appendices, excluding those to be updated later, and the acoustic assessment to be provided next week, can be found at the following link:

https://barkernz-my.sharepoint.com/:f:/g/person/fernb_barker_co_nz/EjfDldxZcZ1CtHDhPzoxofoB0aubR_ZlZ-r5VsC6ljwAgQ?e=lgdMfK

I have also, literally 50 minutes ago received the attached correspondence from the New Zealand Transport Agency.

I look forward to communicating with you next week regarding the likely time frames for Council.

Nga Mihi | Kind regards,

Burnette O'Connor
Senior Associate

M +6421 422 346

PO Box 591, Warkworth 0941
20 Baxter Street, Warkworth 0910
Whangarei | **Warkworth** | Auckland | Napier | Christchurch
barker.co.nz



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Memo

26th September 2018

To: Ila Daniels - Principal Planner

From: Rue Statham – Senior Ecologist Biodiversity Team (I&ES)

**Subject: Private Plan Change 25 (PPC25) – Warkworth North
Terrestrial Ecology Review and Assessment**

1 Introduction:

1.1 I have undertaken an assessment of the information supplied in relation to terrestrial ecological effects. For clarity, and for avoidance of doubt, Mr Jason Smith, will be reviewing freshwater matters where they relate to stream environments. As there is a crossover with wetlands in terms terrestrial and freshwater matters, I will also be addressing wetlands habitats in this memorandum.

1.2 In writing this memo, I have reviewed the application reports; more specifically the following documents:

- Warkworth North – Private Plan Change Request, Section 32 Assessment Report (21-January-2019) prepared by B&A Urban & Environmental
- Appendix 3 – Legal Opinion (21 March 2018) prepared by Russell McVeigh
- Appendix 4 - Warkworth North Structure Plan 2018 (January 2019) prepared by Turnstone Capital
- Appendix 10.1 – Landscape Assessment (Updated January 2019) prepared by Littoralis Landscape Architects
- Appendix 13 - Ecological Assessment, North Warkworth Area (3 May 2019) prepared by Bioresearches
- Appendix 22 - Arboricultural Report on Notable Trees (18 September 2018) prepared by The Tree Consultancy Company
- All relevant submissions received, post lodgement

1.3 I have visited the Stubbs Farm Property on 17th April 2018 and 23rd August 2018, with the applicant's ecologist.

1.4 The legal opinion provided by Russell McVeigh states in para 1.3 of its letter to Ms Burnette O'Connor, dated 21 March 2018, that "little to no progress has yet

been made by the Council” in relation to the Warkworth structure planning process, which was due to start in late 2017. I contend that this is not the case.

- 1.5 The Warkworth Structure Plan process provides an opportunity to improve ecological values, set objectives for ecological enhancement, guide the placement of reserves and align community recreation corridors with ecological areas. Key ecological opportunities include:
- Retaining and enhancing native vegetation to improve wildlife habitat.
 - Retaining and buffering natural watercourses to improve water quality and increase numbers and diversity of instream biota.
 - Retaining natural topography as far as possible to ensure watercourses can maintain natural form and function.
 - Aligning reserves and recreational connections with existing natural watercourse corridors to provide user integration with nature and wider buffering for wildlife movement.
 - Reintroducing riverine wetlands to natural floodplains.
 - Restoring modified watercourses to reinstate a meandering form and habitat diversity.
- 1.6 In the context of the wider landscape, the Warkworth Structure Plan area could provide a key linkage between Dome Valley forest in the north, through to the Mahurangi River and out into the Mahurangi Harbour and pest free islands of the Hauraki Gulf in the east. This means that restoration of ecological values in the Warkworth Structure Plan area will help bridge this current gap and as such could yield ecological benefits of a larger scale and across a larger area of the Auckland region.
- 1.7 February 2018, Auckland Council's Environment and Community Committee approved a strategy for Auckland's Urban Ngahere (forest). A key target of the strategy is to increase canopy cover across Auckland's urban area up to 30 per cent. It was advised through pre-application advice to incorporate this strategy into the ecological reporting, and the application in general, to highlight where opportunities align to the aspirations of the urban ngahere.
- 1.8 The applicant provided an arboricultural assessment relating to any individual specimen, or groups of trees, not identified as SEA but for which development should seek to avoid and could be added to PAUP Schedule 10

- 1.9 The Stubbs Farm site is presently subject to an application for earthworks, vegetation removal, wetland and stream reclamation [BUN60344551]; the outcome of which has not been determined at the time of writing but may prejudice some of the outcomes sought by the Structure Plan, including retention and restoration of ecological habitats, including those identified as to be incorporated into the AUP_OP SEA (SEA) overlay.

2 Review:

2.1 Ecological Assessment Report (general comments):

- 2.1.1 I am in general agreement with the descriptions and values identified in the ecological assessment.
- 2.1.2 I am not in agreement with the identification and classifications of wetland habitats; these are much more extensive across the PPC25 area than currently shown, as highlighted to Bioresarches pers. comm. 5th September 2018.
- 2.1.3 The report, quite rightly, suggests appropriate measures to minimise streambed and wetland disturbances utilising such interventions as arch-culverts as part of a subsequent land-use application; however, none of these interventions are strongly spelt out, or given direction to, in the PPC25 Objectives, Policies and Standards.
- 2.1.4 I believe the report does seem overly reliant on placing emphasis on degraded freshwater and wetland habitats, and only identifying opportunities to restore these where *rigid* development aspirations do not interfere. From my own onsite observations, I did not see any wetland sequence that could not be adequately and appropriately restored. To the reviewer, the report seems subservient to “*planning constraints*” rather than identifying all general restoration opportunities and providing appropriate restoration advice; and more importantly, placing emphasis on defaulting to mitigation / offset, or otherwise, as part of a subsequent Land Use application.
- 2.1.5 To the reviewer, the report does give the impression it has been written to complement an aspirational development proposal, which arguably would follow a successful re-zoning and be accommodating to the outcomes sought by the RPS; rather than a land-use application that is being progressed in tandem.

- 2.1.6 To note: of the recommendations noted in the report, when considering BUN60344551, many of the report's design recommendations such as arch culverts, may never eventuate. BUN60344551 currently seeks reclamations and extended culverting, over bridges or arch culverts.
- 2.1.7 Contrary to the introduction in the Ecological Assessment Ms Jane Andrews has not been formally involved with the assessment of environmental effects for this application, nor has she provided any formal classifications or reviews of terrestrial habitats, watercourses and/or wetlands. (Pers. Comm, April 2018). At the time of reviewing preliminary reporting Ms Andrews provided some general comments proved to the Policy team (7th August 2017), and are as follows; *"I still have the same concerns that there is no real justification for stream loss vs restoration/enhancement of these areas. The ecology section is very light on detail compared to what has been provided in the Whenuapai SP [Structure Plan]. Opportunities for open space are discussed (including removal of native vegetation for parks and recreation) but again the restoration and enhancement of terrestrial biodiversity hasn't really been addressed."* I find the comment relating to Council's preliminary involvement quite misleading considering subsequent consultations, and engagements and would suggest that Councils' ecologists have been in full agreement with the Plan Change and development aspirations.

2.2 Precinct Description and biodiversity outcomes:

- 2.2.1 The proposed wording for the Precinct Description [1.1] does not provide for strong directive for ensuring the enhancement of biodiversity values. Whereas other Plan Changes I have been involved with have provided clear purpose for sought outcomes, PPC25 does not.
- 2.2.2 For example, PC5 Whenuapai, provides brief descriptive outcomes for specific disciplines; the wording for biodiversity outcomes is quite clear in Precinct Descriptions' intent, including notation and direction through Precinct plans.
- *Development of this precinct is directed by Whenuapai 3 Precinct Plans 1, 2 and 3.*
 - *Whenuapai 3 Precinct Plan 1 shows:*
 - *indicative open space, esplanade reserves and coastal esplanade reserves;*

- *the permanent and intermittent stream network, including streams wider than three metres; and*
 - *the Whenuapai 3 coastal erosion setback yard.*
 - *Biodiversity:*
 - *The North-West Wildlink aims to create safe, connected and healthy habitats for native wildlife to safely travel and breed in between the Waitakere Ranges and the Hauraki Gulf Islands. The precinct recognises that Whenuapai is a stepping-stone in this link for native wildlife and provides an ability to enhance these connections through riparian planting.*
- 2.2.3 The only brief reference to biodiversity in PPC25 Precinct Description is, “*to secure the outcomes for watercourses including related mitigation.....*”
- 2.2.4 It is worth noting here, that the proposed PPC25 land does not only contain watercourses, but wetland sequences and area of high value forest remnant; as noted by ecological assessment, onsite observations and the ‘Proposed SEA Overlay Map’.
- 2.2.5 I suggest alternative wording to the Precinct Description to be more articulate in noting high value biodiversity areas, and clear in purpose, to support the relevant objective and policies of PPC25. Appropriate wording could be extracted from the adopted Warkworth Structure Plan and incorporated into such a Precinct Description.
- 2.2.5.1 Remnant patches of native vegetation will not be developed for urban purposes; stream and wetland margins will be restored. This will provide some protection to the important existing natural and ecological values which those areas hold and help protect those values over the long-term. Ecological corridors will be enhanced or established to connect those areas together, as well as to a range of other terrestrial, aquatic and/or marine habitats. Ecological corridors will help improve the quality and resilience of habitats by facilitating movement of wildlife and providing opportunities to increase vegetation cover and biological diversity (especially native species). Creating these corridors will require revegetation of the intervening gaps between existing areas of native vegetation.

2.3 Objectives and policies:

- 2.3.1 PPC25 proposes an objective and several policies directed at ensuring that AUP-OP Policies B7.2.1(2) & B7.3.1 will not be adequately met. Council, through the pre-application process had several meetings with the applicant and their agents, where we reiterated that this approach is unlikely to be supported.
- 2.3.2 I suggest that objective I1.2(b) is re-worded to ensure that potential downstream effects on the Mahurangi harbour and SEA's are appropriately considered and addressed
- 2.3.3 I suggest that objective I1.2(c) is omitted from the Precinct wording and deferred to existing AUP-OP Policy framework; or inserting a clearer Objective wording in relation to enhancement of biodiversity values:
- I1.2 Objectives
 - Biodiversity values and ecological corridors are maintained and/or enhanced through protection of SEA's, riparian and wetland margin restoration [at the time of development], ensuring adequate building setbacks and through appropriate landscaping practices.
 - Stormwater runoff is managed to enable the maintenance and enhancement of natural waterways and water quality, including downstream environments and SEA.
- 2.3.4 I am generally unsupportive of Policies 4 – 6 as currently proposed. I support some of the intentions of Policies 4 and 6, however the text could be clarified further or amended to best achieve AUP-OP RPS.
- 2.3.5 Policy 4, I would suggest that Council is unlikely to take ownership of all nominated Open Space; in my experience this does not always eventuate. Furthermore, the policy does not include wetlands.
- 2.3.5.1 I1.3 Policies (4) (Amend the Policy as follows: ~~Strike through~~ represents deletion, underline represents an addition)
- 2.3.5.2 Provide an indicative network of open space areas, including wetland [and stream] margin protection areas, to protect and connect existing ecological values; provide for areas of public open space, as well as walkway and cycleway connectivity.
- 2.3.5.3 Require, at the time of subdivision and development, a Green Network of 10-20m riparian buffers riparian planting of appropriate

native species along the edge of permanent and intermittent streams, and wetlands to:

- a) provide for ecological corridors through the PPC25 area;
- b) maintain and enhance water quality and aquatic habitats, and;
- c) enhance existing native vegetation and wetland areas within the catchment, and;
- d) reduce stream bank erosion.

2.3.6 I move to strike out Policy 5 in its entirety. As previously mentioned AUP-OP ChpB7 provides for protection, restoration and enhancement of degraded ecological values where development is occurring. AUP-OP Policy framework and ChpE3 provides for appropriate measures and remedies to provide for offsetting of unavoidable wetland reclamation.

2.3.7 Policy 6, as worded does not encompass wetland habitats and includes wording that may prejudice restoration outcomes for wetlands in terms of the direction of the RPS. I move to have the Policy amended.

2.3.7.1 I1.3 Policies (6) (Amend the Policy as follows: Strikethrough represents deletion, underline represents an addition)

2.3.7.2 Enhance wetlands and streams ~~identified for enhancement~~ using techniques such as boulder clusters; spur dikes, vanes and other rock deflectors; rock riffles; cobble or substrate; cobble floodways; root wads or large wooden debris; vegetated floodways; live siltation; erosion control blankets; living walls and culverts designed to enable fish passage.

2.4 Proposed Standards:

2.4.1 The applicant has proposed the following I1.6.2. Standard – Streams

2.4.1.1 Purpose:

To achieve stream enhancement works that improve ecological values and water quality now and into the future.

- (1) Stream enhancement shall be undertaken in accordance with the best practice guidelines including TP148 – Auckland Council Riparian Zone Management; Guidance for Water Sensitive Design (GD04) – 8.1 Riparian Buffers and Planting and Auckland Council’s Strategy for Urban Ngahere (Forest).

- 2.4.2 I will discuss The Auckland Council's Strategy for Urban Ngahere below; suffice to state, that the Standard is unlikely to achieve the Strategy outcome.
- 2.4.3 TP148 and GD04 do not correlate too well with one another; GD04 is a document for Stormwater Infrastructure, whereas TP148 is 20yrs old and is currently being revised; to be completed by mid-2020.
- 2.4.4 Both GD04 and TP148 can be conflicting and interpreted many differing ways; including interpreting "Best Practice".
- 2.4.5 Standard I1.6.2 does not refer to wetlands
- 2.4.6 It is my advice that providing more minimum prescriptive standards provide surety of outcome, thus meeting the objectives of good urban form and design, plus meeting minimum standards for ecological restoration.
- 2.4.7 I submit the following for inclusion:
- I1.6 Standards.
 1. Riparian margins must be planted either side to a minimum width of 10m measured from the bank of the stream.
 2. Any planting required, will be implemented in accordance with a council approved landscape plan and must be use eco-sourced native vegetation, be consistent with local biodiversity and planted at a density of 10,000 plants per hectare.
 3. The riparian areas of a permanent or intermittent stream or wetland margin must be planted to a minimum width of 10 - 20m measured from the top of the stream bank and/or the wetland's fullest extent.
 4. The riparian planting proposal must:
 - (a) include a plan identifying the location, species, planting bag size and density of the plants;
 - (b) use eco-sourced native vegetation;
 - (c) be consistent with local biodiversity and ecosystem extent;
 - (d) be planted at a density of 10,000 plants per hectare, unless a different density has been approved on the basis of plant requirements.
- 2.4.8 The applicant proposes several inclusions to Activity Table (I1.4) and/or Standards (I1.6) that seek to undermine the integrity of the AUP-OP by requesting permitted activities for new wetland [and stream] reclamations. This is not supported.

- 2.4.9 As discussed previously the applicant has not comprehensively identified wetland sequences throughout the PPC25 area. These proposed changes would undermine an effects-based assessment for what would ordinarily be a non-complying activity for all wetland environments.
- 2.4.10 Further, with the proposed wording, the applicant will not need to adequately demonstrate that avoidance is not possible. There are likely to be several differing development configurations resulting in multiple opportunities within the PPC25 area. As discussed previously, the ecological assessment has provided alternative solutions to wetland reclamation, e.g. in terms of road crossings, that potentially the application may then not have to follow through with.

2.5 Esplanade:

- 2.5.1 I have not been able to ascertain from the documents provided, where or how the applicant has assessed the extent of possible esplanade reserve area. The regular flooding experienced during peak hydrological events would aid the assessment of ecological values and provide more robust areas of ecological enhancement.
- 2.5.2 The Stubbs Stream is an important component of the Green Network, and given the modelling and survey undertaken for the Structure Plan, it is highly likely that the entire stream reach would be subject to Esplanade requirements.
- 2.5.3 I make reference at this point that application BUN60344551 has not provided the level of detail either, and the applicant seeks to undertake quite extensive earth-working and retaining within 10-20m of the Stubbs Stream.

2.6 Wetlands:

- 2.6.1 Wetlands have equal protection under PAUP, and can contain rare and threatened plants and habitats
- 2.6.2 The classification and identification of wetlands does not extend to cover the entire PPC25 area.
- 2.6.3 Whilst the ecological report identifies wetlands in text, most have not been adequately / correctly mapped, especially those within the flood extents of the main waterbodies, i.e. Stubbs Stream. Pg23 Figure 2.6 of

the Bioresarches report only classifies streams and two areas of wetland.

2.6.4 The report has used James (2014) as a delineation tool, rather than the nationally recognised Landcare Research wetland delineation tool, which uses soils [and hydrology], as well as plant sequences, to accurately map and identify wetland habitats.

2.6.4.1 For avoidance of doubt, the Landcare Research delineation tool is now incorporated into the proposed (draft) National Policy Statement - Freshwater Management (2019) (NPS-FM) and MFE's Action for Healthy Waterways, where a stronger emphasis is being placed on protecting urban and rural wetland sequences.

2.6.5 As noted on site, wetlands extend into the lower reaches of most significant stream reaches including, but not limited to, Stream 1, 2 & 4. Riverine wetland is evident along Stubbs Stream (from Sanders Road extending upstream). The wetland habitats are clearly visible in some of the ecological reports' photographic plates, for example 2.7, 2.8, 2.9, 2.10, 2.13, 2.14, 2.16 and 2.17.

2.6.6 For example; *Plate 2.16. Lower reach of Watercourse 1 where the water flow becomes diffuse*, should lead the writer to ascertain that this diffuse flow regime is conducive of a wetland environment, especially given the vegetation composition. Diffuse flows, such as shown in the photograph, are typical of lower stream reach wetland habitats. It is highly unlikely that this habitat would change much over time (notwithstanding restoration and/or stock exclusion), given the size of catchment; the flow, even in peak periods, would remain diffuse in nature. This wetland, as with many on site, would be good candidates for restoration and/or enhancement.

2.7 Terrestrial Habitats:

2.7.1 The assessment of terrestrial habitats does not extend to the entire PPC25 area. I am unable to provide review of any other areas of terrestrial habitat, due to the lack of reporting. Furthermore, Council did not have access to all areas subject to PPC25

2.7.2 Terrestrial habitats on Stubbs Farm, i.e. bush areas, have been identified and these are agreed. There are only four distinct areas of vegetation, and these are labelled in Figure 3.1 in the Ecological Report. Two other

areas of habitat have been identified and these are located on the Stubbs stream (riparian planting) and a small area of existing riparian vegetation to the north of Stubbs Farm.

- 2.7.3 The applicant proposes to re-classify areas 1 and 3 as SEAs, and presumably requests these to be incorporated into the AUP_OP overlay; this is generally supported. However, I do note that application BUN60344551 is seeking to remove a portion of the western side of Area 1 due to “*engineering constraints*”; it is unclear at the time of writing what those constraints are, or why engineering solutions are unable to accommodate the SEA retention in its entirety given the gentle to flat nature of the landform in this location. Furthermore, the proposed ‘*mitigation*’, at the time of writing is considered inadequate.

2.8 Auckland’s Urban Ngahere – opportunities:

- 3.11.1 The Auckland’s Urban Ngahere (forest) (AUN) sets an aspirational goal of reaching a 30% canopy cover across Auckland’s urban area. This represents a ‘Good’ forest cover, acknowledging that this is not representing ‘tree’ coverage, but all vegetated cover, including raingardens, green roofs, private gardens etc.
- 3.11.2 Greenfield areas are the most opportunistic areas to achieve this level of coverage, as they are generally lacking in tree / habitat coverage and development can be more accommodating to the strategy. The Ecological Report Section 6.5.3 - Integrated Planning and Ecosystem Enhancement Opportunities is suggesting $\geq 10\%$ may be achieved.
- 3.11.3 $\geq 10\%$ is representative of a Bare to Low coverage overall [1-15%] in the AUN.
- 3.11.4 I believe, as proposed, PPC25 is not consistent with the objectives of Auckland’s Urban Ngahere strategy and would likely fail to achieve the lower end of the scale of ‘moderate’ urban forest canopy [15-20%]. With smaller development lots, and modern development often maximising building coverage, there is increasingly little opportunity on private residential properties to improve overall vegetated cover.
- 3.11.5 This further reinforces my opinion that the applicants proposed I1.6 Standard is unachievable in terms of AUN, and that my recommended approach should be preferred. This would help to ensure that streams and wetlands are best served by the approach of a minimum buffer

standard, requiring restoration and enhancement; even if overall, PPC25 may fail to meet the strategies sought outcomes of 30% cover across the varying habitats in urban areas.

3.12 Submissions:

3.12.1 Several Submitters have made express comment regarding ecological outcomes; I note whilst some submissions are in general support, others seek amendments to PPC25; I will address the latter in turn:

3.12.2 Patricia Sullivan (7) - Do not provide for riparian planting of the watercourse at 27 State Highway 1.

2.9.2.1 Whilst the classification of the watercourse on the property may be incorrect (to be clarified), the stream is still intermittent, and its enhancement still warranted. This submission does not realise the outcomes sought by the AUP_OP RPS in the improvement of degraded habitats and is not cognisant of the outcomes sought by the community through the Warkworth Structure Plan. I do not support this submission.

3.12.3 Dr Isobel Topham (9) – seeks further ecological assessments.

2.9.3.1 Dr. Topham is correct in noting that no ecological assessment has been carried out for the entire PPC25 area, and I support the submission that the ecological outcomes sought through PPC25 would be difficult, though not impossible, to fully appreciate without full reporting. I will seek leave to the applicant to demonstrate why this reporting was not undertaken in consultation with the adjacent landowner. Whilst there are gaps in the ecological reporting, any development of the land in her submission would be dealt with as part of a comprehensive development package which would include ecological assessment. From my knowledge of the area, most of the biodiversity values will be situated around, and within, freshwater bodies (streams / wetlands) and their immediate margins.

3.12.4 Auckland Council (12) – seeks various amendments to Objective, Policies, and Standards.

2.9.4.1 I generally support most of the amendments and comments raised by Auckland Council in their submission and have discussed most, if not all, in this review.

2.9.4.2 In addition to comments already made, I do note specifically that Auckland Council's submission makes mention of restricting the installation of retaining walls within riparian areas. To that end, the application BUN60344551 is currently proposing retaining structures up to 7m in height; commonly over 2.5m along Stubbs Stream, within 10-20m of streams and wetlands. It is my experience that Community Facilities and Auckland Transport are highly reluctant to take on such 'assets' due to potential high cost of maintenance and their durability. Furthermore, locating these structures within the riparian yard can undermine the opportunities for riparian restoration and enhancements.

3.12.5 Manuhiri Kaitiaki Charitable Trust (29) – Seeks protection and enhancement of biodiversity values, to result in a net gain in ecological outcome.

2.8.5.1 I believe that I have address submission matters raised by the Manuhiri Kaitiaki Charitable Trust in this memorandum, especially in relation to ensuring wetlands and riparian margins are appropriately restored and considered through future consenting processes.

4 Conclusion and recommendations:

4.11.1 I have found the Terrestrial Ecological reporting to be generally factual and correct in terms of forest remnants.

4.11.2 I am concerned that the PPC25 report has been written in such a way to give credence to the aspirational outcomes of an unconsented land-use application, rather than from the premise of a purely 'best-practice' ecological outcome focused document.

4.11.3 I disagree with the overall assessment and identification of natural wetlands, which are found extensively throughout the main tributary

streams (lower down in reaches) which feed into, and are located along, Stubbs Stream.

2.8.2.1 In this regard, my proposed changes to Objectives, Policies and Standards would emphasis the need to correctly identify wetlands and help ensure that they are adequately protected and restored.

2.8.3 In conclusion, whilst I have noted a few inconsistencies and issues with the direction of PPC25 in terms of ecological outcomes, with appropriate Objective, Policies and Standards, I find no biodiversity focused reasons why the land could not be appropriately re-zoned for urban development

5 Proposed changes to Precinct text

5.11 I suggest an insertion to Precinct Description for directed biodiversity outcomes (Amend the Precinct Description as follows: Strikethrough represents deletion, underline represents an addition)

Precinct Description

Remnant patches of native vegetation will not be developed for urban purposes; stream and wetland margins will be restored. This will provide some protection to the important existing natural and ecological values which those areas hold and help protect those values over the long-term. Ecological corridors will be enhanced or established to connect those areas together, as well as to a range of other terrestrial, aquatic and/or marine habitats. Ecological corridors will help improve the quality and resilience of habitats by facilitating movement of wildlife and providing opportunities to increase vegetation cover and biological diversity (especially native species). Creating these corridors will require revegetation of the intervening gaps between existing areas of native vegetation.

5.12 11.2 Objectives (Amend the Objective as follows: Strikethrough represents deletion, underline represents an addition)

~~e. providing an integrated stormwater management solution;~~

~~d. minimising loss of, or reduction in ecological values, and enhancing retained ecological values to achieve overall effects on ecological values that are less than minor.~~

- Stormwater runoff is managed to enable the maintenance and enhancement of natural waterways and water quality, including downstream environments and SEA.
- Biodiversity values and ecological corridors are maintained and/or enhanced through protection of SEA's, riparian and wetland margin restoration [at the time of development], ensuring adequate building setbacks and through appropriate landscaping practices.

a. 11.3 Policies (4) (Amend the Policy as follows: Strikethrough represents deletion, underline represents an addition)

Provide an indicative network of open space areas, including wetland [and stream] margin protection areas, to protect and connect existing ecological values; provide for areas of public open space, as well as walkway and cycleway connectivity.

- Require, at the time of subdivision and development, a Green Network of 10-20m riparian buffers riparian planting of appropriate native species along the edge of permanent and intermittent streams, and wetlands to:
 - provide for ecological corridors through the PPC25 area;
 - maintain and enhance water quality and aquatic habitats, and;
 - enhance existing native vegetation and wetland areas within the catchment, and;
 - reduce stream bank erosion.

b. ~~11.3 Policies (5)~~

~~Provide for the retention of watercourses except where Precinct plan 1—Warkworth North Precinct identifies that there will be stream loss and implement appropriate mitigation measures onsite to offset any adverse effects as indicated on Precinct plans 2—Stormwater Catchment Management plans.~~

c. 11.3 Policies (6) (Amend the Policy as follows: Strikethrough represents deletion, underline represents an addition)

Enhance wetlands and streams ~~identified for enhancement~~ using techniques such as boulder clusters; spur dikes, vanes and other rock deflectors; rock riffles; cobble or substrate; cobble floodways; root wads or large wooden debris; vegetated floodways; live siltation; erosion control blankets; living walls and culverts designed to enable fish passage.

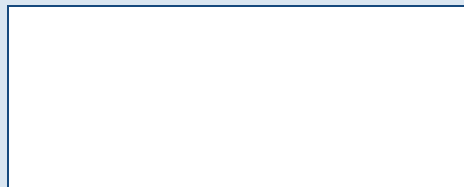
d. 11.6 Standards – Streams

Purpose:

- ~~1. To achieve stream enhancement works that improve ecological values and water quality now and into the future.~~
- ~~e. Stream enhancement shall be undertaken in accordance with the best practice guidelines including TP148 – Auckland Council Riparian Zone Management; Guidance for Water Sensitive Design (GD04) – 8.1 Riparian Buffers and Planting and Auckland Council’s Strategy for Urban Ngahere (Forest).~~
 - ~~1. Riparian margins must be planted either side to a minimum width of 10m measured from the bank of the stream.~~
 - ~~2. Any planting required, will be implemented in accordance with a council approved landscape plan and must be use eco-sourced native vegetation, be consistent with local biodiversity and planted at a density of 10,000 plants per hectare.~~
 - ~~3. The riparian areas of a permanent or intermittent stream or wetland margin must be planted to a minimum width of 10 - 20m measured from the top of the stream bank and/or the wetland’s fullest extent.~~
 - ~~4. The riparian planting proposal must:~~
 - ~~(a) include a plan identifying the location, species, planting bag size and density of the plants;~~
 - ~~(b) use eco-sourced native vegetation;~~
 - ~~(c) be consistent with local biodiversity and ecosystem extent;~~
 - ~~(d) be planted at a density of 10,000 plants per hectare, unless a different density has been approved on the basis of plant requirements.~~

Memo prepared by:

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Biodiversity Team





Warkworth North PPC25

Economic Effects Assessment Report

14 October 2019

m.e
consulting



Warkworth North PPC25

Economic Effects Assessment Report

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1 Introduction

This report reviews the economic aspects of Private Plan Change 25: Warkworth North for Auckland Council, as input to Council's s42A report.

1.1 The proposal

Private Plan Change 25 ("PPC25") is an application by Turnstone Capital to rezone approximately 99 hectares of the Future Urban zoned land in Warkworth North to a mix of residential and business zones. The entire area would provide capacity for approximately 1,000 to 1,200 dwellings and 13.4 hectares of business land.


There will be one small scale neighbourhood centre provided in the locality, which has been deliberately designed as a small scale centre of 3,000m² in order to avoid significant effects on the functioning and vitality of the Warkworth Town Centre.

The Business Light Industry zone is located on the flatter and more easily developed parts of the PPC area, close to the motorway, to enable light industrial or larger footprint buildings to establish there. It is also located close to other vacant industrial land to the north of Warkworth, and forms an extension to the General Business zoned land that is situated on the corner of Hudson Road and the existing State Highway. The PPC proposes less Light Industry land than is earmarked in the Warkworth Structure Plan, and the applicant's justification for this is that there is already sufficient Business Light Industry zoning for the current planning horizon, and in their opinion "there are other areas in the Future Urban zone at Warkworth that can better provide additional business land in an efficient and coherent manner" (p3).

1.2 Documents reviewed

In preparing this report we have reviewed the following documents:

- "Warkworth North Proposed Plan Change Economic Assessment", McDermott Consultants Ltd, January 2018
- "Warkworth North Proposed Plan Change Economic Assessment", McDermott Consultants Ltd, January 2019 (the "McDermott Consultants 2019 report")
- "The Provision of Business Land in Warkworth North", McDermott Consultants and Insight Economics, 3 July 2019 (Appendix D of Submission 23, the "MCIE report")
- "Warkworth Spatial Plan 2017", Warkworth Spatial Plan Working Group, November 2017
- "Warkworth North Structure Plan", March 2018, Turnstone Capital
- "Warkworth Structure Plan", Auckland Council, June 2019 (the "WSP")

- 
- “Warkworth North Private Plan Change Request Section 32 Assessment Report”, 21 March 2018, B&A Urban and Environmental
 - “Warkworth North Private Plan Change Request Section 32 Assessment Report”, 21 January 2019, B&A Urban and Environmental
 - “Warkworth Business Land Assessment”, Market Economics, 13 June 2018, section 5. Appendix 1 in Auckland Council (June 2018) Business Land Topic report (“M.E Business Land Report”)
 - Relevant submissions and further submissions.
 - Relevant sections of the Auckland Unitary Plan (Operative in Part).

We have conducted several site visits over the course of the last 18 months to the PPC area as well as other retail and industrial locations in Warkworth.

1.3 Scope

The scope of this report is to:

- review the potential economic effects of PPC25
- review and respond to submissions that relate to economic effects; and
- provide recommended actions for Auckland Council in response to PPC25.



2 Review of PPC25 application

2.1 Economic assessment overview

An economic assessment (the “McDermott Consultants 2019 report”) was prepared to inform the Structure Plan and the proposed Plan Change (Appendix 8 of the section 32 report). The report assesses the potential effects of and demand for the zoning configuration presented in the notified version of PPC25, which includes a 0.3ha Neighbourhood Centre, some 13ha of Light Industry Zone and the balance of the area in residential zones. The notified configuration represents a position adopted by the applicant after discussions with Council officers, and is somewhat changed from earlier drafts of potential zonings that were contemplated.

An alternative zoning configuration is promoted by the applicant in its submission (No.23), and that alternative is assessed by McDermott consultants (together with Insight Economics Ltd) in a separate report. We review and respond to the zoning requested in Turnstone’s submission in section 3.

The McDermott Consultants 2019 report concludes that it “is difficult to see the employment land zoned for development in the Warkworth North PPC having an adverse impact on existing centres and business activity” (p31). The report provides several reasons for this, including that:

- The Town Centre is well established, buoyant and established as the commercial, administrative, and community centre for the wider area.
- The Grange will benefit from population expansion in Warkworth South.
- The Woodcocks area is diverse, with room for expansion.
- The PPC25 Neighbourhood Centre would provide for most of the convenience needs of PPC area residents (implying it will not attract consumers into the area from outside it, at least in net terms).

The notified zoning configuration provides for the following business land:

- A Neighbourhood Centre of 0.3ha land area
- Some 13ha of Light Industry Zone (“LIZ”), although it is unclear whether than takes into account the need to remove parts for that area for esplanade reserves and the Western Link Road.

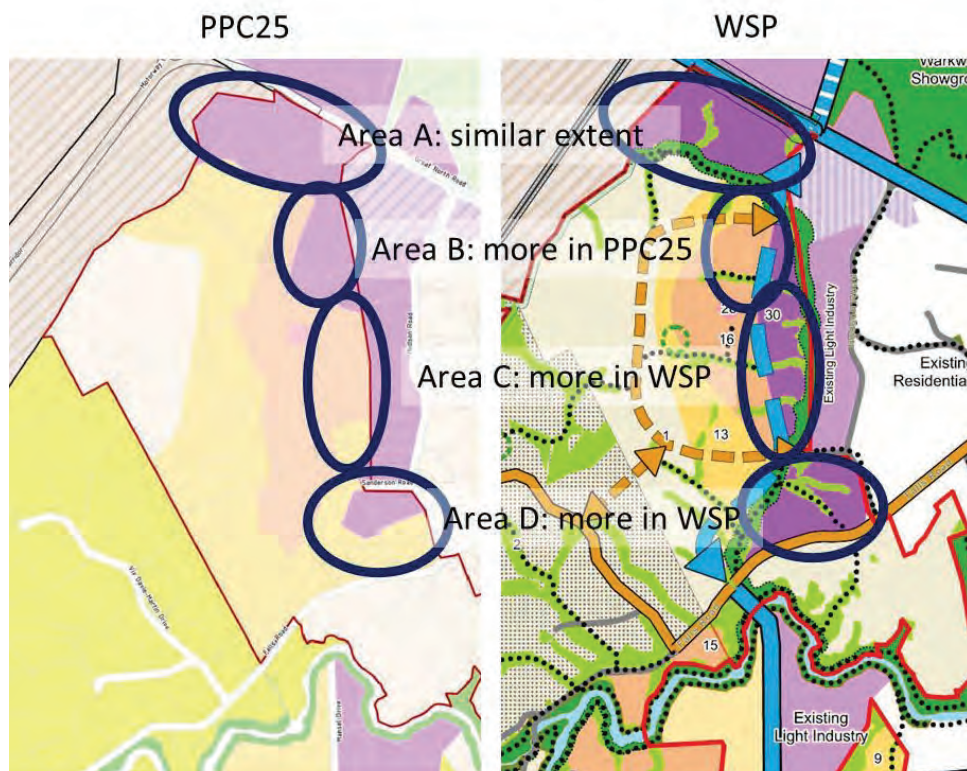
2.2 Response to application

2.2.1 Comparison of PPC25 and WSP business zones

The notified zoning configuration proposed in PPC25 is similar to that contained in the WSP:

- A Neighbourhood Centre is identified in the general proximity of the area proposed for that zoning in PPC25, and the WSP assumes a 0.3ha land area, as does PPC25.
- The extent of the LIZ proposed varies between the two documents, as shown in Figure 2.1::
 - Area A: The WSP and PPC25 propose similar areas of LIZ bordering the current SH1, west of the live zoned General Business Zone.
 - Area B: PPC25 proposes more LIZ to the south-east of the live zoned General Business Zone, much of which is proposed to be residential zones in the WSP.
 - Area C: The WSP proposes a long extent of LIZ between the Western Link Road (blue dashed line) and the existing Hudson Road LIZ, whereas PPC25 proposes that area to be residential zones.
 - Area D: The WSP proposes a larger area of LIZ than PPC25. The former extends between Sanderson Rd and Falls Rd, whereas the latter extends only halfway between the two roads.

Figure 2.1: Comparison of LIZ spatial extent: PPC25 (on left) vs WSP (on right)



2.2.2 Neighbourhood Centre

The proposed Neighbourhood Centre in the PPC25 area meets the requirements of a centre there as informed by our assessment for the WSP in the M.E Business Land Report. We agree that the



Neighbourhood Centre proposed is an appropriate zone type, in a suitable location to provide for the needs of the local community in the PPC25 area.

There is discussion in the s32 report (21 January 2019 version¹) about a Neighbourhood vs Local Centre. One matter raised is the historic changes in the centre type identified within the PPC25 area. The original Future Urban Land Supply Strategy (“FULSS”) (from 2015) identified a Local Centre, whereas the revised version did not identify any centre within the PPC25 area. As discussed in section 2.2.3, the original FULSS represented an early attempt at explaining how growth (including residential and industrial) could be accommodated around Auckland. The FULSS is therefore a high level document that has been followed by more detailed assessments to better take into consideration local constraints and opportunities. Changes in the extent and location of commercial areas at a small spatial scale such as the PPC25 neighbourhood are, in that context, to be expected

While the s32 report relates to the proposed Neighbourhood Centre in the PPC25 area, (“it is critical that a supporting neighbourhood centre is located within the development to provide for day-to-day needs of residents” (p17) the report also states that “it is appropriate to provide for a Local Centre that will provide for the day-to-day needs of the local community within a walkable catchment” (p29). As explained below in response to the Turnstone submission, we disagree that a Local Centre is needed to provide that access to day-to-day retail needs.

In our opinion a Local Centre goes somewhat further than that, especially a very large (5.7ha) one proposed in the submission that might conceivably accommodate 23,000m² of ground floor space, plus inevitably some above ground space. That would make a PPC25 Local Centre a similar size to the Albany Mega Centre (25,000m², part of the Albany Metropolitan Centre)², Eastgate Shopping Centre in Christchurch (27,000m²), the Hornby Mega Centre (23,400m²), the Silverdale Centre (22,900m², zoned Town Centre) or North City in Porirua (25,700m²). These centres include supermarkets, department stores, cinemas, large food courts and many small format retailers, for example:

- North City has large Kmart and Farmers department stores, a 5 screen cinema, 72 specialty shops, a 10 outlet food court and 10 retail kiosks and 900m² of office tenancies.
- Eastgate has a large (10,000m²) The Warehouse, a 5,200m² Countdown, library, and 35 specialty stores (5,600m²).

Those examples are all large retail nodes, and most have more than one large retail anchor. In our opinion they all represent much more than ‘local’ supply to provide for the “day-to-day needs of the local community within a walkable catchment”. In our opinion a centre fitting that description would be much smaller than 23,000m²+, and more likely in the order of 5-10,000m². As discussed in response to Turnstone’s submission, we do not agree that a centre of even that smaller size is appropriate in the PPC25 area, and instead our assessment indicates that a Neighbourhood Centre (3,000m² land area, up to 1,500m² GFA) is appropriate. That position is consistent with the s32 report’s conclusion that “the restricted size of the proposed Neighbourhood Centre will ensure the continued amenity and vitality of the Warkworth Town

¹ All references in this document to the applicant’s s32 report are to the January 2019 version not earlier versions which it supplants

² All floorspace data in this paragraph from Property Council of NZ’s “Shopping Centre Database”



Centre” (p30). We note that there has been no assessment undertaken in relation to the potential effects of any larger potential centre (e.g. the Local Centre proposed in the Turnstone submission).

A Neighbourhood Centre would provide for small scale (<500m²) offices as a permitted activity, as well as small scale retail. Some multi-level development in the Neighbourhood Centre would be expected, and could accommodate non-retail activities, providing a range of employment opportunities indicated as desirable in the McDermott Consultants report.

In conclusion, we agree with the s32 report’s assessment (p32) the Neighbourhood Centre proposed will have positive effects and will support the centres hierarchy by:

- “providing for an appropriately sized Neighbourhood Centre and ensuring other retail opportunities do not detract from the Warkworth Town Centre”;
- Contributing to a diverse mix of choice and opportunity for the community.

We have a different opinion about the effects and appropriateness of a Local Centre proposed in Turnstone’s submission in place of the notified Neighbourhood Centre, as addressed in section 3.

2.2.3 FULSS and Supporting Growth

In response to matters raised in the s32 report, we respond next to observations about the FULSS. We note that the FULSS is a relatively high level strategy document, and while some analytical work underlaid the indicated distribution of business areas (around Auckland generally, and also in Warkworth) more detailed assessment was required, and completed after the initial FULSS was completed. That additional work resulted in the FULSS refresh (2017), which changed the business areas indicated, based on better information available, more assessment and feedback received during consultation.

However, even the FULSS refresh did not conduct a very detailed assessment of business land requirements, and was only ever intended to represent high-level guidance into possible dwelling yields and business land location. The FULSS is specifically stated to be a sequencing and strategy document, contributing to regional growth planning. The FULSS did not, as we understand it, take into account specific local considerations such as geotechnical constraints that were not immediately obvious, but which might have been identified during specific local studies, such as were undertaken for the WSP. As with all growth planning initial high level indications are refined as more detailed investigations are completed.

Similarly Council’s “Supporting Growth – Delivering Transport Networks” document identified the Structure Plan area as “Potential Business”, as did the draft Auckland Plan Refresh document which identified the area as ‘Indicative Future Business Area’ (discussed on p25 of the s32 report). The s32 report notes that “a Light Industry zoning across the Structure Plan area would not be an efficient use of the site, given its predominantly steep topography presence of natural features, (and) the earthworks necessary” (p29). The FULSS was apparently unaware of those constraints, although the constraints were identified in the WSP planning process, resulting in the removal of proposed LIZ zone (in the WSP) from those areas of steep topography. Ultimately the WSP is based on detailed investigation into relevant issues affecting the Warkworth FUZ, and wider Warkworth and the surrounding hinterland, and these issues were not taken into account in the earlier stages of planning (e.g. FULSS). The M.E Business Land Report was one thread of that investigation, and is relied on to provide this response to the PPC25 application and associated specialist reports.



2.2.4 LIZ

The notified PPC25 provides for 13ha of LIZ. That is less than the 20ha provided for in the WSP, and therefore raises concerns about the potential implications for the loss of 7ha of LIZ on Warkworth's ability to generate employment-supporting activities in the medium to long term. The notified PPC25's LIZ provision is, in our opinion insufficient to support the level of employment provision targeted in the WSP (i.e. to maintain at or close to the current employment per household level). The location of the LIZ proposed in PPC25 is generally similar to the WSP location of same, albeit with different spatial extents, as described above in Figure 2.1.

The s32 report however does state a sceptical position, supported by the underlying McDermott Consultants report, that "land zoned Light Industry would be unlikely to be taken up, resulting in economic costs from foregone development", because demand for industrial land "will be predominantly satisfied through the new Light Industrial zoned land to the north of State Highway 1 and Morrison Drive" (p26). Despite that position, PPC25 as notified contains more industrial land than was originally proposed in an early configuration, in response to requests from some landowners in the east of the Structure Plan area (which was initially proposed to be Mixed Use). As stated in section 3, it remains our opinion that the area of LIZ proposed in the WSP in total, and within the PPC25 specifically, is not excessive in the context of future demand for employment opportunities and the role Warkworth will play in the sub-regional economy, and so we disagree with PPC25's position that LIZ provision in the WSP is excessive.

2.2.5 Other zones within PPC25

Apart from the LIZ and Neighbourhood Centre zone, PPC25 proposes residential zones in the rest of the plan change area. That provision is broadly comparable to the zoning configuration provided in the WSP, although PPC25 provides for more higher density (Mixed Housing Urban and Suburban) residential zones. From our involvement in the WSP we understand that there may be constraints as to the suitability of some of that land for higher density residential zones, although defer to planning responses as to that suitability.

From an economics perspective the only potential issue of concern is that the greater dwelling yield that those higher density residential zones represent would likely result in more households resident in the PPC25 area than was envisaged under the WSP configuration. That would have implications for the employment per household ratio that is able to be achieved across the town as a whole, because a higher dwelling yield from the Future Urban Zone overall (PPC vs WSP) would require additional employment to maintain a particular target employment ratio.

It is unclear to what extent the likely household yield would change from the WSP estimate, because no assessment is provided of that, and the WSP areas do not align with the PPC25 boundaries. That assessment could be undertaken by measuring the area of different residential zones and applying average residential densities to them, although would require some assessment of net developable area (i.e. how much land would be unavailable for development due to road and other uses, and not suited to development generally)

We note that both the WSP and PPC25 differ significantly from preliminary indications of potential zoning provided in the high level FULSS strategy document. The FULSS had indicated the possibility for a relatively low residential yield from the PPC25 area but much more expansive industrial zoning, however that has



been changed in light of detailed site investigations and consultation undertaken as part of the WSP drafting process.



3 Review of Turnstone Submission

In this section we comment on Turnstone Capital Limited's submission (No.23) on the PPC. amended precinct and new supporting economic assessment. We provide this response in a separate section due to the significance of the submission.

3.1 Submission content

Turnstone' submission states that it proposes to fundamentally change³ the notified zone layout. The key differences between the notified zoning pattern, the proposed zoning pattern requested through this submission, and the Council's Warkworth Structure Plan are described on p10 of the Turnstone submission (Submission 23):

- Turnstone no longer supports Business - Light Industry ("LIZ") in the north-east, and now requests Business - Mixed Use zone ("MUZ") and a small addition to the existing General Business zone ("GBZ").
- Turnstone now proposes a Business – Local Centre in place of the proposed Business - Neighbourhood Centre.

The submission is supported by an economic report prepared by McDermott Consultants and Insight Economics (Appendix D of the submission, the "MCIE report"). That report, and other parts of the submission, state that:

- There is a significant over supply of LIZ land in Warkworth.
- A better mix of employment opportunities is required to support sustainable growth and development, and the existing urban areas will not provide the necessary supply of this mix for reasons including timing, land ownership etc.
- The Neighbourhood Centre zone is not sufficiently sized to provide for a meaningful variety of employment opportunities. Nor does it provide for an appropriate mix of community facilities, and these are better supported by a Local Centre zone.
- A Local Centre in the location proposed will support existing residential areas, not just new residential areas within the PPC25 area.
- A MUZ is considered to be the most appropriate zone to achieve business land uses and create an appropriate transition between residential and business activities.
- A small extension of the live zoned GBZ out to the proposed Western Link Road ("WLR") is appropriate

³ As described on p2 of the submission



3.2 Related submissions

Middle Hill⁴ supports the request to delete the industrial zoned and supports the request to amend to either Mixed Use or General Business (noting the submitters' preference for Mixed Use).

3.3 Response to submission

The Turnstone submission is supported by, and relies on, economic advice provided in the MCIE report. That report is reviewed and responded to below.

3.3.1 Industrial land

The MCIE report notes that there are very low vacancy rates in Warkworth across the industrial, office and retail sectors (p2), with rates being lowest in industrial, and notes that this suggests a “space-constrained economy” and “limited capacity”. That limited capacity indicates there is likely to be some built-up pressure for additional industrial land, and that current industrial employment might be greater if it were not for the existing constraint. That current employment level is relevant because it is discussed in the MCIE report as the baseline against which to interpret future growth. We note that although there is now live-zoned LIZ land in Warkworth in the Showgrounds precinct, this has only recently begun to be serviced and developed, and is not yet available to the market, as far as we are aware.

The MCIE report concludes that it is “extremely unlikely” that the quantum of industrial land identified in the Warkworth Structure Plan “WSP” will be needed. The report states that the indicative employment yield of the WSP industrial areas would be around 3,300 jobs, which would equate to a compound growth rate of **4.2%** out to 2055, off a base of 930 jobs (p8). That growth rate is incorrect, and growth from 930 to 3,300 over 37 years equates to only 3.5%. If all that growth were to occur by 2048 (instead of 2055) the compound growth rate required would be 4.3%.

Nevertheless, in our opinion it is not at all unlikely that industrial employment might increase by that much:

- There is likely to be some built-up demand for industrial employment and activities that are unable to be accommodated at present, due to a shortage of supply.
- The number of households in Warkworth is expected to increase from 2,330 (2018) to 10,600 once the FUZ is developed to capacity. It is unknown when that point will be, but if it is reached by 2048 that would equate to 5.2% average annual (compounding) household growth. If build out is by 2053, that rate is instead 4.4%. In either development scenario, household growth would exceed the projected growth in industrial employment that would result from full development of the WSP industrial zones.

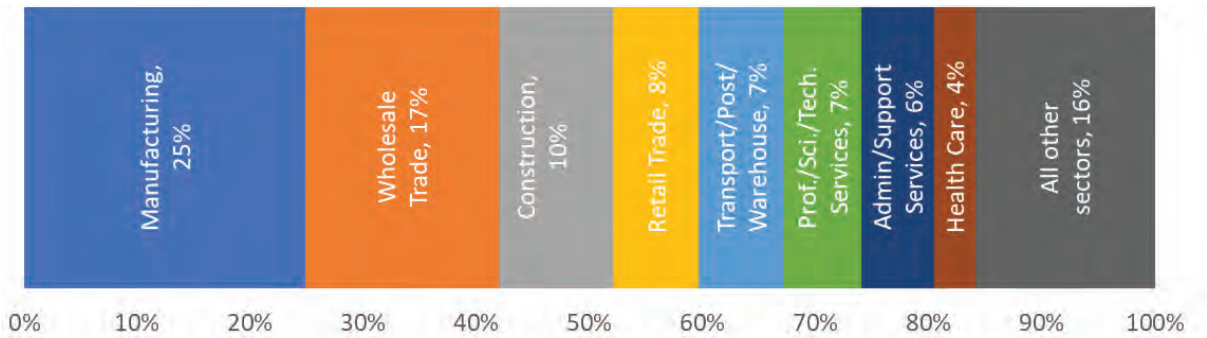
In that context, we strongly disagree with the MCIE conclusion that “the WSP provides for a substantial over-supply of industrial land” (p8). Similarly, we disagree with the assessment in the further submission of Middle Hill Ltd (FS07) which states that “there has been consent granted for 4,000m² GFA of new industrial

⁴ Further submission 07

floorspace in Warkworth over the past ten years. This amount of GFA would require only 1-2 hectares of land” (p7). The past, in the case of Warkworth, is no reliable guide to the future, in our opinion, especially insofar as demand for industrial and is concerned. The WSP seeks to provide sufficient industrial land to provide for long-term demand to meet the needs of a town that will increase several fold in the coming decades, and which will strengthen its role as the industrial hub of northern Rodney. In our opinion the WSP appropriately accounts for this future growth, and the Turnstone and Middle Hill submissions fail to account for this, and the strategic need to ensure there is adequate land provided now to meet long term needs.

Another matter raised by the MCIE report is that “while Warkworth already has high dependence on manufacturing for local employment opportunities, industry alone will not cater for the diversity of occupations and skills that might be expected in a substantially increased population” (p7). The MCIE report appears to conflate manufacturing and industry to an extent. While manufacturing⁵ employment in Auckland declined by 6% between 2000 and 2018, employment in what is now the Light Industry zone increased by 34%.⁶ That reflects the broad range of activities found in Auckland’s industrial zones which include those commonly thought of as industrial, such as manufacturing (25% of LIZ employment in 2016) and transport businesses (7% of LIZ employment), but also other activities such as wholesaling, retail trade (particularly trade retailers and hardware stores) and service activities (Figure 3.1).

Figure 3.1: Auckland LIZ employment (2016, share of MECs)⁷



So while some activities are not permitted in the LIZ, a broad range of activities are, and the LIZ and HIZ remain relevant locations to accommodate employment growth, and are doing so across Auckland. Projecting forward future demand for industrial land needs to consider trends in all of these sectors (many of which have been experiencing strong growth), and not only manufacturing (where employment across all locations is declining). Many of the businesses located in the LIZ and HIZ are technology or other highly skilled businesses, and the provisions of the LIZ are suitably broad that many different types of business can be accommodated. We disagree with the MCIE report’s statement that “traditional industrial zones limit flexibility and do not easily accommodate emerging trends – the integration of production, warehousing, wholesaling, and distribution, for example”. On the contrary, in our opinion the LIZ provides very good flexibility and there are examples all over Auckland of production, warehousing, wholesaling, and distribution companies functioning effectively in the LIZ.

⁵ ANZSIC sector “C”
⁶ Analysis of Statistics NZ Business Directory data, 2000-2016
⁷ From Market Economics assessment for Silverdale Structure Plan



Considering that additional context, we confirm the conclusions reached in our Warkworth Structure Plan assessment that the quantum of land proposed by the Warkworth Structure Plan is required to adequately accommodate long-term potential demand for industrial-zoned land in Warkworth.

3.3.2 Non-industrial workforce

The MCIE report states that the WSP makes “very limited provision of additional commercial business land” and “assumes that the structure of activity will remain largely unchanged” (p9). The first part of that statement is true to some extent, because it is anticipated that the Town Centre and surrounding MUZ will continue to be the primary focal point for commercial activity in Warkworth. That is consistent with objectives and policies in the Unitary Plan.⁸ A core concern with the provision of a large amount of MUZ as requested by Turnstone is that the MUZ is very permissive for a broad range of retail and service activities which are appropriately accommodated in centres as a first priority, and then in the MUZ to support the operation of centres (which is why the MUZ is intended to be located adjacent to centres and along public transport corridors⁹). Permitted activities in the MUZ include small format (<200m²) retail space, all sizes of commercial services activities, entertainment facilities, food and beverage, offices of less than 500m², recreation facilities, healthcare and community facilities.

That range of activities has a very significant overlap with the type of activities currently in the Town Centre, and could result in a near duplication of the Town Centre’s function (excepting the discretionary status in the MUZ for some activities such as supermarkets, larger office tenancies and retail tenancies of 200m²+). There is currently 11.7ha of Town Centre zoned land in Warkworth, and the proposed MUZ in PPC25 would be 16.3ha. Combined with the proposed Local Centre (5.7ha), there would be 22ha of land in which a very similar range of activities to the current Town Centre’s activities would be permitted, nearly double the size of the current Town Centre.

That 22ha would provide very significant potential for retail and services activities to establish in a node that would directly compete with the Town Centre as the focal point of that activity in Warkworth, and at a location less than 1.5km from the Town Centre. That 22ha is, in our opinion, and from the assessment undertaken for the WSP, greatly in excess of what the future population will require to provide for either employment or retail opportunities. Further capacity would also be provided in the requested General Business Zone, which is permissive to larger format retail, as well as to offices and commercial services.

To place that 22ha in context, that area could easily accommodate over 120,000m² GFA, even at relatively low density, low level development. That equates to more than 11.4m² of GFA for every household in Warkworth, at full build-out of the FUZ. At an aggregate Auckland level, the average household supports around 6m² of retail and services floorspace in all locations, and there is around 6-7m² of office space per household, a total of 12-13m² for retail, services and offices. That implies that there is sufficient capacity in the PPC25 area to provide for nearly all of the needs of the future Warkworth population, leaving little for the Town Centre.

⁸ Objectives H10.2.(5) and (6) and Policies H10.3.(1) and (13)

⁹ H13.1. Zone Description



Figure 3.2: Indicative development capacity of PPC25 Mixed Use and Local Centre zones

	MUZ	LC	Total
Zone area (ha)	16.3	5.7	22
Site coverage	40%	40%	
Building footprint (sqm)	65,200	22,800	88,000
Average levels	1.5	1	
GFA (sqm)	97,800	22,800	120,600

Consider also that much of the 12-13m² of that space supported by Warkworth households will never be supported in Warkworth. For retail and services activities, some 35% of retail spend is directed to the CBD or Metropolitan Centres, and would be so directed by Warkworth residents, who would likely be prepared to make (potentially infrequent) trips to urban Auckland to visit large retail centres with a superior range of stores such as at Albany. While there is an objective to promote some degree of self-sufficiency in retail provision in Warkworth, and to reduce travel out of the town, some leakage of retail spend will always persist because even by 2050 the town will not be able to support the same range of retailers as a much larger centre such as Albany can. Further, Albany is only 35 minutes from Warkworth now, and that is expected to reduce further with the completion of Ara Tuhono (the Puhoi-Warkworth motorway extension).

That likelihood underpins the assumptions in the WSP economics assessment¹⁰ which made allowance for increased self sufficiency of Warkworth in retail terms, with locally retained spending increasing, contrary to the MCIE report which suggests the WSP reflects a “higher level of outbound commuting”.

The applicant has provided no quantitative assessment of the potential economic effects of that very high level of provision on the Town Centre or existing Local Centres, limiting its assessment to a high level qualitative assessment of the Neighbourhood Centre in the notified application.¹¹ The assessment in the notified application is adequate given the small size of the commercial zones proposed and we would not expect that a Neighbourhood Centre would be likely to generate adverse effects on other centres.

The omission of any effects assessment from the assessment (in the MCIE report) accompanying the Turnstone submission is of more concern. From the relatively high level assessment we have presented above, we consider it probable that very significant effects on the Town Centre might result if the configuration of PPC25 requested in Turnstone’s submission proceeds, however there is no assessment of those potential effects in the MCIE report or the Turnstone submission. The MCIE report makes no attempt to estimate total sales performance of any existing centre in Warkworth, or the Neighbourhood Centre proposed in the notified zoning configuration. It is not possible then to understand how the proposed zoning will potentially affect the town’s other centres.

3.3.3 Residential land

The MCIE report states that “75% of employment growth associated with residential gains to be housed in residential areas” (p7). That is not correct, and the data relied on (Table 3) to calculate that number ignores

¹⁰ “Warkworth Business Land Assessment”, Market Economics, 13 June 2018, section 5. Appendix 1 in Auckland Council (June 2018) Business Land Topic report

¹¹ McDermott Consultants January 2019 report, in relation to the notified PPC25, which requests a Neighbourhood Centre



the fact that much of the employment generated by new households in the WSP will be accommodated in existing, live zoned areas (e.g. the Showgrounds LIZ, existing centres and the central MUZ).

The MCIE report’s coverage of employment in residential zones is incomplete. There are many jobs that are registered in residential areas, and which do not require commercial space to operate from. The MCIE report has not taken into account tradespeople (such as plumbers, builders and electricians) who have no fixed workplace, but do not work from home. They will not describe themselves as working from home in the Census, but do not require a fixed commercial space to operate from, being instead based on site. The share of employment growth accommodated in residential zones reflects all of these types of activities, as explained in the Business Land Assessment.

Similarly the MCIE statement that “the marginal participation rate will be substantially lower than the 1.39 persons prevailing at the moment, at just 0.66 jobs/dwelling. The result is “around 5,000 jobs” required” is inaccurate, and misleading. That is not what the WSP says, and the actual text is:

The expected dwelling yield from the Future Urban zone is around 7,500 dwellings¹³, while the employment (jobs) growth in the Future Urban zone is around 5,000 jobs¹⁴.

This is only around 0.66 jobs per dwelling and is below the current employment ratio in Warkworth of around 1.39 jobs per dwelling. However, it is important to note, that these yield figures only relate to the Future Urban zoned part of Warkworth, and do not include the existing developed parts of Warkworth¹⁵. There is obviously no requirement for everyone living in the Future Urban zoned area to have to also work in the Future Urban zoned area. Many people could live in the Future Urban zoned area and work in the ‘live’ zoned areas of Warkworth. Some areas in Warkworth within the existing ‘live’ zoned areas have significant employment growth anticipated such as the town centre and the expansion area around it, and the as yet undeveloped Light Industry zone by the Showgrounds¹²

Accounting for the fact that much of the employment attached to FUZ households will be outside the FUZ, the marginal jobs per household ratio is very similar to the existing ratio, although has declined from 1.39 jobs per household to 1.19. We note that that future provision is near the upper end of the range (1.0-1.25) suggested as being required in the MCIE report (p5).

Figure 3.3: Warkworth Jobs per household under WSP-proposed zoning

	2017	2043	Growth
Jobs	2,933	12,601	9,668
Households	2,107	10,593	8,486
Jobs/hh	1.39	1.19	1.14

¹² WSP, p47



4 Review of other submissions

This section reviews and responds to all other submissions made regarding PPC25 that relate to the proposed zone provisions for centres and business areas within the Warkworth North Structure Plan area. Responses are grouped by topic, as many submissions relate to the same topic.

4.1 Commercial centres

A range of submissions have supported the neighbourhood centre provisions, whilst others have suggested that the centre should be upgraded to a Local Centre in line with the recommendations that have been made in the Turnstone proposal. The key issues relate to the scale and location of the proposed centre.

4.1.1 Neighbourhood Centre scale

There are two submissions that support the centre being of a scale appropriate to a Neighbourhood centre (Ross Brereton No. 8, and Auckland Council No. 12). The Auckland Council recommendation is that the centre should be restricted to a size of 1,500m² GFA¹³. Those submissions are generally consistent with the recommendations made in the M.E Business Land Report.

A number of other submissions suggest that the Neighbourhood Centre would be too small, and that a Local Centre would be more appropriate in Warkworth North. The key concerns presented in submission are that the scale and diversity of activities that would be enabled in a Neighbourhood Centre would not be of a sufficient scale to support the resident households.¹⁴ The key premise is that a larger centre will provide better opportunities for more employment in Warkworth North.¹⁵

As discussed in the M.E Business Land Report and in section 3.3.2 our opinion is that a Local Centre would not be appropriate in Warkworth North, particularly of a size requested in Turnstone's submission, due to the potentially large size of a Local Centre and the degree to which it would compete with and potentially have significant adverse effects on the Warkworth Town Centre. A Local Centre is provided for in the WSP, although not within the PPC25 area. Instead a site in south Warkworth near Morrison's Orchard is proposed for a Local Centre to provide for the needs of the community in that southern part of Warkworth, which is further from the Town Centre.

The M.E Business Land Report considered retail demand from the town and surrounding catchment in deriving estimates of sustainable floorspace in Warkworth, and concluded that only one Local Centre was required in the FUZ. The recent Local Centre at "The Grange" offers significant spare capacity to supply part of the Warkworth population, and the smaller population expected in the west (general PPC35 area) and north (north of the current State Highway and river) is assessed to require only smaller centres to supply their everyday retail needs.

¹³ Submission point 12.6

¹⁴ E.g. Chad and Carly Ranum (No. 2), Robert White (No. 3) and Robert White (No. 3)

¹⁵ Goatley Holdings (No.14), Allison and Steve Haycock (No. 27), Aaron Rodgers (No. 26), Diana Mei (No. 30), Terri Walkington (No. 32), Lily Rodgers (No. 33), Macy Rodgers (No. 34), Ngahine Rodgers (No. 35), Steven Liang (No. 36)



4.1.2 Neighbourhood Centre location

A number of submissions support the location of the Neighbourhood Centre.¹⁶ These submissions are generally consistent with the recommendations we made to the WSP planning process, in that they relate to a Neighbourhood Centre in the general proximity to that ultimately identified in the WSP (location 28 on the WSP map). The most suitable centre location within that vicinity is difficult to identify precisely now, prior to the final roading and transport network being confirmed, however the guiding principle should be that the centre should be located centrally within the residential catchment that is within the PPC25 area. This appropriate to locate centrally within that PPC25 area, and not within some alternative area, as the PPC 25 area extends between the significant catchment boundaries in the north (current SH1) and south (Falls Road).

Dr Isobel Topham (No. 9) suggest that the centre would be better located elsewhere from a health impact assessment perspective. Her proposal is that the proposed “town centre” would be better located on the “northern side of the hill between the Stubbs and North Blocks” and “would make better use of the natural vistas of the area”. Her key concern is that the “current site is at the base of a gully with little outlook or sun”. She is also concerned with transport modes and safety aspects which fall outside of our areas of expertise. From an economic success, and accessibility point of view, a location near the site identified in PPC25 would be preferable to a location up the hill, away from the denser dwelling base. That more dense aggregation of dwellings is unable to extend up the hill to which Dr Topham refers, due to what we understand are geotechnical constraints, and which are reflected in the higher density zoning types (Mixed Housing Urban) being limited to the lower reaches of the hill in both PPC25 and the WSP. For those reasons we suggest that the PPC25 location for a Neighbourhood Centre is the most appropriate location within the PPC25 area, and is preferable to Dr Topham’s suggested alternative.

4.2 Business zones

There have been a range of submissions relating to the provision of land for business activity in Warkworth North, with the majority relating to provisions (or lack of) for Business Light Industry, General Business, Mixed Use and Business Parks. The key issues relate to scale, zone types, activities enabled, and location of business land within Warkworth North.

4.2.1 Business land location and zoning mix

Scale of Light Industry Zone

Auckland Council (No. 12) submitted that the WSP carries more weight than the Warkworth North Structure Plan and that PPC25 be amended to reflect the overall intent of the WSP. The WSP identifies that opportunities for employment will be required to help stem the flow of outward commuters over the long term. The WSP has identified some of the land within the PPC25 area (area 30 on the WSP map) as being suitable for Light Industry because there are limited options elsewhere in the Warkworth vicinity for this type of activity, and because it is adjacent to the existing Hudson Rd LIZ. That contiguity was identified as a desirable outcome in submissions on the WSP. Council’s submission therefore seeks to have the land between the new Western Link Road, the location of which is yet to be finalised, and the existing Hudson

¹⁶ Chad and Carly Ranum (No.2), Robert White No.3, and Goatley Holdings Ltd (No.14)



Rd LIZ, zoned as Light Industry as far south as Falls Rd. The WSP anticipated 25ha of Light Industry in the location which compares with the 13ha that is contained in PPC25¹⁷.

Auckland Council (No. 12) also seeks that no General Business, Mixed Use or Business Park zones are provided in the area covered by PPC25 to reflect the consultation feedback that was provided during the development of the WSP which contains the Planning Principle to “retain the current town centre as the focal point and ‘beating heart’ of Warkworth”. They assert that the existing Town Centre has capacity for expansion within the Town Centre zoning and the surrounding Mixed Use zoning.

In contrast to the Auckland Council submission, a number of submitters support the Business – Mixed Use provisions in PPC25 because they believe a MUZ will provide more employment opportunities.¹⁸ Those submitters believe that “the idea of containing the business areas to the existing town centre is romantic, but not practicable”. Goatley Holdings Ltd (No. 14) is in opposition of the Business Light Industry provisions based on the rationale provided in the McDermott report prepared for Turnstone which states that there is sufficient zoned capacity currently. That position is supported by Middle Hill in their further submission (FS07) in which it opposes Council’s submission to not include Mixed Use zoned land in PPC25. Middle Hill therefore oppose the request to expand the proposed light industry zoning, and favour applying MUZ.

As discussed above in response to the Turnstone submission, our opinion is that it is important that the quantum of LIZ land identified in the WSP is provided for, and any erosion of that will diminish Warkworth’s industrial employment capacity. Providing adequate local employment opportunities is an important objective underpinning the WDP, and as established in work on the WSP the PPC25 area is not well suited to large commercial employment areas because it is in close proximity to the Town Centre, and a large retail/commercial presence that close to the Town Centre is unnecessary from an access to goods perspective, and inappropriate from a centres effects perspective.

Auckland Transport’s submission (No.16) opposes PPC25, and requests that it be declined unless “it is demonstrated that the lesser amount of Business zoned land, when compared with the zoning proposed in the Warkworth Structure Plan, will not have an adverse effect on the ability of the wider Warkworth area to be self-sufficient for employment”. We agree with that submission, and for the above reasons we disagree with the submissions (including by Middle Hill and Goatley Holdings) to change the notified LIZ zone to MUZ.

Site Specific Submissions

Warkworth Properties (No. 15) contends that the Light Industry zoning proposed for the site on the north western corner of the Hudson Road/SH1 intersection is inappropriate mainly due to topography constraints. Their recommendation is to apply Mixed Housing – Urban zoning to that site rather than Light Industry zoning. That position is supported by Middle Hill in their further submission (FS07). We defer to the appropriate geotechnical or engineering specialists as to the appropriateness of that site for LIZ, and reiterate our above comments about the adequate provision of LIZ in the Warkworth FUZ, the limited places where LIZ can be accommodated in the FUZ, and the appropriateness of the PPC25 area as a place to provide for that LIZ given its accessibility and contiguity with the existing LIZ zone along Hudson Road.

¹⁷ Warkworth North Private Plan Change Request Section 32 Assessment Report, 21 January 2019, p4

¹⁸ Aaron Rodgers (No. 26), Diana Mei (No. 30), Terri Walkington (No. 32), Lily Rodgers (No. 33), Macy Rodgers (No. 34), Ngahine Rodgers (No. 35), Steven Liang (No. 36)



Middle Hill Ltd (No. 13) would like to re-zone the land identified as Business Light Industry zone to Business Mixed Use zone and Residential Mixed Housing Urban as shown in Attachment 2. Their assertion is that there is not likely to be demand for more industrial land, on top of the 79ha of zoned industrial land, of which they estimate is 70% vacant currently, “for at least two to three decades”. We note that the large area of Showgrounds LIZ is vacant in part because it has only recently been live zoned, and the land owner has not yet (as we understand it) made it available for occupation. Other submissions¹⁹ also request removal of the LIZ zone (with or without suggesting an alternative), and our response to Middle Earth’s submission also applies to those submissions.

The provision of the quantum of LIZ proposed in the WSP is a long term, multi-decade proposition. That has been necessary because the relatively limited amount of land within Warkworth that is suitable for LIZ, and the likelihood that if not zoned for LIZ now it will be developed for alternative uses, and lost as potential LIZ land forever. The WSP therefore seeks to adopt a holistic approach to zoning across all of Warkworth (incorporating both the FUZ and live zoned areas) and to the long-term (late 2030s and beyond).

Additionally, Middle Hill believe that the WSP provision for Mixed Use land around the Warkworth Town Centre does not represent significant quantities of feasible capacity because it is already developed with high value residential buildings, and for this reason there is room for an additional 3 hectares of Mixed Use land. They suggest that the location on the northern edge of Warkworth North is a good location for this zoning due to its profile in the gateway to the wider location and accessibility. They assert that this location and scale would not compete with or undermine the Warkworth town centre.


As stated above in response to the Turnstone submission, we disagree with that proposition. The MUZ proposed in the Turnstone submission is a very large area, especially when considered in conjunction with the (also very large) Local Centre proposed in that submission. Together those 22ha represent nearly twice the size of the Town Centre, and it is very likely that if developed to anywhere near capacity the PPC25 MUZ/Local Centre requested in the Turnstone submission would have significant adverse effects on the Town Centre. We note, however, that no assessment has been undertaken to establish what quantum of effects might be expected, by Turnstone, Middle Hill or any other submitter that agrees with the Turnstone submission.

Commercial land location

The Middle Hill further submission (FS07) states that the WSP (which it refers to as the WNSP) “identifies a need for three new retail centres, however only identifies two new centres”. That is incorrect, and the WSP actually identifies four new centres (a Local Centre south of Morrison’s Orchard, and Neighbourhood Centres at the northern end of the Matakana Link Road, in the PPC25 area and on Woodcocks Road). In Middle Hill’s further submission the GBZ at the northern end of Hudson Road is a good place for a “convenience retail” or “commercial and mixed use” centre. We disagree with that submission, because the area is constrained in several ways:

- There are streams to the south-east that limit the contiguity of the GBZ and any possible extension to form a centre

¹⁹ Including Brereton (No. 8), Woolsey (no. 10), Massey (no. 17). Robert and Maryanne Sikora (No. 11) take a contrary position, and favour retention of the LIZ as notified, which we agree is appropriate and preferable.

- 
- The Matakana Link Road is expected to pass through the area, constraining possible centre design options and again fragmenting the GBZ area from any nearby centre.
 - The area has live zoned LIZ land to the north (across the existing SH1) and south-east (Hudson Road), limiting its accessibility to a walk-up residential market.
 - The area is close (less than 1.5km) from the existing Town Centre, and so is close to a large existing centre.

We do agree that it is appropriate to zone a centre in the PPC25 area, so as to provide for the convenience retail needs of the population (primarily of the PPC25 area). However, as our assessment for the WSP concluded, only a small centre is required to adequately provide for those needs in the PPC25 area, based on the size of the residential population expected.

4.2.2 Quantity of employment land

Auckland Transport (No. 16) is concerned that the provisions in PPC25 would result in a loss of employment zoned land that would compromise the ability of the wider Warkworth area to be self-sufficient for employment. They maintain that the applicant would need to address the effects of PPC25 on the overall aim of providing employment land so that people can live and work locally in Warkworth.

In Auckland Transport's further submission (FS02) it supported NZTA's position that Objective I1.2(1)(f) was amended as follows: "f. Providing a balance of employment land and places for people to live with a choice of living types and environments". Their submission was that the objective "is critical for better integrating land use and transport, providing residents with more opportunities to avoid long commutes for employment and reducing transport demands". NZTA also submitted that the PPC identifies less business land than the WSP and noted that further information was required to enable an adequate assessment of the likely effects of the proposal. From our review of the application and submissions, additional information is required also to understand the economic effects of the PPC, especially the zoning configuration proposed by Turnstone in its submission.



5 Conclusion and recommendation

Market Economics has undertaken a significant body of work assessing business and population growth projections in and around Warkworth, and contributing to the formulation of the Warkworth Structure Plan. Having considered that prior assessment in the context of the application, and having considered the submissions and further submission on PPC25, Market Economics:

- Supports the proposed provision of a Neighbourhood Centre of not more than 0.3ha land area, and not more than 1,500m² in PPC25.
- Opposes the reduction of Light Industry Zone in the PPC25 (to 13ha) relative to that identified in the Warkworth Structure Plan (20ha) in the absence of any assessment that demonstrates the PPC25 provision of LIZ land will not have an adverse effect on the ability of the wider Warkworth area to be self-sufficient for employment.
- Opposes the submissions and further submissions that request the notified Neighbourhood Centre be increased in size to a Local Centre. From our assessment a Local Centre would provide much more capacity for commercial activities than is required in the PPC25 area, particularly if the zone is to be as large as the 5.7ha proposed in the Turnstone submission.
- Opposes the submissions and further submissions that request a large area (16.3ha) of Mixed Use zone in the PPC25 area.

Memo

4/10/2019

To: Ila Daniels
cc: Charlie Brightman
From: Ross Roberts
Subject: Warkworth North PPC25 – Geotechnical Specialist Report
Status: Final
Document ID: AKLC-1201561183-436

Version: 1

1 Introduction

The Warkworth North Precinct is located to the north of Falls Road and extends north to the motorway designation, west to the Viv Davie Martin Drive development and adjoins the existing Hudson Road Industrial area and the Business – General Business zoned land to the east. A Private Plan Change (PPC25) has proposed amendments to the zoning.

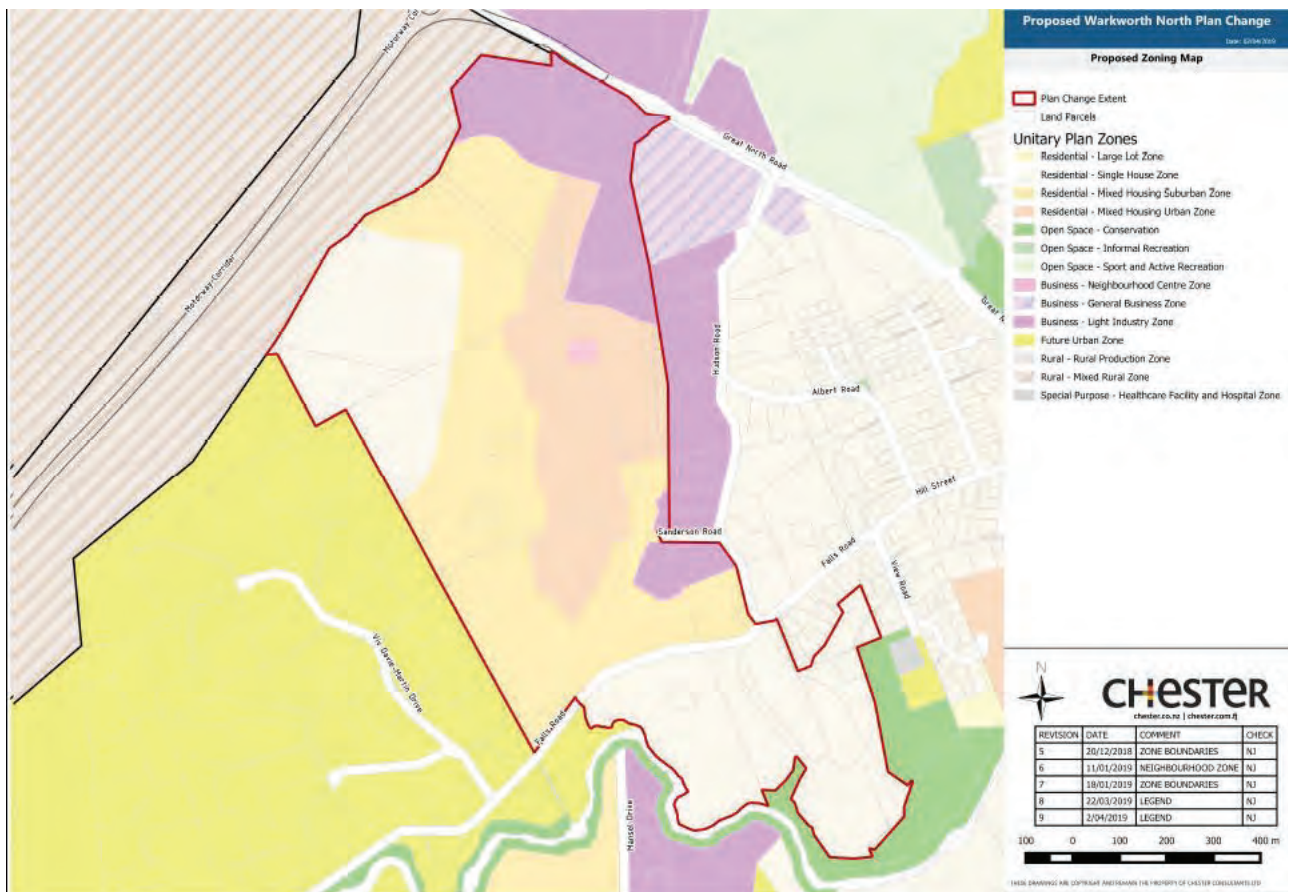


Figure 1: Site location and proposed zones

A site visit was undertaken on 17 April 2018 in the presence of the applicant and their geotechnical specialists from KGA to gain a better understanding of the site and its context.

2 Scope and purpose of memo

2.1 Scope

A specialist report presenting a preliminary assessment of geotechnical information provided with the application was requested by Michelle Perwick and Ila Daniels to inform their RMA Section 42A report.

2.2 Purpose and limitations

This report is provided expressly for advising Auckland Council's Plans and Places team. It is not intended to be used or copied in whole or part for other audiences or purposes without the prior approval of Engineering and Technical Services.

3 Assessment of the notified PPC and any supporting documents relevant to your speciality

Key documents reviewed were:

- KGA, 2019. Geotechnical Engineering Feasibility Assessment, Proposed Plan Change, North Warkworth Area. 18 January 2019. Ref 9885-3G. Prepared for SF Estate Ltd.

Other relevant documents include:

- Tonkin & Taylor, 2013. Geotechnical Desk Study North and North-West Auckland Rural Urban Boundary Project. August 2013. Ref 29129.001

In general I agree with the findings of the KGA report. Key areas of disagreement are detailed below in Sections 3.1 and 3.2. I have also made general comments in sections 3.3 to 3.5.

3.1 Area A slope stability

KGA note that, "the mechanism of the large scale feature to the east of the site is difficult to define". They also noted that, "The depth of soils across the site is variable with a relatively sudden transition from soil to rock. This suggests that the underlying rock has not been sheared or deformed as in a deep seated block slide."

A sudden transition from soil to rock is not evidence that a deep seated block slide doesn't exist. In other areas of Auckland deep seated block slides have been identified. Where investigated in detail (such as in the area of the proposed Whitford landfill) the movement was identified to be along thin clay seams within the rock mass. This would not be readily identified as significant deformation by the investigation undertaken by KGA.

The cross section (C-C') provided does not extend through the full height of the slope to show the morphology of the movement that created the main backscarp at the crest.

3.2 Area B slope stability

It is agreed that the instability is likely to be concentrated on slip planes at the soil / rock interface, at approximately 10 m depth.

KGA note that, “drainage measures will be required to control the groundwater levels at the site to assist with slope stability.” This raises some concerns, as drainage measures require maintenance in order to satisfactorily function over the long term. Maintenance of drainage systems, particularly those that cross lot boundaries, is often inconsistently undertaken and is hard to enforce. There is a risk that any slope relying on drainage as a stabilising measure will, over time, have a reduction in the factor of safety to below acceptable levels. This may cause further slope movement and risk to the properties particularly during heavy rainfall or as a result of earthquake loading. Even small-scale movement can result in damage to buried pipes, which can then precipitate much larger failures by introducing significant volumes of water into the slope.

3.3 Stormwater soakage

KGA note that, “stormwater retention by ground recharge is not recommended from a geotechnical perspective”. I support this view and emphasise the importance of minimising infiltration into these slopes.

3.4 Proposal to increase housing density in the western part of the site

This is an area with relatively low slope stability. The more intensive the development the harder it is to do without needing significant changes to the landform to stabilise it. As a result the construction would likely have greater effects. It was originally proposed in the Warkworth Structure Plan to be zoned at a lower density to:

- **Minimise earthworks.** More dense construction on slopes tends to require larger earthworks to give stable building platforms. More earthworks would increase the environmental and social impacts and could increase the risk of slope instability, particularly in the long term.
- **Minimise the number of parcels that groundwater drainage would cross.** Groundwater drains are expected to be required to stabilise the slope, and the more parcels they cross the harder it becomes to define maintenance responsibilities in the future. If not properly maintained it would expose the properties to increasing risk of landslides, and with more properties this risk would be exacerbated.

The developer's consultant has suggested in the past that higher density development is a better outcome because it brings in a higher revenue and therefore allows for the construction of more stabilising measures, and suggested that lower density might never be developed as the costs of developing might outweigh the revenue. We don't have enough information about the impact on land value or the costs of stabilising measures to confirm or deny the validity of these opinions.

3.5 Proposed reduction in light industry zone

The applicant has partly said that the reduction in Light Industry zone in PPC25 is required as the contour is not suitable for industrial uses due to the earthworks that would be required to create larger flat building platforms.

This statement cannot be readily confirmed from a geotechnical perspective. The key control is the required size of building platform, which is a commercial consideration rather than a purely geotechnical one.

I haven't seen cross-sections showing various options for cut/fill to assess if the building platforms that could be created would be large enough, or a clear definition of what an acceptable size is for industrial use. Without these it's not possible to say for certain whether a suitable platform can be built. However, the industrial land adjacent to Woodcocks Road is relatively steep and is being used without creating a flat building platform. I would assume that the same would apply to the PPC25 area where the slopes are similar.

If a larger platform is required, then a large flat platform for industrial use could be constructed by either cutting into the existing slope, or by filling up against the existing slope. Cutting into the slope would be a major geotechnical challenge, as it would risk destabilising the full slope above. This leaves filling as the only reasonable option. From a geotechnical perspective helps this to stabilise the slope, but might be problematic if it has negative consequences for the river or ecological areas adjacent to the river. These aspects are beyond my expertise so I can't comment on this.

In summary:

- The statement that 'the contour is not suitable for industrial use' is a commercial consideration rather than a geotechnical one, and needs to be checked.
- Flat industrial building platforms could be built by placing fill, and this could be geotechnically beneficial, but there are some limitations and risks:
 - The impact on the adjacent river and environment would need to be assessed.
 - The available flat area after earthworks might still be too small, depending on what the actual requirements for the building platforms is (noting that the area required is a commercial decision).
 - If commercial land is less valuable than residential land, it might not be cost-effective to develop it (or the developer might prefer residential as they might get a better return).

4 Comments on relevant submissions (except the turnstone submission)

None applicable to geotechnical specialist area.

5 Comment on Turnstone submission

None applicable to geotechnical specialist area.

6 Quality assurance

Reviewed and approved for release by

Reviewer

Charlie Brightma, Principal Geotechnical Specialist, 4/10/19

This memo is satisfactorily completed to fulfil the objectives of the scope. I have reviewed, and quality checked all information included in this memo

Author

Ross Roberts, Geotechnical & Geological Practice Lead

File location

<https://aklcouncil.sharepoint.com/sites/EXT/ETS/Shared Documents/AKLC-1201561183-436.docx>

Date printed

13/10/2019 8:17 PM

Memo

30 August 2019

To: Ila Daniels
From: Robert Brassey – Principal Specialist Cultural Heritage

Subject: Private Plan Change 25 Warkworth North:
Manuhiri Kaitiaki Charitable Trust submission

I have reviewed the following documents:

- Manuhiri Kaitiaki Charitable Trust Cultural Values Assessment for the Warkworth North Structure Plan and Associated Development dated May 2017
- Manuhiri Kaitiaki Charitable Trust submission on PPC 25 dated 4 July 2019
- Te Kawerau a Maki Settlement Trust and Tribal Authority Cultural Values Assessment for the Warkworth North Structure Plan dated July 2017
- Warkworth North Structure Plan and Plan Change Archaeological Assessment (Clough and Associates 2019)

Undiscovered archaeological remains

Clough and Associates have concluded that it is unlikely that unrecorded subsurface archaeological remains will be exposed during future development within the plan change area (p. 40). This conclusion is well supported by documented evidence including archival research and the results of field survey within, and in the vicinity of, the plan change area in my opinion. It is also consistent with the conclusions reached in the technical report prepared by myself and Megan Walker for the Auckland Council Warkworth Structure Plan.

I agree with the conclusion reached by Clough and Associates. I further note that the cultural values assessments provided in support of the application do not identify any tangible ancestral sites within the study area.

I consider that the Accidental Discovery Rule in the Auckland Unitary Plan is the most appropriate and efficient way of managing undiscovered archaeological remains or other tangible evidence of Māori occupation. The accidental discovery rule is located within Chapter E (Auckland-wide) of the Unitary Plan. It can be found in both the district and regional land disturbance sections, and also in the Infrastructure section at E11.6.1, E12.6.1 and E26.5.5.1.

The MKCT CVA makes reference to and proposes cultural monitoring and adoption of an accidental discovery protocol in relation to the plan change area.

There is no rule in the that I am aware of in the AUPOIP requiring cultural monitoring of land for undiscovered archaeological remains, other than within the Sites of Significance to Mana Whenua overlay. This is not relevant to the plan change area.

Given the low (or very low) likelihood of any tangible evidence of Māori occupation being found within the plan change area, I do not consider that monitoring for this purpose is justified. I note that Clough and Associates did not recommend monitoring in the archaeological report.

The MKCT CVA includes a proposed accidental discovery protocol on pages 31-2. This protocol shares some similarities with some parts of the Accidental Discovery Rule in the AUP but is not consistent with the ADR. For example, it includes no requirement for Auckland Council to be notified, is not triggered by finds of archaeological remains of European origin or of other sensitive materials and does not provide for other Mana Whenua groups with an interest in the area.

Adoption of protocols such as this creates a significance risk of non-compliance with the AUP rule and with other legislation.

This protocol cannot replace the requirement to comply with the ADR. Should the applicant wish to adopt a supplementary protocol or protocols, the protocol/s must align with the plan rule and it must be clear that they do not replace the rule.

There is nothing to prevent additional requirements proposed by Ngāti Manuhiri in the protocol being put in place as the next step after the ADR has been triggered and complied with, if the find is of Māori origin.

Memo:

S42A specialist input relating to funding for bulk infrastructure for Turnstone Capital Private Plan Change 25

Date	26 September 2019
To:	Ila Daniels
CC:	Peter Vari, Corina Faesenkloet, Rudolph Van Wyk, Fiona Wright, Warren McLennan, Alastair Lovell, Andre Stuart
Purpose:	Provide overview of funding for bulk infrastructure in the Turnstone Capital Private Plan Change area.

Background:

- The private plan change request was lodged by the Turnstone Capital (the applicant) on 29 March 2018. This request covers 99Ha of land in the Warkworth region that overlaps an already 'adopted' Council structure plan area.
- This Council structure plan in question covers 1000Ha of land in the Warkworth area and was adopted by the Councils Planning Committee on 6 June, 2019.
- Specialist inputs to this process confirm that there are significant bulk infrastructure funding challenges related to this structure plan area and by default the same challenges will apply to the private plan change request.
- Refer to appendix 2 of the Funding Report for the Warkworth Structure plan (available on the Auckland Council website, search under key words 'Funding Plan'). This identifies all bulk infrastructure projects for the entire structure plan area, therefore by default also covers the private plan change area.

Funding Process Overview:

- The projects identified in appendix 2 are required to have funding approval of the unfunded projects in either the 2021 Long-Term Plan (LTP) or subsequent Annual Reviews of the LTP.
- If a public infrastructure project is not included or approved in the 2021 LTP, and if the applicant wants this delivered earlier then the applicant will need to fund the project in full or wait until Council funds and delivers the project.
- All projects are reviewed against regional infrastructure delivery priorities in the Asset Management Plans and LTP.
- For wider LTP context, it is important to note that the Council currently faces two significant funding constraints; debt capacity constraints for the next 5 years from committed works and our required priorities for government project infrastructure commitments such as public transport and urban housing developments
- In a future scenario where a cost share Infrastructure Funding Agreement was considered appropriate, it would only be relevant where council has available committed funds for the works.

Funding discussions with the applicant to date:

- Two separate meetings were held between the Development Programme Office and the applicant regarding funding. These discussions were very high level and largely in the context of the Western Link arterial road, where it was confirmed that funding was not currently available. The applicant was informed that any 'out of sequence' funding required to undertake this work would need to be provided by the applicant by means of an Infrastructure Funding Agreement (IFA).
- It is understood that the applicant has had other high-level funding discussions with other asset owners within Council & Council controlled organizations. No firm conclusions were reached and it was agreed that further discussions were necessary.

Next Steps:

- As the preferred transport routes to support the broad Warkworth structure plan area (and consequently the private plan change area) are not yet confirmed, in particular the Western Link Road; detailed discussions with the applicant and other related parties are necessary to understand all landowner implications, final road configuration and designs and ultimately how the project will be funded.
- Discussions to date have predominantly been on transport projects, it is important to note, all other Council and bulk infrastructure assets will require the same level of detailed discussion to determine timing and cost implications and the role that the applicant will play in funding these currently unfunded assets.

23 September 2019

Ms Ila Daniels
Campbell Brown Planning Limited
PO Box 147001
Ponsonby
Auckland 1144

Email: ila@campbellbrown.co.nz

Dear Ila,

RE: TURNSTONE CAPITAL PRIVATE PLAN CHANGE WARKWORTH NORTH LANDSCAPE REVIEW



This report addresses the assessment of landscape effects prepared by Littoralis (Landscape Architects) for Turnstone Capital's proposed Private Plan Change 25, together with submissions received by Auckland Council in relation to the application. In particular, it addresses the following matters:

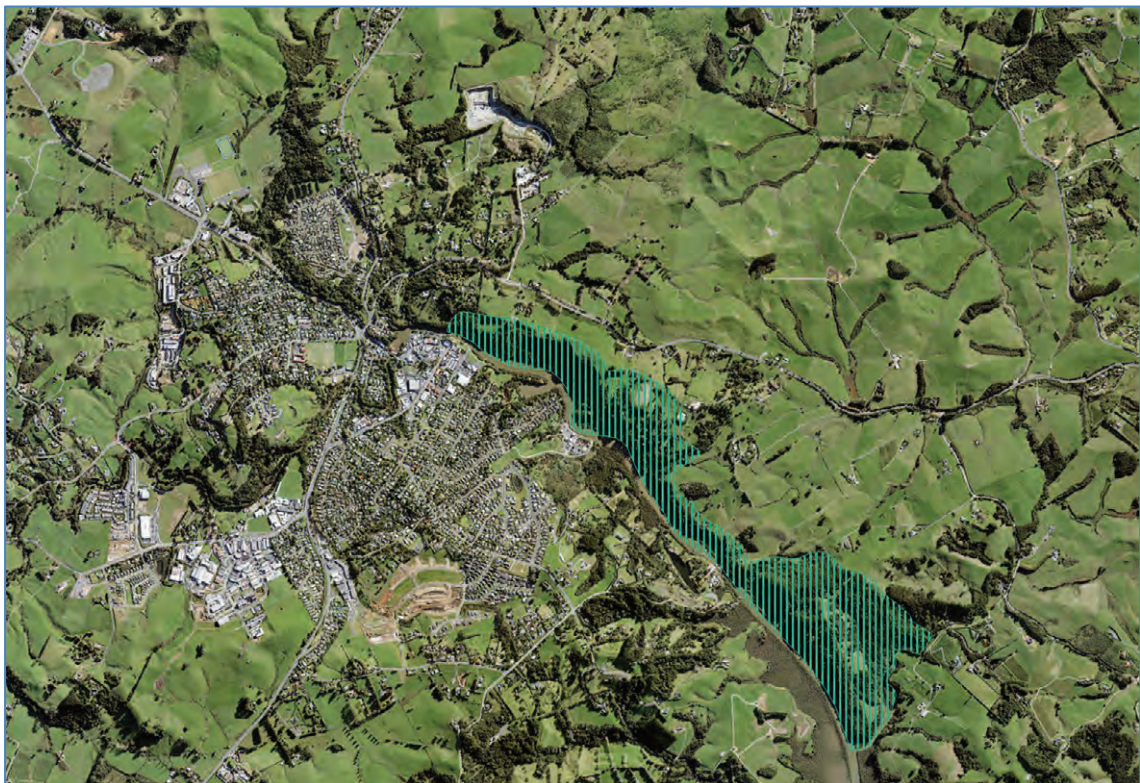
1. The effects of the proposed Plan Change in relation to Outstanding Natural Landscape (ONL) No.43 and High Natural Character (HNC) Area No.58 in the Auckland Unitary plan – both of which address the Mahurangi River corridor and its margins.
2. Effects in relation to other landscape features, characteristics and values identified in the course of preparation of the Warkworth Structure Plan.
3. Effects in relation to the amenity values enjoyed by existing residents of, and visitors to, Warkworth – recognising that urbanisation of most of Warkworth's urban periphery under the AUP and current Structure Plan proposals would also give rise to 'permitted baseline' effects.
4. The level of amenity that the proposed pattern of development would give rise to, including any implications arising from interaction with the new SH1 corridor and the proposed Warkworth to Wellsford extension of that corridor in the future, together with any effects in relation to the character and identity of Warkworth in the future.
5. Public submissions to the Private Plan Change application.

CONTEXT – STRATEGICALLY IMPORTANT ONLS & HNC AREAS

Just two landscapes / environments of high strategic value are identified in close proximity to the Plan Change ‘site’. Both embrace the main corridor of the Mahurangi River, around and below the waterfalls next to the town centre, together with its steeply rising, northern escarpment and the tract of native forest that extends along that landform.



AUP: Outstanding Natural Landscape Area No.43 (dark green diagonal lines)



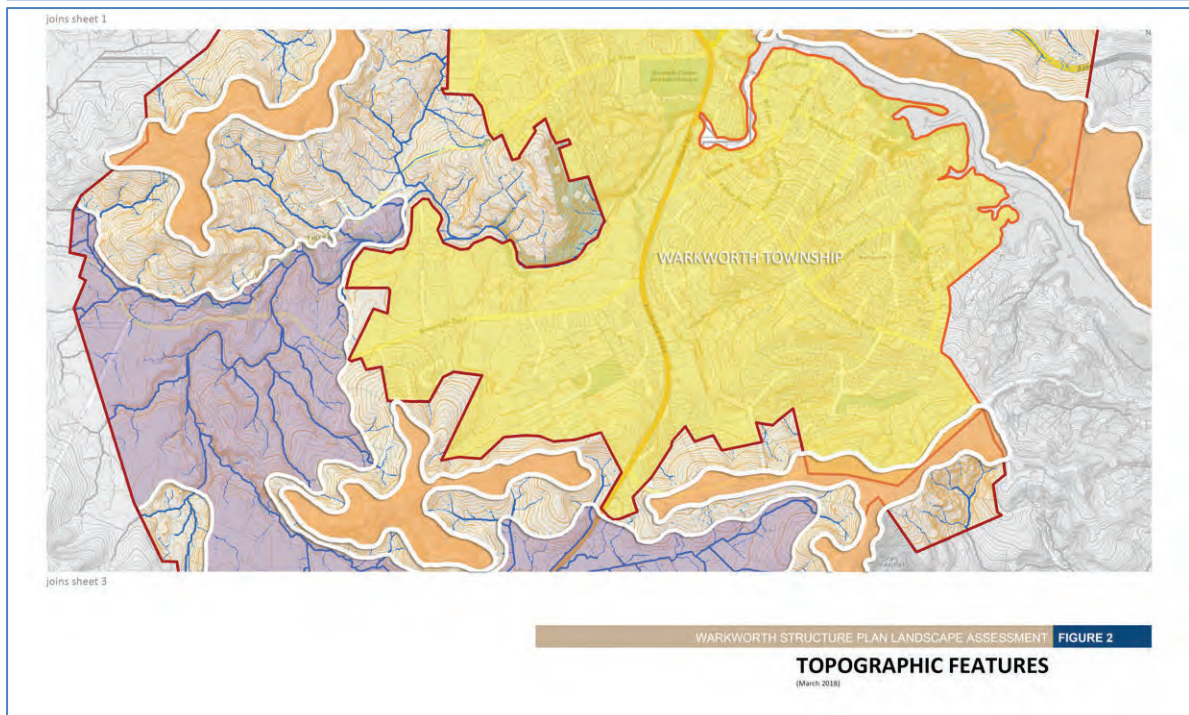
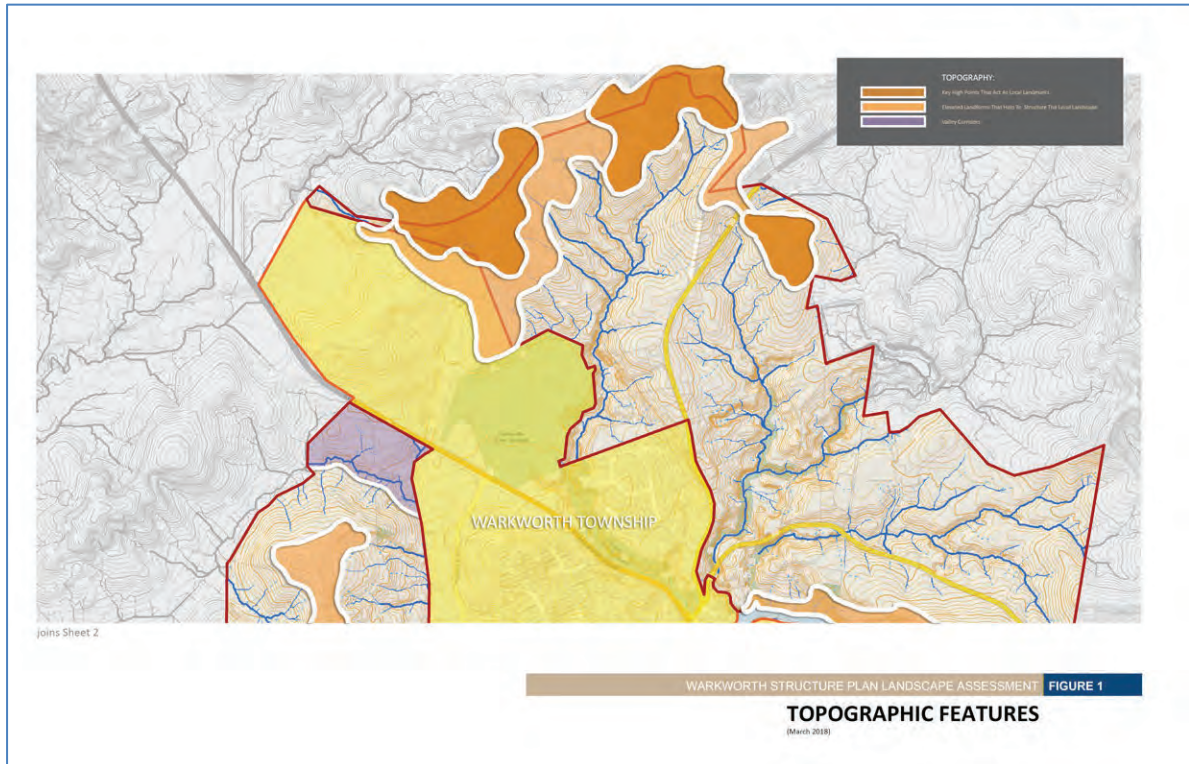
AUP: High Natural Character Area No.58 (green vertical lines)

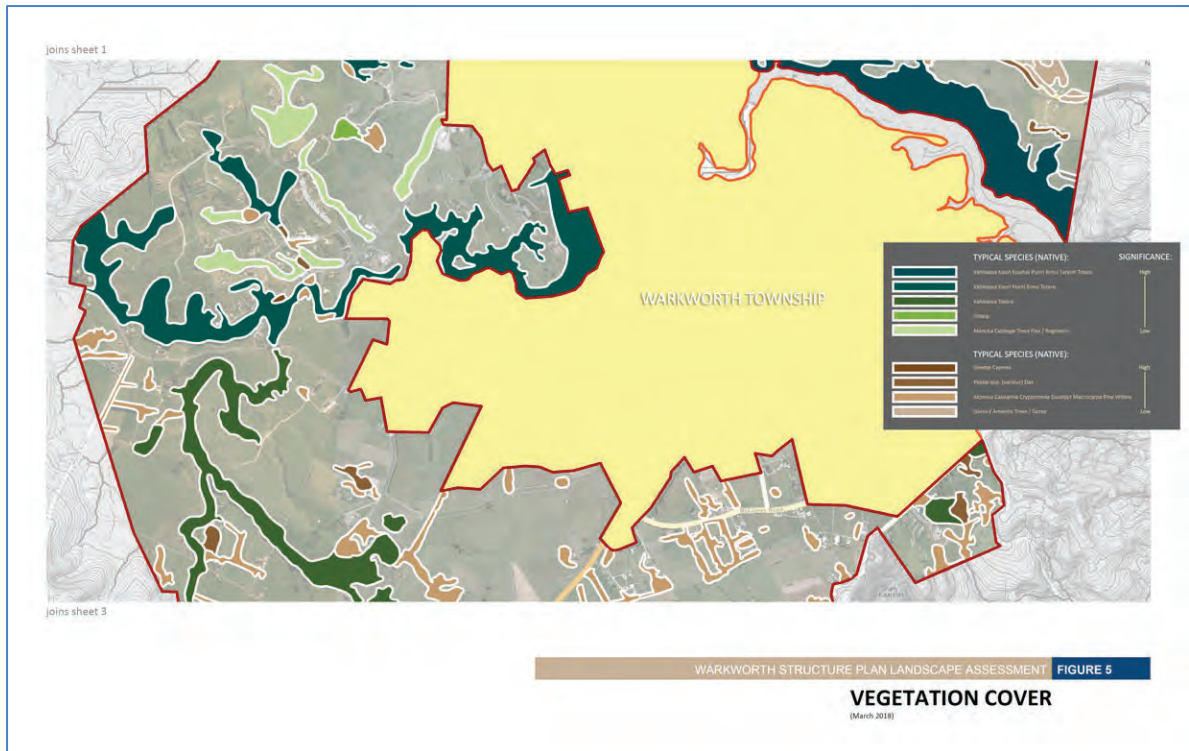
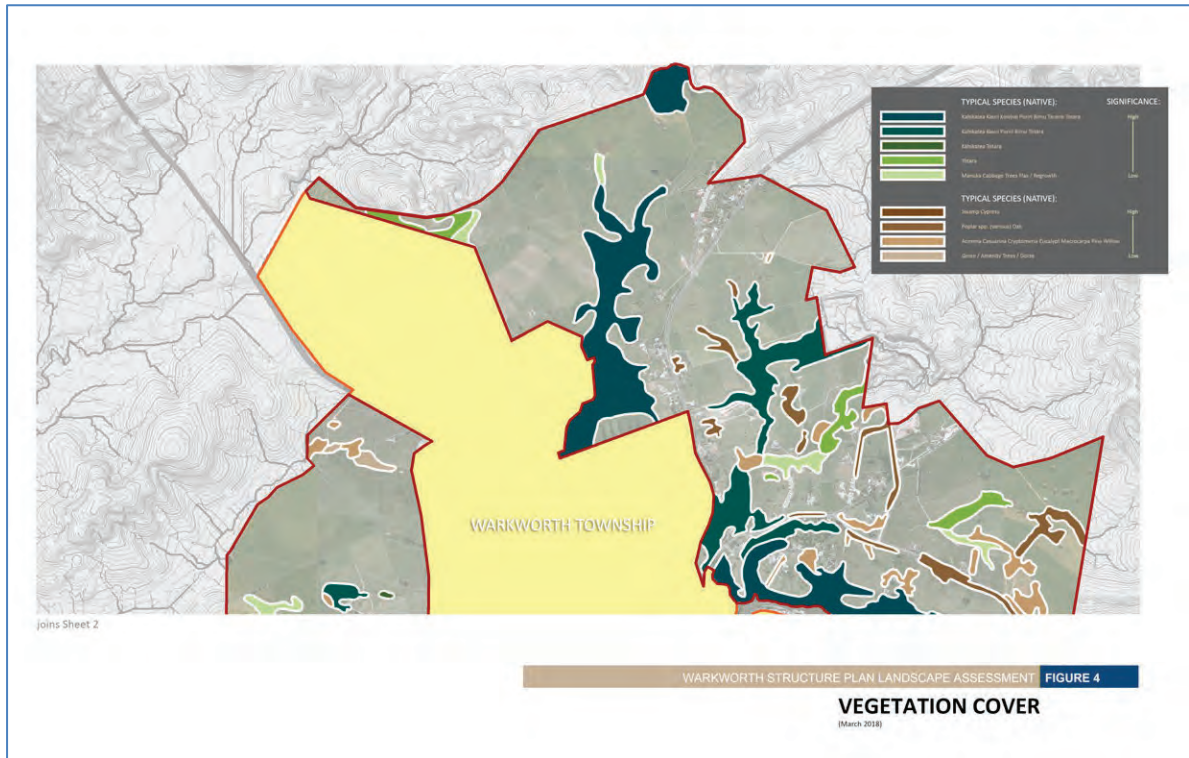
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Neither of these sensitive landscapes / environments is linked, perceptually, with the Warkworth North Plan Change area, even though the path of the Mahurangi River continues westwards to meet part of the Plan Change catchment near Falls Road.

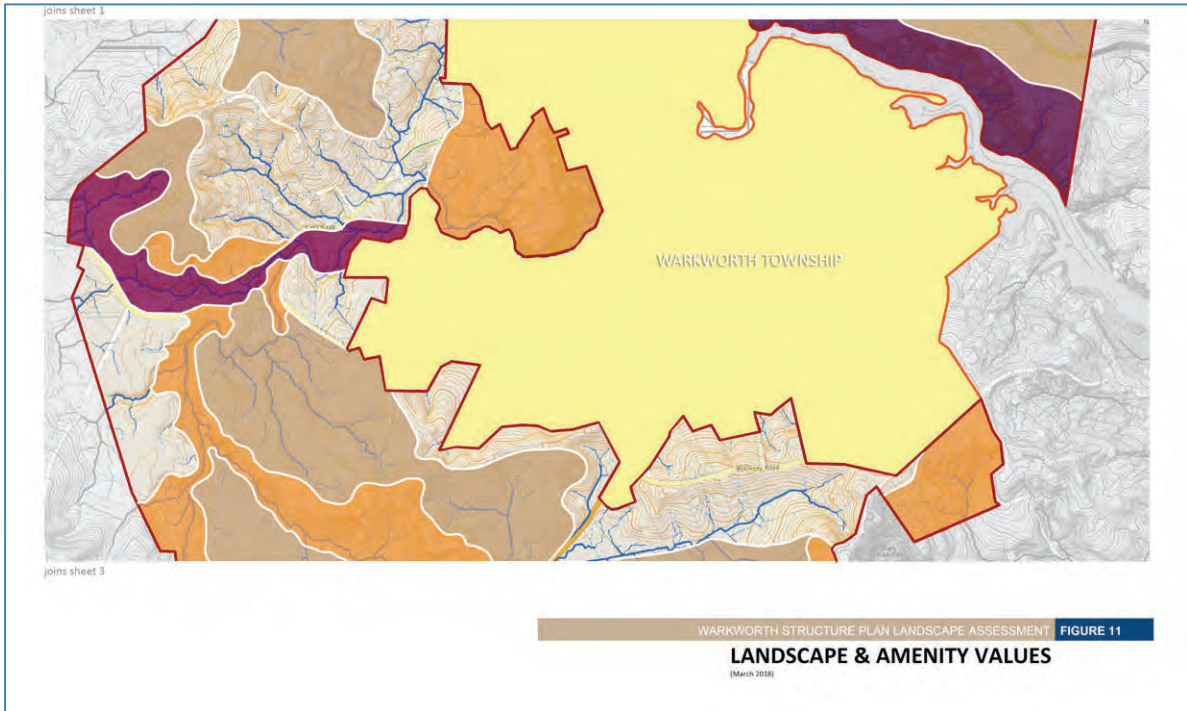
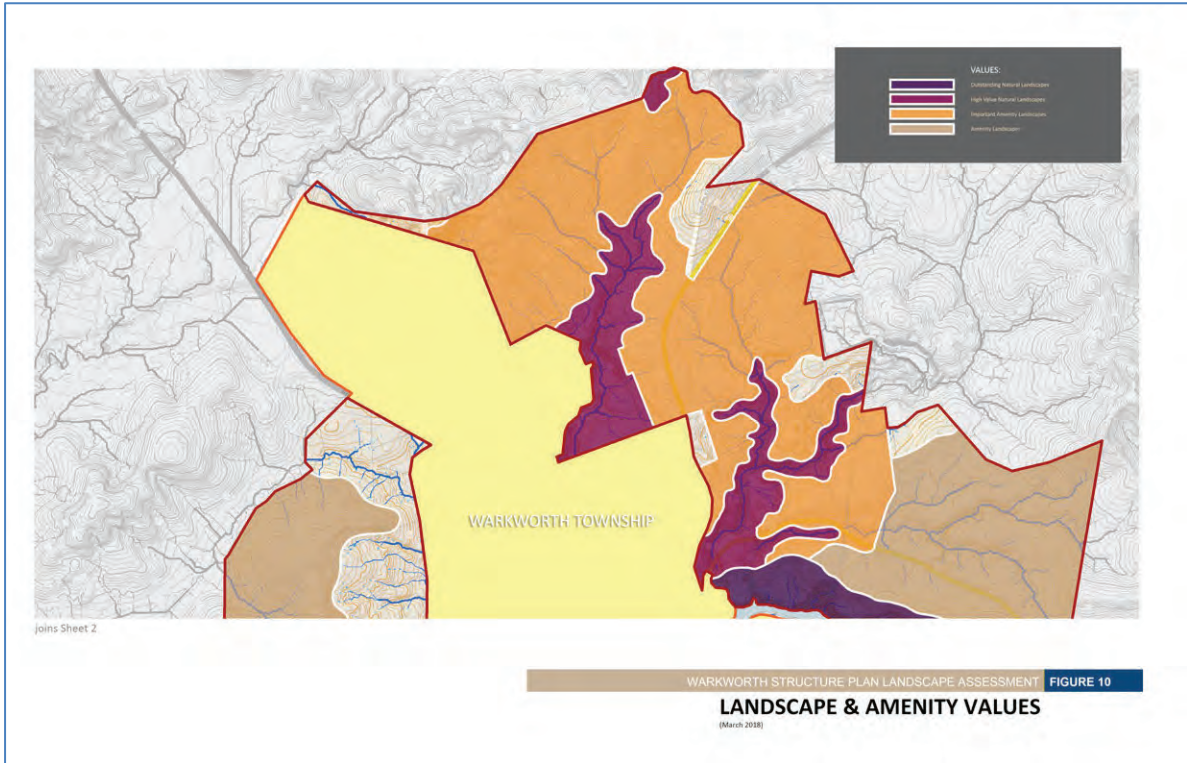
LOCALLY SIGNIFICANT LANDSCAPE FEATURES & CHARACTERISTICS

The Littoralis report does not identify any specific features or landscape elements of note within the Plan Change catchment, other than the mixture of network of small scale, perennial and ephemeral streams that feed into the upper reaches of the Mahurangi River near Falls Road, east of Viv Davies Drive and Hudson Road. However, analysis of the Warkworth Structure Plan identified a number of features within, and on the margins of, the Plan Change area. These are shown on Figures 1, 2, 4 and 5 below, together with a description of the key attributes associated with the identified features / elements.





This identification of physical features and components within the structure plan catchments then contributes to identification of significant landscape and amenity ‘values’ associated with different parts of those catchments – as are shown overleaf:



Figures 1-3 *Topographic Features:* highlight the landforms that frame the various valley catchments and areas of future development within the Warkworth Structure Plan area. Particularly prominent landforms – knolls, hilltops and ridgelines – that might help to retain a sense of identity for individual catchments or that might be linked to other landscape features – such as stands of bush, stream courses, and even the Warkworth Showgrounds – are also identified. Figures 1-3 also show the various stream paths and overland flow paths that are found through the study area.

Figures 4-6 *Vegetation Cover:* identify the major stands of native forest, marginal vegetation around stream / river courses and other planting within the Structure Plan area. A network of native and exotic planting is indicated that stretches throughout the Structure Plan area, contributing to its character, identity and aesthetic appeal. The relative significance of this vegetation is also indicated (albeit, purely from a landscape standpoint), reflecting

this contribution, even though the species involved may be quite diverse. For example, while kahikatea and totara (in places, augmented by kauri, rimu, and other native trees) provide the backbone for much of the planting around the Left and Right Branches of the Mahurangi River, a small stand of exotic Swamp Cypress reinforces the scale and visual presence of the native bush near the 'Left Branch' abutting Falls Road, while Chinese Poplars are also a feature of the 'gateways' in and out of Warkworth via Sandspit Road and SH1 (near Toovey Road and Valerie Close).....

Figures 10-12 *Landscape & Amenity Values: Pull the various strands of information gathered in Figures 1-9, together with an overall analysis of the character of each catchment to identify those locations that are both most significant in their present state – in terms of their landscape and amenity values – and which are therefore more or less sensitive to change. Just one “**Outstanding Natural Landscape**” is identified: correlating with ONL 43 covering the Mahurangi River escarpment and its bush / forest area, together with an HNC Area 58.*

*A number of “**High Value Natural Landscapes**” are also identified, focusing on the stream corridors in Catchments 1, 2 and 5 that are hallmarked by tracts of mature native forest, dominated by such species as kahikatea, totara and kauri. The ridgeline extending from SH1 to Thompson Road (at the edge of Catchments 6 and 7) is also identified as a “High Value Natural Landscape” because of the interplay between its highly expressive landforms and stands of mostly native vegetation that extend over the ridge crest into Avice Miller Reserve.*

*Most areas near, or surrounding, these more ‘natural landscapes’ are dominated by human-made / cultural landscape patterns, often associated with farming activity, but also including the likes of the Ransom Vineyard. Such landscapes can have significant amenity appeal because of their focus on particular elements and more confined, ‘natural landscapes’ within them; for example, Catchments 1 and 2 largely comprise pasture, but are still strongly influenced, visually, by the tracts of bush that follow stream corridors at the centre of both catchments (which have, in turn, been identified as “High Value Natural Landscapes”, as described above). Some landscapes also display considerable appeal because of the way in which both native and exotic vegetation helps to reinforce the underlying terrain, frame road corridors and open spaces, and create an appealing interplay between pasture and vegetation within each catchment. This is often assisted by the way in which existing residential buildings are bedded into the landscape and such elements as post and rail fencing reinforce its rural, even bucolic, qualities. Consequently, those ‘amenity landscapes’ that are more aesthetically appealing because of such characteristics are identified as “**Significant Amenity Landscapes**”, while those that have appeal that is less marked are identified as “**Amenity Landscapes**”.*

The area affected by the proposed Plan Change contains a stand of mature totara on the current pasture facing back towards Hudson Road – that is intermixed with a smaller stand of pines – while a sizeable ridge extends north-eastwards from Viv Davie Martin Drive towards the current SH1 corridor at the northern end of Warkworth. A corridor of native revegetation also follows the course of the Mahurangi River that branches off the main river stem near Falls Road to run generally parallel with, and below, Hudson Road. That revegetation terminates near the WaterCare site at the bottom of Sanderson Road.

The vegetation following the Mahurangi River is important insofar as it is part of a wider network of vegetation – comprising kauri, kahikatea, kauri and other canopy species – of considerable significance that follows the Left and Right Branches of the Mahurangi River, as well as the main river’s passage past the town centre. However, it is still immature, and provides little more than the foundation for a linked sequence of stream corridors and margins through the Plan Change catchment at present. The Littoralis and Biosearchers reports place considerable emphasis upon the realisation of this connected network of streams, linked to the Mahurangi River, and they are captured by the proposed Open Space – Informal Recreation Zone.

The stand of totara shown in Littoralis’s Viewpoint 10 and 12 photos is physically quite isolated, without the same sense of connection to other features or key landscape elements. Consequently, it is a reasonably prominent, but not unduly significant, feature. Even so, the proposed zoning

concept for the area north-west of Hudson Road and Sanderson shows this stand retained as part of the wider Open Space – Informal Recreation Zone mentioned above. It would sit at the head of one of the stream corridors within that wider network of mostly streams and their margins. In my assessment, this is appropriate.

The largest of the features within the Plan Change ‘site’ that is identified in the Warkworth Structure Plan Landscape Assessment comprises the ridge running north-east of Viv Davie Martin Drive. In addition to helping to define the outer limits of the Warkworth Structure Plan area and link future residential development to the lifestyle lots already found around Viv David Martin Drive, this ridge provides a point of division – and buffer – between development either side of Hudson Road and the new SH1 route (Ara Tuhono / Puhoi to Warkworth By-pass) that is currently under construction. As the ridge ‘tails off’ near the current SH1 alignment, this physical containment and separation diminishes. Even so, it remains very pronounced for most of its course parallel with Hudson Road, rising some 40-60m above the valley floor near Falls Road and the southern end of Hudson Road.

The proposed Plan Change zoning pattern across this ridge would see the Single House Zone capture its crest and more elevated slopes both sides of the ridge crest, before ‘cascading’ down through Mixed Housing Suburban, then Mixed Housing Urban and General Business zoning across the northern end of the ridge and across its east-facing slopes. The last of these zones would extend to the very edge of the current SH1 corridor. For the sake of completeness, it is also notable that Single House zoning would be located on the slopes either side of a rising Falls Road – further to the east – while pockets of Light Industry and Local Centre zoning would in-fill sites immediately south of Sanderson Road and part of the valley floor opposite Hudson Road further north.

This pattern of development is unsurprising: it would concentrate future business development near the existing business premises and development off Hudson Road and Sanderson Road, while the residential zones proposed would grade upwards from more intensive, multi-unit, development close to the valley floor and Business zones, into semi-detached, then single house zoning near, and on, the ridge crest. This will result in more intensive development than that currently found around Viv Davie Martin Drive and will also result in a sizeable number of ‘Single House’ residential properties both overlooking, and facing directly, towards, the new SH1. Photos 1-6 (**Attachments 1-5**) depict the current state of this ridge from a variety of vantage points:

Viewpoint 1: Falls Road near Viv Davie Martin Drive;

Viewpoint 2: Falls Road above the Mansel Drive intersection;

Viewpoint 3: Falls Road below the Hudson Road intersection;

Viewpoint 4: Hudson Road north of Albert Road;

Viewpoint 5: SH1 (existing) north-west of the Hudson Road intersection; and

Viewpoint 6: a paddock at the end of Viv Davie Martin Drive.

Viewpoints 1 and 2 show the steeper slopes at the southern end of the ridge, closer to Viv Davie Martin Drive, while Viewpoint 6 reveals the steep slopes of the catchment around the new SH1 corridor – running between Hudson Road and Kaipara Flats Road. As indicated above, the ridge reveals a much shallower profile close to the northern end of Hudson Road and the current SH1 corridor. Despite this, the proposed earthworks and related development would fundamentally change the nature of this landform: instead of enclosing and containing the outer margins of Warkworth, its development would spread across the ridge, to the very edge of the emerging highway. Although the graduation of developments types and densities across its slopes would subtly reflect the underlying landform, it would not acknowledge, and respond to it, in the same way that the current lifestyle development around Viv Davie Martin does to the south-west.

Having said this, it is recognised that the ridge in question is less significant, overall, than landforms that frame other parts of Warkworth's structure plan area – including the Mahurangi River escarpment and identified ridges and knolls near Avice Miller Reserve, Thompson Road and Matakana Road (to the south, east and north-east respectively). As a result, the adopted Warkworth Structure Plan also provides for Single House development across most of the ridge subject to Turnstone Capital's Plan Change application, and the Plan Change zoning would give rise to effects – related to earthworks, retaining, infrastructure provision and housing development – that are similar to those anticipated under the adopted Structure Plan.

AMENITY EFFECTS – EXISTING RESIDENTS

Residents living in the vicinity of Albert Road, more elevated parts of Falls Road and the eastern side of Viv Davie Martin Drive would all witness the transition of farm paddocks into both residential and business premises within the Turnstone land – particularly so across its more elevated slopes opposite (and above) Hudson Road. However, the adopted Warkworth Structure Plan also anticipates ‘up zoning’ of the lifestyle area around, and west of, Viv Davie Martin Drive, while the remaining pockets of rural land either side of Falls Road (above its intersection with Mansel Drive), as well as below Albert Road, are already exposed to a mixture of existing, conventional housing, the lifestyle development near Viv Davie Martin Drive and business development near Hudson and Sanderson Roads.

Consequently, much as the Turnstone application would result in a fundamental change to the landscape that local residents currently enjoy near the western edge of Warkworth – with their rural, in places quite bucolic outlook, displaced by housing and roading in particular – both the Auckland Unitary Plan and the adopted Structure Plan already foreshadow large scale change to the catchment north to west of Falls Road and Hudson Road.

As I have just indicated, most of the development exposed to existing residents will also be residential in nature – albeit of varying levels of intensity – while the greater bulk of proposed Business development would, under Turnstone’s Plan Change, be concentrated near the Business premises that already follow off Hudson Road. For the most part, this development would have a low ‘centre of gravity’ that keeps it away from the main viewing axes of residential properties currently found on the western side of Warkworth. Those with views of the proposed Business zones are already exposed to, or aware of, the industrial / business premises that have been established north of Falls Road, so that the pockets of Business development now proposed would generate change that is essentially incremental – adding to that which exists at present and filling in the ‘gaps’ between current business / industrial premises.

This is not entirely the case, as the large Light Industrial Zone proposed closer to Great North Road (the existing SH1) would ‘break new ground in this area. However, this area is largely divorced from the main body of residential properties between Hudson Road and the town centre, with an existing Z Station and rising paddocks behind it shielding most of Warkworth’s residential area from this sector. The pattern of development proposed for this area is again quite similar to that anticipated under the adopted Warkworth Structure Plan, so that any additional effects arising from Business development near the current service station would be largely incremental.

Overall, therefore, even though the Plan Change would result in very significant change to the outlook and amenity of those Warkworth residents living near the town’s north-western boundary, it would be largely aligned with the landscape change foreshadowed by the AUP and adopted Structure Plan.

OTHER AMENITY & LANDSCAPE EFFECTS

It is my assessment that the Warkworth North Plan Change would not affect any strategically important landscapes or features, and is generally consistent with the pattern of development (and related landscape change) now anticipated for the Plan Change area. Even so, a number of 'landscape' issues have been identified in relation to specific aspects of the Plan Change proposal. These relate to:

- Ā effects on the stream network across the application 'site' that connects with the northern tributary of the Mahurangi River;
- Ā the interface with a new SH1 – both in relation to the Ara Tuhono / Puhoi to Warkworth By-pass and any future extension northwards, towards Wellsford (although this does not comprise part of the 'current environment'); and
- Ā the effects of the proposal on Warkworth's primary future 'gateway' to and from SH1.

The Northern Stream Network:

Concern has been raised by Council ecologists about the potential effects of the proposed development on the margins of the Mahurangi River tributary north of Falls Road and the various, small scale, perennial and ephemeral streams that feed into it from existing farmland. I have read the report prepared by Biosearchers as part of the s.92 reply to Council, which highlights the degraded state of many of these streams and their poorly connected state; conditions that would ameliorated in the course of implementing the proposed Plan Change.

I agree that the current stream network is both fragmented and physically degraded. Although a large area of revegetation around the main stem – from Falls Rd through to just past Sanderson Road – has improved the condition of part of this system, most of the smaller streams feeding into this stem traverse open pasture, without marginal vegetation of any note apart from two small stands of totara and other vegetation at the head of two streams closer to Viv Davies Martin Drive. At the northern end of the Plan Change site, the system deteriorates to the point where its course is marked by a few poplars and its indented channel running between gorse, tobacco weed and pasture (**Attachment 4, Photo 5**).

In my assessment the proposed revegetation, together with retention of the two stands of headwaters vegetation mentioned above and stream corridor protection, would have a positive effect overall. In particular, this would contribute to a stream system that is physically healthier, better defined, and more visually expressive. As a result, all of the stream network north of Falls Rd is likely to benefit from the measures recommended in the Biosearchers Report.

Exposure to SH1:

I also have some concern about the amenity effects of exposing the large residential catchments within the Plan Change to the new SH1 motorway system, including any Stage 2 extension towards Wellsford (as part of the Ara Tuhono Puhoi to Wellsford Project). Most such effects would relate to the residential zones within the same valley catchment as the SH1 corridor, directly north-east of Viv Davie Martin Drive, as well as those cascading down the ridge above the state highway – towards the intersection of SH1 with Great North Road. In fact, the SH1 corridor already being developed would come to within just over 230m of the Plan Change's proposed Mixed Housing Suburban, Mixed Housing Urban and Single House Zones.

The structure plan for the Plan Change also shows a stream corridor and Indicative Open Space between the proposed MHU Zone and Light Industrial Zone abutting Great North Road. I anticipate

that planting within and around that corridor – together with its spatial corridor – would help to reduce some of the highway’s effects on future residents in the proposed Mixed Housing and Single House zone (**Attachment 4, Photo 6**), without entirely removing or mitigating the effects associated with such interaction. These would be exacerbated by awareness of associated traffic noise and activity on SH1. Inevitably, therefore, this would create a feeling of close interaction between the highway and all three residential zones.

The ‘flip side’ of this situation is that the AUP identifies all of the application site as part of the Future Urban Zone that is wrapped around the periphery of Warkworth – including the area just described – and clearly, therefore, anticipates at least some of the interaction / engagement with the nearby highway that I have just outlined. The adopted Warkworth Structure Plan’s Single House Zone north-east of Viv Davie Martin Drive is consistent with this approach. Yet, the Council Structure Plan also indicates that the minimum lot size within this zone may well be 1500m² to 2500m², limiting the number of future residents close to the highway corridor.

Turnstone’s Single House Zone is generally aligned with this strategy, using lower density development to help to ‘buffer’ the more intensive, MHU and MHS Zones closer to Hudson Road. Although this proximity to the highway will almost certainly require specific mitigation measures to maintain a reasonably level of amenity for residents within this part of the Plan Change area, the effects identified are therefore broadly consistent with those anticipated for development under the AUP and Warkworth Structure Plan.

Where the two differ, however – beyond the issue of Single Zone lot sizes – is in Turnstone proposal for MHU and MHS development above the northern stream corridor and Indicative Open Space, directly abutting the SH1 corridor. This would expose a larger number of new residents to the highway, together with its intersection with Great North Road and the rear of the proposed Light Industrial Zone directly across the stream / open space corridor. In my assessment, this elevates the potential for significant amenity effects at this interface.

Warkworth’s Future SH1 ‘Gateway’:

This matter merges with a related issue addressed in the Warkworth Structure Plan – that of the future SH1 ‘gateway’ into Warkworth. Currently, the town enjoys the feeling of being an attractive enclave of development that is framed by its natural features, together with mature farm shelterbelts addressing both SH1 at the southern entrance to Warkworth and its Matakana Rd entry.

Although the Warkworth Showgrounds will continue to frame (in part at least), the entrance from a realigned SH1 to the town centre, the existing service station and industrial premises flanking the present Hudson Rd / SH1 intersection suggest a quite different ‘gateway’ into the town (**Attachment 5, Photo 7**), while the existing Light Industrial Zone north of Great North Road, already means that the ‘face’ of Warkworth will be significantly changed at this key gateway in the foreseeable future. In particular, there is the very real potential for Warkworth to be transformed from an attractive town that is framed by natural landforms, river / stream corridors and mature trees into a town that is defined by its industrialised, business ‘front door’. Examples of this situation are legion throughout New Zealand, including the Te Rapa entrance to Hamilton and Rotorua’s Fairy Springs Road ‘gateway’. A similar situation at the main entrance to Warkworth would dramatically change the town’s public ‘face’ and identity.

Council’s adopted Structure Plan responds to this issue by incorporating Landscape Screening Areas both sides of Great South, and I support these measures as some form of significant setback and ‘sleeving’ of development is required along Great North Road’s margins to ensure that Warkworth does not suffer from the emergence of a “Te Rapa” type ‘front door’. This sleeving

would need to be deep enough to accommodate both extensive bunding and the creation of an avenue of mature native trees backed by a layering of sub-canopy species – ideally up to 30m deep (a typical mature pohutukawa or puriri can easily spread out over 20-25m).

However, Turnstone’s proposals would extend the Light Industrial Zone to the very edge of Great North Road, without any such buffering or sleeving. In my opinion, this would have a significant and deleterious effect on the road corridor’s visual amenity, its interface with the adjoining Showgrounds and the wider community’s perception of Warkworth. As a result, I consider that the Turnstone Capital Plan Change should be amended to accommodate the concerns that have just been outlined. As I have implied, such buffering needs to be addressed in a comprehensive fashion that goes well beyond just a narrow strip of short-term, planting and could well be integrated with buffering measures adopted at the interface between SH1 and the proposed residential zones at the northern ‘tip’ of the Plan Change land.

PUBLIC SUBMISSIONS

Public submissions have been received which address many aspects of the application, while Turnstone Capital Ltd has provided its own submission: No. 23. Matters addressed in the submissions of most relevance to ‘landscape’ effects, include the following:

Submission 30, 32, 33, 34, 35 and 36: raise concern about the extent of up-zoning proposed, particularly the change from Single House zoning near Falls Road and Viv Davie-Martin Drive to Mixed Housing Suburban (although a Single House Zone would be retained near the ridge crest of Viv Davie Martin Drive).

Submission 23: requests a change from Single House zoning to Mixed Housing Suburban zoning in the same location.

Submissions 8, 10, 23, 24 and 27: raise concerns about the proposed stream corridor interface near Hudson Road with Industry. In particular, Submission 24 states: *“It is noted that the Warkworth Structure Plan has industrial areas on both sides of the stream leading to the Mahurangi River whereas the PPC has industrial development on one side only. PPC 25 therefore has better outcomes for the stream and its immediate environment and also allows for better development of Walkways and Cycleways than the Warkworth Structure Plan (as adopted).”*

Submission 23: raises the issue of Light Industry versus a Mixed Use Zone around the northern gateway to Warkworth, which also has a direct bearing on the related matter of a landscape buffer (“Landscape Screening Area”) down the southern side of Great North Road.

My comments in relation to these matters are as follows:

Residential Up-zoning Near Viv Davie Martin Drive:

In general, it is my opinion that the graduation of development intensities should respond to the characteristics (including slope) and sensitivities of different landforms within individual catchments. For this reason, I support the Adopted Council’s Structure Plan, in which residential development is ‘graduated’ up the slopes near Falls Road and Viv Davie Martin Drive. The crest of the ridge that Viv Davie Martin Drive climbs up to is also one of a sequence of ridges that physically encloses and visually frames the Warkworth Structure Plan area. In my assessment, Council’s structure plan would retain a stronger sense of connection between the underlying landform and the pattern of development emerging across it.

Further, as is indicated at the foot on page 12, I do have concerns about exposing a sizeable residential population to SH1, near the northern entrance to Warkworth. That same audience – of both MHS and MHU development – would directly overlook the rear of the proposed General Business zone, and both zones would visually cascade down the ‘tail’ of the Viv Davie Martin ridgeline near SH1 and Great North Road. In my assessment, this would diminish the level of amenity experienced by a sizeable residential population in that area (as indicated above), while the combination of MHU and MHS development would truncate the ridgeline above the northern ‘gateway’.

On the other hand, I also accept that much of the valley catchment and slopes below the main Viv Davie Martin ridge will appear ‘developed’ and modified’ irrespective of the residential densities applied to this area. For this reason, I accept that some intensification of the valley catchment –

beyond that proposed in the adopted Warkworth Structure Plan – may be appropriate for the mid and lower slopes facing back towards Hudson and Falls Roads.

On balance, however, I do not support that part of Submission 23, which seeks to up-zone the area near 62 Viv Davie Martin Drive – on the crest and near-crest of the ridge – from Single House zoning to MHS. In my opinion, Single House zoning should be retained above the stream headwaters area immediately east of Viv Davie Martin Drive and that this zone should be retained down the spine of the ridge and across its more elevated slopes, through to the point where it meets the proposed Light Industrial Zone (see **Attachment 1**). This arrangement would provide a more appropriate sense of transition from the main body of the structure plan catchment into the Mixed Rural Zone around SH1, as proposed in the Structure Plan, and would reduce the potential for reverse sensitivity issues near the originally proposed Light Industrial Zone (now proposed by Turnstone to be Business - Mixed Use).

Submission 10 also seeks the establishment of a Green Belt at the western edge of the PPC25 to safeguard the amenity of those living in Viv Davie Martin Drive. I agree that it is desirable, from an amenity standpoint, to both maintain and (where possible) enhance amenity values, which may include addressing the merger of established and new areas of development. However, Viv Davie Martin Drive is located within a Future Urban Zone, that will almost certainly be subject to intensification in the future, and it abuts areas within which significant residential development is anticipated – as is discussed on page 10 of this report. As a result, I consider that a green belt down PPC25's western boundary would be arbitrary and meaningless from a landscape standpoint: it would serve no real purpose in the longer term.

The Industrial / Stream Interface Near Hudson Road:

The stream and river courses through the Warkworth Structure Plan Area comprise a significant network that also contributes to the vegetated qualities of much of it. In my assessment, the stream courses should remain as open, accessible and visually legible as possible. Consequently, I agree that PPC 25's replacement of an area of Heavy Industry immediately west of the Hudson Road stream with a Local Centre Zone would have some benefits from a landscape perspective, even if Light Industry remains directly east of the corridor.

As a result, I am comfortable with the change of zoning proposed near the foot of the Viv Davie Martin ridge, next to the aforementioned stream.

Light Industry Versus General Business Zone on Great North Road:

My main concern in relation to the northern 'gateway' in and out of Warkworth relate to the industrialisation of that key entrance to the town and mitigation of related effects as much as is practicable (see page 12 above). In my opinion, the sleeving of development both sides of Great North Road, via setbacks and planting in some depth, is likely to be much more successful if development is accessed via an internal road network, rather than Great North Road itself. Unfortunately, a Mixed Use Zone is more likely to rely on direct access from Great North Road than a Light Industrial Zone. For this reason, I do not support the change of zoning proposed.

It may be that this matter can be successfully addressed via an internal road network connected to Hudson Road, in which case it may be possible to successfully prevent the 'Te Raparisation' of the northern gateway. However, it is unclear if such an approach is proposed and Turnstone's latest submission still appears to ignore the adopted Warkworth Structure Plan's Landscape Screening Areas.

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I note that Council's own submission (no.12) addresses this issue under the title 'Landscape Screening Areas' (pages 5 and 6), and I support the concerns raised by Council in relation to this matter.

CONCLUSIONS

On the basis of this review, it is considered that the Turnstone Capital is generally acceptable in terms of its effects on strategically important landscapes and features within and near Warkworth, and would have a very limited adverse effect on the amenity enjoyed by existing residents – when considered in the context of the AUP and adopted Warkworth Structure Plan.

Moreover, in relation to Warkworth’s more fine-grained, landscape components, the adopted Plan Change would have a beneficial effect in relation to the stream network associated with a tributary of the Mahurangi River north of Falls Road. It would contribute to the realisation of a physically healthier, better defined and more visually expressive, sequence of small scale streams that feed into the river stem.

On the other hand, the PPC 25 would also draw housing development closer to both the SH1 corridor that is presently being developed north of Viv Davie Martin Drive – on slopes above the highway – and it would expose a greater mix of residential development to the highway. Turnstone Group’s own submission (No.23) would exacerbate this by ‘up zoning’ the residential area down the spine of the Viv Davie Martin Drive ridge and across its upper slopes, while the combined MHS and MHU zones at the northern end of the ridge would visually traverse its ‘tail’ and butt directly into the Light Industrial Zone near Great North Road, potentially increasing the amenity effects and reverse sensitivity issues at that interface.

In addition, the proposed location of Light Industrial or Mixed Use Zone at the very edge of Great North Road has the potential to adversely affect the ‘sleeving’ of development in this area by open space and large scale planting to help define Warkworth’s new SH1 ‘gateway’ – which is crucial in terms of the town’s future character and identity. If Warkworth is to avoid being transformed from a highly appealing, town that is both framed and cossetted by natural elements into one whose signature is defined by its industrial ‘front door’, then provision must be made for buffering of the business development proposed for the Turnstone site near Great North Road and SH1. This approach is consistent with the sleeving measures outlined in the adopted Warkworth Structure Plan.

Overall, therefore, while the PPC25 proposals are generally consistent with the ‘bigger picture’ landscape strategy for Warkworth Structure Plan area, the location of more intensive residential (MHS and MHU) zoning on the Viv Davie Martin Drive ridge and its upper slopes is not supported.

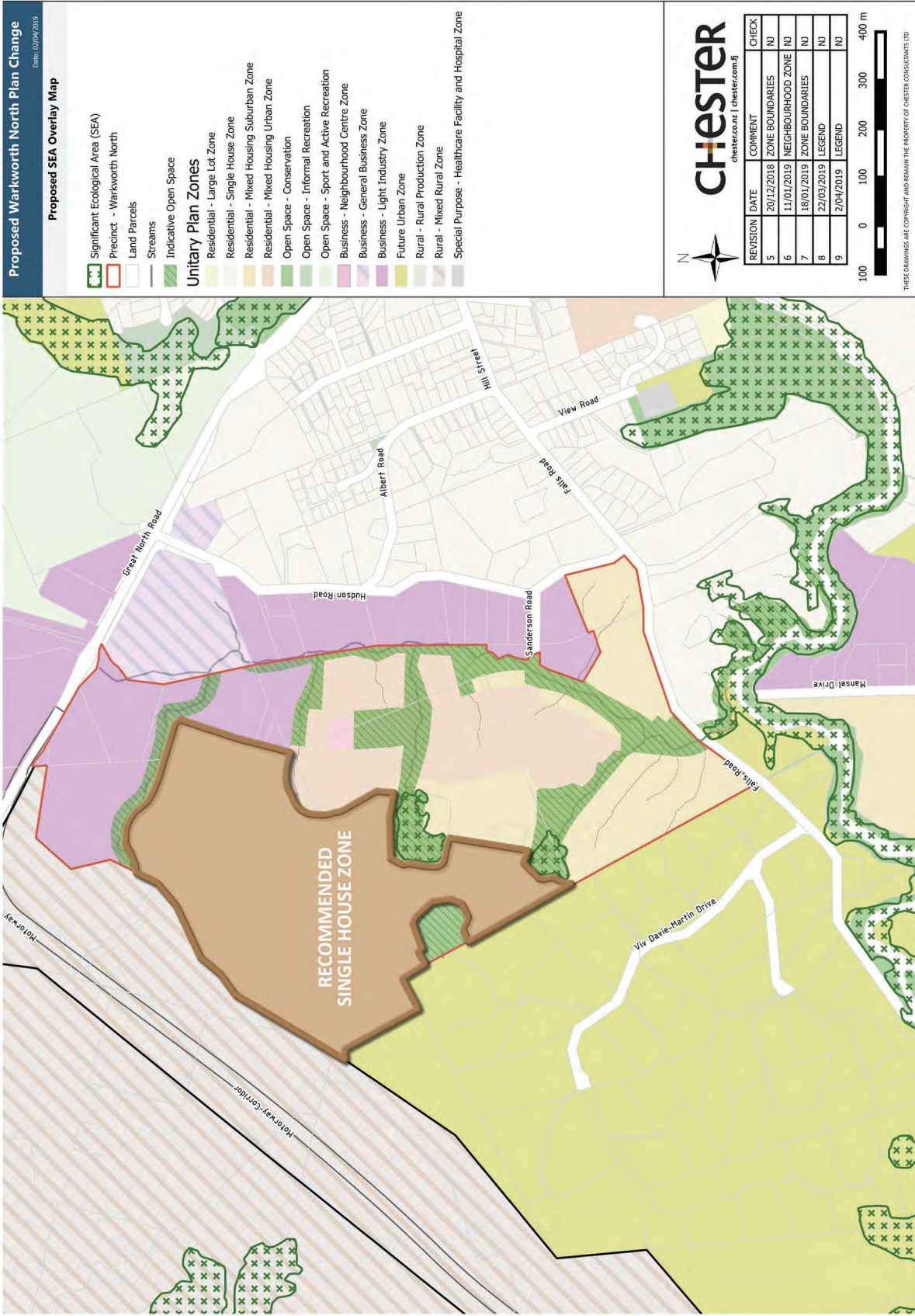
I also retain concerns about the implications of the proposed business zoning next to Great North Road for Warkworth’s future character and identity at that strategically important gateway, particularly as Turnstone’s proposals appear to dismiss the proposed Landscape Screening Areas down that road corridor.



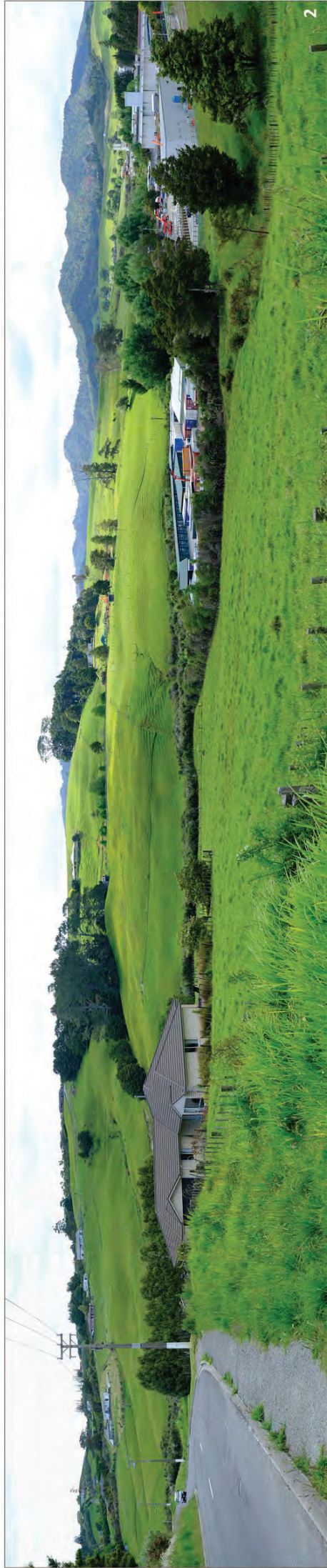
Stephen Brown

BTP, Dip LA, Fellow NZILA















Parks Specialist Comments, PPC25

Hi Ila

Open space

Apologies for the delay response. I have been in contact with the developer and their planner Burnette O'Connor over the last 12 months regarding the two large open spaces they are proposing. I have highlighted our interest in the two SEA central to the private plan change area. This of course is subject to governing body approval and Burnette is aware of this.

Submissions: I've reviewed the submissions and apart from individual support for the open space shown in the plan change including conservations and esplanade reserve there is no additional information I need to respond to I believe.

Precinct Plan 1: the plan shows several 'Indicative Open Space' areas along the streams. I assume these will come across as esplanade reserves.

As mentioned above council have only expressed interest in the two proposed open space/SEA areas only at the end of the two streams in the middle of the development.

Give me a call if you want to chat or require more information.

Thanks

Roma Leota

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Memo

8/10/2019

To: Ila Daniels
cc: Ken Tomkins, Kieren Daji
From: Paula Vincent
Subject: Warkworth North PPC25 – Stormwater Management report
Status: Final

Version: 1

1 Scope and purpose of memo

1.1 Scope and purpose

This report provides Healthy Waters advice on the quality of the plan change application lodged by Turnstone Capital, advice on the appropriateness of the precinct provisions and plans as they affect stormwater management and views on submissions if relevant. It is intended to support the s42 report for this plan change.

A specialist report presenting a preliminary assessment of geotechnical information provided with the application was requested by Michelle Perwick and Ila Daniels to inform their RMA Section 42A report.

1.2 Summary

The plan change as notified purports to be consistent with the principles outlined in the Warkworth Structure plan and the intent behind the land zonings shown in the Structure Plan. Being a plan change under the Auckland Unitary Plan Operative in Part it also needs assessment against the Regional Policy Statement and relevant objectives, policies and rules.

With regards to an assessment of the effects on the natural environment generated by the land change proposed and how these are proposed to be managed the plan change is lacking.

Key points of concern

- There are objectives and policies included in the plan change which are inconsistent with the rules in the unitary plan and undermine achievement of the regional policy statement and regional plan with no reasonable justification.
- Those same objectives and policies also undermine the delivery of the Warkworth Structure Plan and are do not represent best practice in stormwater management or water sensitive design.

- The information provided in the stormwater management plan is inadequate. It is concerning that there are some aspects of stormwater management effects which are conflated in the report (hydrology mitigation is distinct from flooding and pipe capacity) which suggests a lack of expertise in preparing the report.
- The Stormwater Management Plan as prepared is inappropriate to include in the precinct plan. Including the Stormwater Management Plan as part of the plan change means it cannot be altered as it becomes part of the plan itself. With regards to both the content of the SMP and with the Auckland Council's region wide Network Discharge Consent commencing in October 2019 it becomes inappropriate.

More detail on these points is provided below.

2 Assessment of the notified PPC and any supporting documents relevant to your speciality

In addition to the plan change application key documents reviewed were:

- Chesters, 2019. Land Development Report for Warkworth North. Prepared for Turnstone Capital Ltd.

Other relevant documents include:

- Tonkin & Taylor, 2019. Stormwater Management Plan for Warkworth Structure Plan. Prepared for Auckland Council.

2.1 s32 report

The applicant has a heavy focus on the urban development and form aspects of the relevant planning framework and does not acknowledge other relevant planning aspects that relate to the natural environment in the s32 report. Meeting environmental outcomes and quality urban development outcomes are not mutually exclusive.

Overlays – the applicant appears to be recommending which overlays apply in the plan change. All overlays that currently apply through the AUP should continue through into the precinct. Hydrological features such as streams and aquifers are interconnected to each other and this connectedness extends beyond the boundaries of the plan change area. It is inappropriate to remove overlays for these features as the management of these needs to span the entire area that the hydrological feature exists – not cease to manage because it is inconvenient or an arbitrary planning boundary.

Auckland Plan – applicant references the Development Strategy revised June 2018 and the emphasis on quality urban form. The Auckland Plan – Outcome Environment and Cultural Heritage Direction 3 Use Auckland's Growth and Development to protect and enhance the natural

environment also applies to this area. The Auckland Plan recognises the importance of quality development which includes applying water sensitive design and utilising development opportunities to deliver improved environmental outcomes.

Auckland Unitary Plan – the applicant notes that the Chapter B2 provisions relating to urban development are the most relevant for this plan change (pg 19). We note that these include growth that enables natural and built environments to be maintained or enhanced and reduction of environmental adverse effects (B2.2.1). In addition there are other Regional Policy Statement provisions that also apply to this plan change including B7 Natural Resources. There is particular direction in B7 on how the indigenous biodiversity and freshwater habitats should be treated during the urbanisation process, particularly:

B7.2 Indigenous Biodiversity

B7.2.1. Objectives

- (1) Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision use and development.

- (2) Indigenous biodiversity is maintained through protection, restoration and enhancement in areas where ecological values are degraded, or where development is occurring.

B7.3. Freshwater systems

B7.3.1. Objectives

- (1) Degraded freshwater systems are enhanced.
- (2) Loss of freshwater systems is minimised.
- (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated.

Explanation of how the B7 objectives and policies are being met in the proposed plan change should have been addressed in the s32 report.

Lack of protection areas

The plan change as lodged does not match the green corridors identified in the Warkworth Structure Plan. These were intended to provide for a range of positive social and environmental outcomes and reflect the natural heritage of the area. This should be retained in the plan change area.

2.2 Stormwater Management

The Auckland Unitary Plan (AUP) promotes an integrated stormwater management. This is a step change in stormwater management that integrates land uses with its effects on stormwater including sources of contaminants and impacts of changes in hydrology. The effects of stormwater on the natural environment are well documented and a summary of these is provided in evidence by Martin Neale for the hearing on Council's application for a region wide Network Discharge Consent.

Chapter E1 of the AUP specifically addresses what integrated stormwater management is and what is expected for managing stormwater in greenfield areas. These policies guided the development of the Tonkin and Taylor report on Stormwater Management that was prepared in support of the Warkworth Structure Plan. For reference the relevant policies are E1.3.8 and E1.3.10.

These policies are also supported by Water Sensitive Design principles in Guidance Document 04 (GD04) which can be found on the Auckland Design Manual website.

2.3 Stormwater Management Report

Healthy Waters notes with regards to Stormwater Management as proposed in the plan change application that:

Hydrological mitigation is covered by SMAF1, but no flood attenuation provided.

- The flooding report has not taken adequate account of future development within the wider upstream catchment in its assessment of peak flood levels and flood mitigation measures will be required where appropriate.
- There is insufficient capacity at the Falls Bridge for the 5 year storm at Maximum Probable Development and no mitigation is proposed through PPC 25 development area.
- For your information there will be ongoing “road-overtopping issues at the Falls Road Bridge until it is upgraded/replaced. (The Bridge is an AT asset.)

The Stormwater Management plan conflates infiltration and soakage. This is important as it will impact on the stormwater management approach and stability of soils. The Geotech memo provided by Ross Roberts supports the KGA note that, “stormwater retention by ground recharge is not recommended from a geotechnical perspective”. I believe that this issue of slope stability and when it is appropriate for infiltration devices to be used is behind the Auckland Council submission point (page 12/23 Submission 12) to include a standard for assessing infiltration. This would be appropriate to ensure good development and stormwater management outcomes.

Other submission points raised in Submission 12 relate to flood modelling being insufficient in scale and in consideration of climate change impacts. Water is fluid and the area that is modelled for flooding should extend from the site and consider impacts on the surrounding, particularly downstream environment. While there may be limited impact of increased impervious surface on flooding extent for the plan change area it may have a significant impact further downstream of the plan change area. This doesn't appear to have been considered. Also note that the flood models are required to account for anticipated climate change and rainfall effects.

With regards to flood sensitivity analysis we expect this would be done as part of any subdivision application. Healthy Waters supports application of AUP policies not to build in the 1%AEP floodplain and believe the existing AUP provisions, subdivision consent process will be adequate to cover this.

Ultimately the Stormwater Management Plan will need to be redone to address Healthy Waters concerns' and enable discharges from future developments to be authorised under the region wide NDC.

2.4 Including the Stormwater Management Plan as part of the precinct plan

Healthy Waters does not support this. There are three reasons for this:

- 1) Recent agreements reached in Environment court directed mediation on council's region wide network discharge consent for stormwater management make inclusion of the SMP into the precinct unpracticable.
- 2) Once included as part of the plan change it cannot be altered so therefore cannot easily be updated in response to further information.
- 3) The SMP is not consistent with the stormwater management approach identified during the Warkworth Structure Plan process, best practice identified in GD04 or the performance requirements of council's region wide network discharge consent.

1) Stormwater discharges are managed under E8 of the AUP. It is a permitted activity to divert stormwater from lawfully established impervious surface into the network. However an authorisation for the discharge from the network into the receiving environment is still required. The Healthy Waters department of Auckland Council will hold from October 2019 a network discharge consent (NDC) which will hold the authorisation for all discharges from the network. As it is only a permitted activity to divert into the network developers will still need some form of authorisation for their discharge and can either:

- 1) utilise council's NDC to authorise their discharge (subject to meeting performance requirements), or
- 2) apply for a private discharge consent.

To ensure the network performs at the level needed Healthy Waters will use the Stormwater Bylaw to ensure that those seeking connection to the public network meet the relevant performance requirements. These performance requirements are set out in Schedule 4 of the NDC.

The NDC includes Objectives and Outcomes in Schedule 2, a description of Best Practicable Options for managing stormwater at a regional scale in Schedule 3 and performance requirements in Schedule 4. This all reflect the AUP objectives and policies and water sensitive design in stormwater management.

THE NDC includes future developments and this aspect was part Forest and Bird's appeal against the consent. Forest and Bird were concerned that the effects of stormwater discharge on Significant Ecological Areas was not well considered or defined in the NDC therefore it was

inappropriate to lose the application for discharge consent process that would go through council's regulatory body. Auckland Council successfully argued that the most appropriate place to consider the effects that a decision to urbanise a greenfields area and the subsequent effect of stormwater on Significant Ecological Areas was during the plan change stage. This is because this is when the decision is being made to change the land use and the effects of that change are considered. Forest and Bird wished to ensure that there was the opportunity for public input into such a decision and Healthy Waters agreed that a Stormwater Management Plan for a greenfield area would not be adopted and used to authorise discharges without going through a plan change process and the plan change being operative or through a s127 process.

3) Precinct plan 2 does not reflect either the Warkworth Structure Plan and associated Stormwater Management Plan recommendations for managing stormwater, best practice or new performance requirements for greenfield developments in council's region wide NDC.

Greenfield areas are recognised as having the greatest opportunity to apply water sensitive design and design for best possible outcomes compared to existing urban areas (see E1.3.8 and E.1.3.10 and GD04 and GD01). In recognition of the policies and guidance on best practice available the performance requirements for greenfield areas is for treatment of all impervious areas. Precinct plan 2 has full treatment for some impervious areas but not all. This is not consistent with best practice and would also mean council would not accept assets for vesting from this area as it would not performance requirements and this is a matter that council can consider under the Stormwater Bylaw 2015 in accepting assets.

2.5 Comments on the Precinct plan as proposed

Precinct Description:

Doesn't reflect the intent of the Warkworth Structure Plan or the existing features of the nearby environment to inform context such as the existing natural features and historic township of Warkworth. Healthy Waters supports Jason Smith's submission on the precinct description.

Precinct Objectives:

Some of the objectives are consistent with the AUP and/or Warkworth Structure Plan, notably in relation to stormwater and freshwater habitats Objectives I1.2.1(b) and (d). However Objective I1.2.1(c) is not.

"minimising loss of, or reduction in ecological values, and enhancing retained ecological values to achieve overall effects on ecological values that are less than minor."

The reasons for this are:

- The s32 report and supporting reports do not define what is meant by ecological values or why it is necessary to lose or reduce these.
- Policy E1.3.3 in the AUP gives effect to the NPS-FM 2014 and requires that "Freshwater systems to be enhanced unless existing intensive land use and development has irreversibly modified them such that is practicably precludes enhancement."

- Values associated with indigenous biodiversity and freshwater systems are required to be protected in B7 of the RPS and this objective is inconsistent with that.
- It is unclear how 'less than minor effects' would be defined and assessed.
- Is a level of detail that would be addressed in resource consent applications for activities that the AUP determines has an effect on ecological values (assuming that these are associated with indigenous biodiversity and freshwater systems).

Relief sought:

- Remove this objective.

Precinct policies

In general Healthy Waters supports Auckland Council's submission and relief sought on the precinct policies.

Healthy Waters supports all precinct policies except policies I1.3(5) and I1.3(6).

I1.3 Policies

- (5) Provide for the retention of watercourses except where Precinct plan 1 –Warkworth North Precinct identifies that there will be stream loss and implement appropriate mitigation measures onsite to offset any adverse effects as indicated on Precinct plans 2 - Stormwater Catchment Management plans.

This policy is completely inconsistent with the NPS-FM, AUP regional policy statement B7.4 and Chapter E3 rules. Under the AUP all permanent and intermittent streams are protected and reclamation of streams is a non-complying activity. The protection given to streams recognises the importance of the entire stream network in maintaining functionality as a freshwater habitat, including a hydrology that reflects natural conditions and cycles. The importance of hydrology to supporting freshwater ecology is outlined in Martin Neale's evidence supplied for council's region wide network discharge consent hearing.

The appropriateness of reclaiming streams should be assessed when an application is made for the non-complying activity, including if avoidance of the need to reclaim the stream has been made.

Implementing mitigation measures onsite is likely to raise additionality issues.

Further the ecology reports and s32 report provided by Turnstone suggests the streams identified for loss are not of high value, are of short reach and/or headwaters. This does not recognise either the potential for the headwaters and streams to be enhanced (which is what is directed by AUP including policy 1.3.3) or the importance of headwaters to the overall freshwater system.

The email from Healthy Waters Waterways Specialist, Colleen Brent, provides an explanation of the importance of headwaters.

Relief sought:

- Remove the policy entirely.
- Update the precinct plan to show all streams and their classifications as shown in the Watercourse Assessment Report prepared for the Warkworth Structure Plan. The streams mapped in that report have been done to AUP definitions.

- (6) Enhance streams identified for enhancement using techniques such as boulder clusters; spur dikes, vanes and other rock deflectors; rock riffles; cobble or substrate; cobble floodways; root wads or large wooden debris; vegetated floodways; live siltation; erosion control blankets; living walls and culverts designed to enable fish passage.

The intent of this policy seems good in that it recognises a range of methods to address erosion issues instream, increase the habitat potential of a stream and allow for fish passage. There are a couple of issues with the policy that need clarifying however:

- 1) the methods identified are most appropriate in larger streams rather than intermittent streams and as such as most likely to be applied to the Mahurangi stream.
- 2) the methods are things that could be applied to mitigate adverse effects of changes to hydrology caused by urbanising the environment. Putting into place all practicable methods to avoid adverse effects of changes to hydrology is directed by E1.3.8. As such these methods are most appropriate as part of a suite of measures to avoid or remedy adverse effects rather than enhancement used for offset purposes.

Relief sought:

- Reword the policy as provided by the Auckland Council submission.

Activity Table

The activity rule status for A3 is redundant as streams are already protected under the AUP – protecting them is already permitted as activities that impact on them are RD, D or Non complying in Chapter E3.

A4 – permitting enhancement in line with the policy may lead to additionality as it appears to conflate mitigation of adverse effects, enhancement and compensation for residual adverse effects. Refer to Jason Smith’s memo.

A5 – all stream loss should remain non-complying as the AUP region wide rules currently apply. There is no justification or demonstration of avoidance of stream reclamation demonstrated in the plan change application and it is a resource consent decision. Therefore the rule undermines the resource consent decision making process.

Relief sought:

- Remove activity rule changes.

Standards

Precinct Plan 1

Inappropriate to determine through a plan change which streams should be kept and which streams should be lost. Reclamation is a non-complying activity. There is some benefit to identifying streams on a precinct plan so that all parties and landowners are clear on the status of streams at the point in time that a decision to livezone the land is made. If the precinct plan is retained then all streams should be shown as classified by AUP criteria. Stream classifications as provided in the Watercourse Assessment Report should be used.

Precinct Plan 2

It is inappropriate to include the Stormwater Management Plan as a precinct plan as discussed above.

Relief sought:

- Remove precinct plan 2.

3 Comments on relevant submissions (except the turnstone submission)

I have read the submissions and agree with a number of submission points raised

Submission number	Organisation	Issues raised	Comment	Healthy Waters Support
25	Forest and Bird	Stream provisions in precinct plans.	Healthy Waters believes that the stream provisions proposed are less than what AUP provides.	No.
12	Auckland Council	Stormwater management and stream provisions	Healthy Waters supports all amendments sought.	Yes
15	Warkworth Properties (2010) Ltd	Potential flooding effects 5(L) and (M)	Healthy Waters agrees that evidence is needed that additional impervious areas will not increase flood levels.	Yes

The Auckland Council submission proposes a number of additional standards to the precinct plan which on reading their submission appear intended to ensure quality stormwater outcomes and address deficiencies in the stormwater management plan and information supplied by Chesters.

Two examples o

4 Comment on Turnstone submission

The Turnstone Capital submission proposes a number of proposed zone changes. The land use zone changes could be accommodated if the appropriate stormwater management was applied to account for changes in amount of impervious surface and subsequent impacts on hydrology and water quality. Healthy Waters notes an updated Stormwater Management Plan (SMP) was not supplied as part of the Turnstone Capital submission. The SMP supplied as part of the plan change as notified does not adequately address flooding effects, network capacity or the impact on the Falls Rd bridge so an updated SMP should be prepared so the effects of land use change can be properly considered. It is also unclear if all roads and impervious surfaces will have water quality treatment.

Appendix One – Email from Healthy Waters Waterways Planning Specialist, Colleen Brent.

From: Colleen Brent
Sent: Wednesday, 25 September 2019 3:16 p.m.
To: Ken Tomkins
Cc: Danny Curtis
Subject: PPC25 Warkworth

Hi Ken,

The Healthy Waters Management actions have been outlined in the Warkworth Watercourse Assessment Report (and the Warkworth SW Management Plan by T&T) to support the general outcomes sought by the Auckland Unitary Plan and the draft Warkworth Structure Plan, including:

- Preservation of all existing intermittent and permanent open watercourses through avoidance of any further reclamation or diversion.
- Protection and enhancement of ecological values including the protection of existing open watercourse, development setbacks, and planting of riparian corridors.
- Stormwater management including, at source, bioretention to manage effects on the receiving environment, to mitigate and regulate baseflows, and to maintain ecological biodiversity values.
- Restoration of wetlands to help regulate stream flows and enhance ecological functions;
- Restoration of riparian areas to promote ecological connectivity between Significant Ecological Areas and reduce fragmentation.
- Naturalisation of modified watercourses to re-develop hydraulic and habitat diversity.

Headwater streams, typically small first order streams are an extremely important part of stream network and add significant length to the total length of watercourse within a catchment. Headwaters stream typically differ from reaches in lower parts of a catchment because they are more closely linked to hillslope processes and have more temporal and spatial variation (Gomi et al., 2002). These connections ultimately mean headwater streams have a strong influence on hydrological, geomorphic, biogeochemical and biological processes and functions in larger order streams and rivers further down the catchment (Gomi et al., 2002; Alexander et al., 2007; Dodds and Oakes, 2008; Storey et al., 2011b). This includes influences on flow rates and volumes, biodiversity, water chemistry and nutrient and sediment loads (Wilding and Parkyn, 2006; McKergow et al., 2006; Sukias et al., 2006; Parkyn et al., 2006). Headwater streams therefore should be considered important at both a local and landscape level.

Headwater streams, particularly intermittent and ephemeral streams that are periodically or predominantly dry, are often subjected to greater levels of modification and consequently degradations than larger streams. Because these smaller streams have such an important influence on the overall state of the watercourse management, protection and enhancement of such areas should be considered a priority and seen as a landscape level control on issues that are prominent throughout a watercourse.

The focus of the AUP(OP) is to ensure freshwater systems (lakes, rivers, streams and wetlands) are retained and enhanced where practicable. The AUP(OP) policies and objectives emphasise the requirement to avoid, remedy or mitigate any modification of these systems. In particular, where the permanent loss of streams is proposed, the AUP(OP) sets out an expectation that the applicant will be required to demonstrate a functional/operational need for the loss of the stream (i.e. reclamation) and that there is no practicable alternative method to undertaking the activity outside the stream.

Accordingly the AUP(OP) policies and objectives emphasise the requirement to Avoid adverse effects on streams in the first instance. This is particularly important in greenfield developments where opportunities to protect and enhance stream health are greater than they are on developed (urban) sites. In cases where adverse effects cannot be practicably avoided, policies seek to minimise any pre-existing or potential adverse environmental effects that may result from development.

**Colleen Brent | Senior Healthy Waters Specialist
Waterways Planning**

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Please note I currently work part time on Tuesday and Wednesday

Memo

26/09/2019

To: Ila Daniels – Processing Planner

From: Jason Smith – Freshwater Ecology

**Subject: Private Plan Change 25 (PPC25) – Warkworth North
Freshwater Ecology Review and Assessment****1.0 Introduction**

Auckland Council has requested a peer review of the freshwater ecological effects in relation to a proposed private plan change referred to by Council as PPC25 Warkworth North. The private plan change is requested by Turnstone Capital Limited (TCL) and seeks rezoning of approximately 99 ha of land between State Highway 1, Hudson Road, Falls Road, Viv Davie-Martin Drive and the Puhoi to Warkworth Motorway alignment.

The applicant has also prepared a precinct plan, including planning maps, as part of the application material.

I have reviewed notified application material, available from the Auckland Council website. In particular the following documents have been reviewed:

- 'Warkworth North Private Plan Change Request Section 32 Assessment Report', report prepared by Barker and Associates Limited, dated 21 January 2019 (herein Application Report). Including:
 - Appendix 1: Planning maps and precinct provisions part 1
 - Appendix 1: Planning maps and precinct provisions part 2
 - Appendix 4: 'Warkworth North Structure Plan', plan prepared by TCL, dated January 2019
 - Appendix 13: 'Ecological Assessment Warkworth North', report prepared by BioResearches, dated 3 May 2019 (herein EclA)
 - Appendix 14: 'Land Development Report', report prepared by Chesters, dated 3 May 2019
 - Appendix 19: Objectives and policies assessment table

I have also reviewed the Warkworth Structure Plan prepared by Auckland Council. Dated June 2019.

This memorandum provides a review and assessment of the application material, as notified, from a freshwater ecological perspective. Particular attention is paid to the adequacy of the supplied information and consistency with the policy direction of the Auckland Unitary Plan: Operative in Part (AUP:OP), submissions and further submissions are also reviewed and assessed where they raise matters that relate to freshwater ecology.

The application material makes references to mitigation, offset and offset mitigation; these terms are used inter-changeably and inconsistently throughout the application material. For the avoidance of doubt, this assessment adopts the definitions and distinctions of mitigation and offset from the latest and most up to date guidance document from central government being Maseyk *et al.* (2018)¹, where:

¹ Maseyk, F.; Ussher, G.; Kessels, G.; Christensen, M. & Brown, M. 2018. *Biodiversity Offsetting under the Resource Management Act*, prepared for the Biodiversity Working Group on behalf of the BioManagers Group

A biodiversity offset is:

A measurable conservation outcome resulting from actions designed to compensate for residual adverse biodiversity effects arising from activities after appropriate avoidance, remediation and mitigation measures have been applied. The goal of a biodiversity offset is to achieve no-net-loss, and preferably a net-gain, of indigenous biodiversity values.

Mitigation and a biodiversity offset are not the same thing. To 'mitigate' means to alleviate, or moderate the severity of something. Offsets do not do that. Offsets do not reduce the adverse effects, rather they seek to achieve biodiversity gains that are at least equivalent to the residual biodiversity losses.

Whilst this report touches on wetlands and water quality and hydrology components of this application, more detailed assessments have been undertaken in this regard by Councils experts Rue Statham and Paula Vincent respectively.

2.0 Assessment of the Notified Private Plan Change

Description of the Site and Existing Values:

The application material provides a description of the subject site in section 4 of the Application Report. The ecological features of the properties are described under sections 2 – 5 of the EclA.

As relevant to freshwater ecology matters the subject site is described as:

- undulating with small gullies and water courses, sloping towards tributaries of the Mahurangi River
- including areas of existing native vegetation to the north of Falls Road
- The riparian margins of the Mahurangi Tributary on 223 Falls Road has been designated a Significant Ecological Area (SEA_T_2294) within the AUP:OP
- landuse is primarily for farming activities and a small number of dwellings and accessory buildings.

For the purposes of this review, the applicant's description of the subject site is considered reasonable. The EclA reports on stream and wetland classifications; in-filed, spot testing of water quality parameters as well as the width and integrity of the riparian vegetation. The majority of watercourses within the plan change area are assessed as having low ecological value predominantly due to the lack of riparian vegetation, hydrologic heterogeneity and habitat for native fauna. The exceptions are 'Mahurangi River Tributary' at 220 Falls Road (Stubbs Farm), Watercourse 6 at 220 Falls Road and watercourse 2 on 223 Falls Road. The applicant has also undertaken limited Stream Ecological Valuation (SEV) sampling, this is discussed further below. Comment is also made with regards to the stream classifications being agreed to with Auckland Council. However, as I understand it, there is still disagreement with the extent of wetlands and wetland margins shown by the applicant.

Regardless of their present condition, the potential ecological values should be taken into account when assessing effects on freshwater systems. Restoration and enhancement of streams degraded through rural land uses is achievable on through relatively straight forward interventions such as riparian planting and fencing to prevent stock access. Clear direction in this regard is provided by objectives and policies at both the national and regional level as well as case law.

The National Policy Statement: Freshwater Management provides local authorities with a clear direction from central government to improve the conditions of water bodies that have been degraded by human activities. The objectives and policies of the Regional Policy Statement and E3 of the AUP and in particular the E3 assessment criteria provide clear direction to restore, maintain or enhance Auckland's lakes, rivers, streams and wetlands as well as minimising the loss of all freshwater systems, not just streams of existing high ecological values.

The 2008 Long Bay Structure Plan Environment Court decision provides further direction in this area, the court accepted that current poor stream health associated with current poor management of streams is not a valid baseline against which to determine environmental effects. Furthermore, the court recognised that restoration of rural streams is realistic and does not take a long time (paragraph 425) and that environmental effects should be based on the potential condition under responsible land management using fencing and planting (paragraph 427), rather than any current degraded condition.

Description of the Proposal:

As relevant to the matters considered within this technical assessment the Warkworth North Precinct proposed by the applicant contains the following key provisions:

- 11.1 Precinct description
- 11.2 Objective 1
-
- 11.3 Policies 4 -6

- 11.4 Activity Table rules A3, A4 and A5

- 11.6 Standards

- a precinct over the plan change area to secure a potential alignment for the proposed Western Link Road and to identify watercourses

- a sub-precinct to provide guidance on 'mitigation' for stream loss that includes a range of ecological and engineering best practice measures as well as riparian enhancement and protection

It is considered that the detailed zoning considerations and the extension of the SMAF Flow 1 – stormwater management controls are more appropriately assessed by others, under separate cover and are not considered further in this assessment.

A significant driver of the plan change provisions is the potential Western Link Road. At the time of writing it is understood that the Western Link Road is unfunded and has not yet advanced to preliminary design; the preferred route is still under investigation. Regardless, it is inferred in the application material that provision for the Western Link Road necessitates stream reclamation, with the precinct also seeking to provide 'mitigation' measures. These outcomes are sought to be facilitated through the precinct plan.

It is considered by this reviewer that the consideration of specific activities and the addressing of those effects is more appropriately considered at the resource consenting stage. The AUP:OP contains sufficient provision to address any works required to facilitate the Western Link Road, it is unclear why the Western Link Road requires specific provisions that circumvent normal resource consenting procedure. SF Estate Limited has already lodged a resource consent application for 220 Falls Road, currently being processed by Auckland Council (referenced as BUN6034451) under the operative future

urban zoning provisions. BUN6034451 includes large scale earthworks, vegetation clearance and streamworks (including reclamation, and placement of two new culverts) that would appear to also be envisioned by the plan change application material. The reclamation of any stream, lake or wetland is a non-complying activity under the provisions of E3 of the AUP:OP, the relevant objectives and policies provide clear direction around the avoidance of reclamation unless there is no practicable alternative. As above, it is understood that the Western Link Road is unfunded, without preliminary design or a preferred route. The inclusion of the provisions sought within the precinct would infer a pre-determined acceptance of an offset and that the associated level of assessment and effects as been agreed to when no such assessment has been made and the full extent of the activities and associated effects are not yet fully known. Further conditions can be placed on any consent, that may be granted, to ensure that the effects of the reclamation are appropriately addressed. Specific consideration of the level of effect and the measure to address those effects circumvents the resource consenting process. Given all of the above, it is unclear why the applicant requires the additional measures sought through the plan change and precinct.

Assessment of environmental effects:

The applicant provides an assessment of environmental effects in section 9 of the Application Report. As relevant to the matters considered in this technical assessment, the Application Report has assessed that some level of reclamation will be necessary. The Application Report assessment considers that the effects of the reclamation have been avoided and minimised to the greatest extent possible and the residual effects adequately mitigated.

Further assessment is provided in the EclA which considers construction activities and the implication of urbanisation, including:

- The potential for sediment runoff to enter waterways as a result of works within close-proximity of a watercourse.
- The potential for injury or mortality to native fish where works are undertaken within watercourses or artificial ponds.
- Reclamation of permanent or intermittent watercourses would have a high ecological effect (more than minor) on freshwater values, if not appropriately managed or mitigated through compensatory restoration elsewhere.
- Where appropriate stormwater management is set in place to mitigate water runoff from impermeable surfaces (e.g. roads), the effects on local watercourses would be considered no more than minor.

The EclA considers that the reclamation of permanent or intermittent watercourses would have a high ecological effect (more than minor) on freshwater values, if not appropriately managed or mitigated through compensatory restoration elsewhere.

The EclA includes SEVs and Ecological Compensation Ratios (ECRs) to demonstrate that the impacts of the streamworks facilitated through the provisions of the plans change can be addressed onsite. Notwithstanding that the SEV is a useful tool to quantify ecological functions and that high-level ECRs may be useful in demonstrating management review, the specifics of this assessment are considered to be more appropriately addressed through resource consenting stage. As such, no detailed assessment of the SEV/ECRs has been undertaken, a full review of the SEVs would be concerned with the scoring of several functions (notably Vripar, Vshade, Vwatqual, Vimperv and Vripcond). Further, no clear rationale

has been provided for limiting the management of adverse effects to onsite mitigation. The RMA and AUP:OP and RMA provide for a range of different approaches to addressing adverse effects including avoidance and biodiversity offsetting, including offsite works. It would also appear that only riparian planting has been considered in the SEV/ECR assessment, additional measures such as the removal of fish passage barriers or measures to address stream bank erosion are also considerations.

Notwithstanding that the re-zoning of land does not necessitate reclamation by itself, as it stands, I consider the following effects to also apply:

- loss and modification of aquatic habitat and ecological functions
- water quality effects associated with the change in land use, such as increased contaminant loadings including potential for bank erosion, stream bed incision and subsequent land stability effects
- effects that could be realised in the receiving environment, including hydrology, water quality and ecosystem health.
- the opportunity to restore and enhance the ecological values and functions
- the facilitation of reclamation through the precinct description, objectives, policies, activity table and standards of the proposed precinct plan

Alignment with the AUP:OP:

The applicant provides an assessment against the relevant objectives and policies of the AUP:OP in appendix 19. As relevant to the matters considered in this technical assessment, appendix 19 includes brief assessments against the objectives and policies of B7.3 – Natural Resources, E1 – Water quality and integrated management and E3 Lakes, rivers, streams and wetlands. The applicant's assessment considers that their proposal achieves the intent of the relevant objectives and policies.

This view is reliant on the applicants assessment that total avoidance [of reclamation] is not possible if the land is to be reasonably and efficiently used for urban development. The applicant also reiterates their view that with the higher quality streams protected and with the mitigation [sic] measures proposed adverse effects are mitigated to an acceptable level. Streams to be reclaimed have been degraded through the existing land use, which the applicant considers will be improved through urbanisation. The applicant considers that water quality will be maintained through the extension of the SMAF Flow 1 control and that water quality will be enhanced through riparian planting, with these outcomes to be secured through the resource consenting process.

This technical assessment takes an opposing view and considers that the applicant's proposal is not consistent with the relevant objectives and policies as noted above. B7.3 includes the following provisions which are considered relevant to the assessment contained in this particular memo:

B7.3.1 Objectives:

- (1) Degraded freshwater systems are enhanced.*
- (2) Loss of freshwater systems is minimised.*
- (3) The adverse effects of changes in land use on freshwater are avoided, remedied or mitigated.*

B7.3.2 Policies:

- (2) Identify degraded freshwater systems.*
- (3) Promote the enhancement of freshwater systems identified as being degraded to progressively reduce adverse effects.*

(4) Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply:

(a) it is necessary to provide for:

(i) the health and safety of communities; or

(ii) the enhancement and restoration of freshwater systems and values; or

(iii) the sustainable use of land and resources to provide for growth and development; or

(iv) infrastructure;

(b) no practicable alternative exists;

(c) mitigation measures are implemented to address the adverse effects arising from the loss in freshwater system functions and values; and

(d) where adverse effects cannot be adequately mitigated, environmental benefits including on-site or off-site works are provided.

(6) Restore and enhance freshwater systems where practicable when development, change of land use, and subdivision occur.

Chapter E3 of the AUP:OP also provides the following policy direction:

- *E3.2(2) Auckland's lakes rivers, streams and wetlands are restored, maintained or enhanced.*
- *E3.2(6) Reclamation and drainage of the bed of a lake, river, stream and wetland is avoided, unless there is no practicable alternative.*
- *E3.3(2) Manage the effects of activities, in, on, under or over the beds of lakes, rivers, streams and wetlands outside the overlays identified in E3.3(1) by:*
 - (a) Avoiding where practicable or otherwise remedying or mitigating any adverse effects on lakes, rivers, streams or wetlands; and*
 - (b) Where appropriate restoring and enhancing the lakes, rivers, streams or wetlands*
- *E3.3(3) Enable the enhancement, maintenance and restoration of lakes, rivers, streams or wetlands.*
- *E3.3(13) Avoid the reclamation and drainage of the bed of a lake, river, stream and wetlands, including any extension to existing reclamations or drained areas unless all of the following apply:*
 - (a) There is no practicable alternative method for undertaking the activity outside the lake, river, stream or wetland;*
 - (b) For lakes, permanent rivers and streams and wetlands the activity is required for any of the following:*
 - i. As part of an activity designed to restore or enhance the natural values of any lake, river, stream or wetland, any adjacent area of indigenous vegetation or habitats of indigenous fauna;*
 - ii. For the operation, use, maintenance, repair, development or upgrade of infrastructure; or*
 - iii. To undertake mineral extraction activities; and*

- (c) *The activity avoids significant adverse effects and avoids, remedies or mitigates other adverse effects on Mana Whenua values associated with freshwater resource*

The objectives and policies highlighted above provide clear direction around avoiding, remediating or mitigating adverse effects, minimising the loss of all freshwater systems not just streams of existing high ecological values and enhancing those streams where functions and values have become degraded. It is not considered that the applicant's proposal to retain high value streams and facilitating the loss of other streams is consistent with this policy direction.

Auckland Council Warkworth Structure Plan:

The Warkworth Structure Plan has been adopted by Auckland Council with the intention to guide future development around the Warkworth area. The Structure Plan provides a strong direction for the enhancement of watercourses, and has identified watercourses on the Structure Plan maps as 'Protection Areas (not for development)', including the following wording (emphasis added):

- *"The Warkworth Structure Plan is built on the foundation of setting aside areas that are important for ecology, stormwater, heritage, and cultural values from any built urban development. These areas have been excluded from the development yield (they are assumed to have no dwellings or businesses on them)".*
- *"The plan change to implement the first stage of the structure plan will need to include specific provisions (not currently in the Auckland Unitary Plan) to ensure that **all these areas** are set aside from development".*
- *"There are currently limited mechanisms to require the active restoration of these areas (i.e. riparian planting etc). Again, the plan change to implement the first stage of the structure plan will need to include specific provisions to require active restoration measures in these areas".*
- *"Protection and enhancement of these areas through a future plan change is **essential** as the protection of these areas is the foundation on which the Warkworth Structure Plan is built".*
- *Protect and enhance existing bush/natural areas and create ecological corridors linking the Future Urban zone to other ecological areas*

The Structure Plan recognises not only the potential value of intermittent headwater streams, but also the important ecosystem functional values they provide, including those relating to hydrological and biogeochemical processes. Along with appropriate restoration (e.g. riparian planting), if given appropriate statutory protection the Green Network will afford protection of existing freshwater ecological values as well as improve the long-term life supporting capacity of the freshwater systems in the area, of which sections are currently degraded and lacking suitable riparian cover. The structure plan anticipates that the Green Network will be restored through revegetation (e.g. riparian planting) to improve water quality, amongst other potential benefits such as the provision of public access. The Green Network includes a 10 m buffer around all streams, including both intermittent and permanent, in the study area.

The assessment above has noted a number of concerns with the plan change as notified. The concerns can be summarised as:

- consideration of specific activities and the addressing of those effects that could circumvent the resource consenting process

- a precinct description, objectives, policies that focus on the current degraded state of the streams and the facilitation of future reclamation
- rules within the activity table that reinforce points 1 and 2 above
- confusing standards that could be simplified
- inconsistency with the policy direction of the NPS:FM and AUP:OP
- inconsistency with the outcomes sought by the Warkworth Structure Plan
- additional environmental effects are not fully realised.

To address these concerns, it has been considered practicable to include this section of relief measures in table 1, below. The inclusion of these recommendations should in no way be taken as tacit approval of the overall plan change. Relief is sought to align the plan change with the policy direction of the relative statutory documents. In particular it is considered that amendments are required to the plan change, where the plan change seeks to facilitate stream reclamation.

Table 1: Relief Sought

Area of Concern	Relief Sought	Reasoning
	<ul style="list-style-type: none"> • Remove: <ul style="list-style-type: none"> • Paragraph 3 of 11.1 of the precinct description. • Insert: <p>The Warkworth North area is a highly modified landscape with predominantly arable livestock/pastoral and rural lifestyle activities surrounding the existing Warkworth urban area. Small patches of native vegetation remain across the landscape and freshwater habitats are of variable condition. Warkworth North provides an opportunity to improve ecological values.</p> 	
11.1 description	<p>Warkworth North precinct proposes to create a continuous 'green corridor' across the study area that connects terrestrial and freshwater habitats with the Mahurangi River and Mahurangi Harbour.</p>	<p>It is considered that the Precinct Description should be updated to reflect the intentions of the Warkworth Structure Plan and the direction of the AUP:OP regional policy statement.</p>
	<p>The Green Network areas are not intended to be developed for urban purposes and are managed to some protection to the important existing natural and ecological values which those areas hold. To protect those values over the long-term, ecological corridors need to be established to connect these areas together, as well as to a range of other terrestrial, aquatic and/or marine habitats. Ecological corridors help improve the quality and resilience of habitats by facilitating movement of wildlife and providing opportunities to increase vegetation cover and biological diversity (especially native species).</p>	

Area of Concern	Relief Sought	Reasoning
I1.2 Objectives	<ul style="list-style-type: none"> • Remove: <ul style="list-style-type: none"> • I1.2 Objective (1) • Insert: <ul style="list-style-type: none"> • Ecology is maintained and enhanced through riparian margin re-planting at the time of development with building set-backs and landscaping. • Stormwater runoff is managed to enable the maintenance and enhancement of the ecological functions of waterways. 	Where the goals of the Warkworth Structure Plan relate to ecological matters these goals should translate through to logical objectives and policies.
I1.3 Policies	<ul style="list-style-type: none"> • Remove: <ul style="list-style-type: none"> • I1.3 Policies 4 -6 • Insert: <ul style="list-style-type: none"> • The Green Network will be restored and revegetated (e.g. riparian planting) along all waterways • Require, at the time of subdivision and development, riparian planting of appropriate native species along the edge of permanent and intermittent streams and wetlands to: <ul style="list-style-type: none"> • provide for and encourage establishment and maintenance of ecological corridors through the Warkworth North area; • maintain and enhance water quality and aquatic habitats; • enhance existing native vegetation and wetland areas within the catchment; and • reduce stream bank erosion. 	Where the goals of the Warkworth Structure Plan relate to ecological matters these goals should translate through to logical objectives and policies.

Area of Concern	Relief Sought	Reasoning
11.4 Activity Table	<ul style="list-style-type: none"> • Remove: <ul style="list-style-type: none"> • Rules A3, A4 and A5 	<p>The inclusion of A3, A4 and A5 within the Activity Table would infer a pre-determined acceptance of an offset and that the associated level of assessment and effects as been agreed to when no such assessment has been made. It is considered premature to make such an assessment both due to the high-level nature of the plan change process and because the road is currently not funded, nor has it been designed. Consequently, the effects could be of a much greater or lesser extent than what is proposed within the plan change documentation.</p>
11.6 Standards	<ul style="list-style-type: none"> • Remove <ul style="list-style-type: none"> • 11.6 Standards (2) • Amend 11.6.2 Standards – Stream (2) <ul style="list-style-type: none"> • Provide for stream enhancement works, including riparian replanting and in-stream works, to protect and enhance ecological values. • Any planting required will be implemented in accordance with a council approved landscape plan, prepared in accordance with Appendix 16 of the Auckland Unitary Plan: Operative in Part • The riparian margins of a permanent or intermittent stream or a wetland must be planted to a minimum width of 20 meters for all Esplanade Reserves or 10m of any other permanent or intermittent stream or a wetland. The riparian margin shall be measured from the top of the stream bank and/or the wetland's fullest extent. • The riparian planting required by Standard (X) cannot form part of any environmental compensation or offset package in relation to works and/or structures within a stream. 	<p>It is considered that the AUP:OP contains sufficient provision to address these issues through normal resource consenting.</p> <p>Ecological enhancements will require active restoration and standards are proposed to ensure that this occurs in accordance with best practice. Enhancements are not limited to riparian planting.</p> <p>A standard is also proposed to ensure that the riparian planting sought through the plan change process to address the effects of the changing land use and to give effect to the objectives and policies of the NPS:FM and AUP:OP. Further, riparian planting should not be conflated with any other measures that an applicant may put forth to address the effects of a specific activity such as reclamation at the time of resource consent application.</p>

Area of Concern	Relief Sought	Reasoning
Ensuring the Green Network is delivered	<p>Add:</p> <p>Special Information Requirement:</p> <ul style="list-style-type: none"> <li>• An application for land modification, development and subdivision which adjoins a stream or wetland must be accompanied by a riparian planting plan prepared in accordance with Map 1 – (Amended) 	<p>It also considered practicable given the high-level nature of the plan change, that any mapped information is presented accurately and aligns with the Council prepared Warkworth Structure Plan so that the opportunities and limitations they represent can be incorporated into future development proposals. This is specifically relevant to streams and wetlands, including the wetland margins of streams, notably the streams and wetlands on 27 and 63 State Highway 1 as well as of Stubbs Stream.</p>
Inference that stream reclamation has already been assessed and approved	<p>Amend:</p> <p>Precinct Plans.</p> <ul style="list-style-type: none"> <li>• Remove: Map 2 (drawings 402, 403, 404) <li>• Update Map 1 to show all streams and wetlands with indicative esplanade reserves and protection areas as per Figure 2 of the Warkworth Structure Plan. 	

3. Comments on Submissions

Plan Change 25 Warkworth North has been publicly notified and a number of submission relevant to the matters discussed in this technical assessment have been received.

Submitter #07 Patricia Sullivan objects to the stream on her property (27 State Highway 1) being classified as permanent, rather than intermittent and being shown with riparian planting. It is important to note that regardless of the stream classification as either permanent or intermittent the same planning provisions in terms of the RMA, NZFPS:FM and AUP:OP apply. It is also noted that the definitions used to classify streams as either permanent or intermittent have been updated since the referenced report was released.

Submitter #12 Auckland Council seeks a range of amendments. An assessment of the submission points, summary, position and reasoning is provided in Table 2 and 3, below.

Table 2: Points of Agreement with Submission #12

Submission Point	Summary	Technical Position and Reasoning
12.15	PC25 is amended to incorporate all of Warkworth Structure Plan's Green Network for the Land covered by PC25, and included provisions to ensure such is provided	Support submission 12.15. Showing the Green Network from the Warkworth Structure Plan over the PC25 area is more appropriate than the current precinct maps which show only a limited extent
12.16	PC25 precinct to be amended to cover all of the plan change area, and the precinct provisions cover the matters the Warkworth Structure Plan sets out in section 3.5.3	Support submission 12.16. The Auckland wide provisions of the AUP:OP should apply unless there is a compelling case for a site specific approach, such research has been undertaken in preparing the Warkworth Structure Plan
12.17	PC25 is amended to cover all of the plan change area, and the precinct provisions cover the matters the Warkworth Structure Plan	Support submission 12.17. Objective 2(c) should be deleted and the AUP:OP policy provisions deferred to
12.18	Amend the policy [1.3 Policies (4) as follows: Provide an indicative network of open space areas including riparian margin stream protection areas to protect existing ecological value, provide for areas of public open space, provide for geomorphically effective stream management solutions as well as walk ways and cycle way connectivity.	Support submission 12.18. Ecological values should be protected by a range of mechanisms
12.19	Delete the policy [1.3 Policies 5] and defer to the existing AUP policy framework	Support submission 12.19. This policy should be deleted and the AUP:OP policy provisions deferred to

Submission Point	Summary	Technical Position and Reasoning
12.21	Delete the rule [I1.4 Activity Table A3, A4 and A5] and defer to the existing policy framework	Support submission 12.21. These rules should be deleted and the AUP:OP policy provisions applied
12.22	Delete the standard [I1.6 Standards]	Support submission 12.22. This standard should be deleted
12.23	Delete the standard [I1.6.2], Replace with a standard for streams, permitting no building or development within stream protection areas, except permeable paved walkways and cycleways; stormwater management devices; and to require re-vegetation of the stream protection area at time of earthworks and subdivision	Support submission 12.23. This standard should be deleted
12.24, 12.25, 12.26	<p>Amend Precinct Plan 1 to show riparian margin protection areas for the intermittent streams as well as the permanent streams.</p> <p>Amend Precinct Plan 1 to show 'Indicative Open Space' only for land Council agrees will become public open space (neighbourhood park, esplanade reserve, SEA conservation reserve, streamside walkways and cycleways) and to show the riparian margins of all permanent and intermittent streams as stream protection areas.</p> <p>Delete Precinct Plan 2 (Drawing Nos: 402, 403, 404)</p>	<p>Support submission 12.24, 12.25 and 12.26.</p> <p>The final precinct plan should show all watercourses and their margins accurately, and to provide for their enhancement. It is not considered appropriate to infer or facilitate stream loss through the plan change</p>

Table 3: Neutral Areas with Submission #12

Submission Point	Summary	Technical Position and Reasoning
12.20	<p>Amend the policy [I1.3 Policies (6) as follows:</p> <p>Enhance streams to prevent stream bank erosion from new impervious surfaces using techniques such as boulder clusters, spur dikes, vanes and other rock deflectors, rock riffles, cobble or substrate, cobble floodways, root wads or large wooden debris, vegetated floodways, live siltation, erosion control blankets, living walls. Install culverts designed to enable fish passage</p>	<p>Neutral on submission 12.20.</p> <p>Whilst the intention, to recognise a range of geomorphically effective management solutions is supported, the list should not be seen as exhaustive nor necessarily site appropriate.</p> <p>Fish passage is an existing legal requirement.</p>

Submission Point	Summary	Technical Position and Reasoning
	The relief is addressed by the relief set out above [Delete Precinct Plan 2]	Neutral on submission 12.27 and 12.28.
12.27 and 12.28	<p>Include a rule requiring retaining walls to be installed outside of the riparian margin.</p> <p>Include a rule requiring resource consent for structures within the riparian margin, including that they must have a functional or operational need to locate within the riparian margin, such as for example a stormwater outfall device adjacent to a road.</p>	This matter is principally addressed by others under separate cover, from a freshwater perspective the amendment is supported as it would support the integrity and functionality of the riparian margin in terms of stream health

Submitter #29 Pieter Tuinder of Manuhiri Kaitiaki Charitable Trust request Council incorporate the principles of minimal land disturbance, the protection and enhancement of native vegetation, streams and habitat areas, in order to protect and restore the mauri of the land and water. As I identified throughout this assessment these concerns are shared and where appropriate amendments have been proposed to ensure these outcomes are achieved to the extent practicable at a plan change level.

4. Comments on Submissions from Turnstone Capital Ltd

Submission #23 from Turnstone Capital Ltd also proposed amendments to the precinct plans. The changes sought are in relation to zoning and do not materially affect any of the technical matters considered in this assessment.

5. Further Submissions

Two further submissions have been received that relate to the technical matters considered in this technical assessment.

Further Submission #04 from Turnstone Capital Ltd. has made further comment on the amendments sought by submission #12 from Auckland Council. The submission points, position and my corresponding analysis have been summarised in Table 4, below:

Submission Point	FS04 Position	Technical Position and Reasoning
12.15	Support	Support submission 12.15. Showing the Green Network from the Warkworth Structure Plan over the PC25 area is more appropriate than the current precinct maps which show only a limited extent
12.16	Oppose	Support submission 12.16. The Auckland wide provisions of the AUP:OP should apply unless there is a compelling case for a site specific approach, which is not evident from the material reviewed to date

Submission Point	FS04 Position	Technical Position and Reasoning
12.17	Oppose	Support submission 12.17. Objective 2(c) should be deleted and the AUP:OP policy provisions deferred to
12.18	Support	Neutral on submission 12.18. If the standard is not to be deleted, this amendment is an acceptable alternative
12.19	Oppose	Support submission 12.19. This policy should be deleted and the AUP:OP policy provisions deferred to
12.20	Support	Neutral on submission 12.20. If the standard is not to be deleted, this amendment is a reasonable alternative although, noting that it should refer to all streams
12.21	Oppose	Support submission 12.21. These rules should be deleted and the AUP:OP policy provisions applied
12.22	Oppose	Support submission 12.22. This standard should be deleted
12.23	Oppose	Support submission 12.23. This standard should be deleted
12.24, 12.25, 12.26	Oppose	Support submission 12.24, 12.25 and 12.26. The final precinct plan should show all watercourses and their margins accurately, it is not considered appropriate to infer or facilitate stream loss through the plan change
12.27 and 12.28	Oppose	Neutral on submission 12.27 and 12.28. To ensure the integrity and functionality of the riparian margins it is considered appropriate to recommend that structures are set outside the riparian margin unless there is no practicable alternative

6. Recommendation

Overall it is considered that the plan change, as notified, contains numerous of areas of concern. Areas of concern include the application material and planning provisions, including:

- I1.1 Precinct description
- I1.2 Objective 1
-
- I1.3 Policies 4 -6
- I1.4 Activity Table rules A3, A4 and A5
- I1.6 Standards
- a precinct over the plan change area to secure a potential alignment for the proposed Western Link Road and to identify watercourses
- a sub-precinct to provide guidance on 'mitigation' for stream loss that includes a range of ecological and engineering best practice measures as well as riparian enhancement and protection

As proposed, these measures are considered to be inconsistent with the direction provided through the provisions of the NPS:FM and AUP:OP. The provisions of the NPS:FM and AUP:OP provide clear direction around avoiding, remediating or mitigating adverse effects, minimising the loss of all freshwater systems, not just streams of existing high ecological values, and enhancing those streams where functions and values have become degraded. It is considered that the applicant's proposal to retain high value streams and facilitating the loss of other streams is not consistent with this policy direction.

Consideration of specific activities and the addressing of those effects is more appropriately considered at the resource consenting stage. The AUP:OP contains sufficient provisions to address any works required to facilitate the Western Link Road. It is unclear why the Western Link Road requires specific provisions that circumvent normal resource consenting procedure. The applicant has not presented a robust argument for the Warkworth North Precinct to be subject to a different set of provisions.

To address the identified concerns, a series of relief recommendations have been made. It is the position of this technical assessment that the plan change could be granted subject to the amendments sought being included. Should the relief sought not be included, it is considered that the plan change would be inconsistent with the AUP:OP and potentially have significant environmental effects.



Jason Smith
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Morphum Environmental Ltd



Ila Daniels
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PO Box 147001
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23 September 2019
Our Ref: P19005

By email: ila@campbellbrown.co.nz

Dear Ila

Traffic Review of Private Plan Change 25 – Warkworth North

Private Plan Change 25 - Warkworth North (PPC25) application has been lodged by Turnstone Capital Limited for the proposed re-zoning of approximately 99Ha of Future Urban Zone land to a mix of residential and business zones.

This report reviews the traffic aspects of the Private Plan Change (PPC) and supporting documentation. These documents include:

- Section 32 Assessment Report, Barker & Associates (dated 21 January 2019)
- Relevant appendices, including Appendix 12 – Integrated Transport Assessment, Harrison Grierson (dated May 2019)
- Submissions and Further Submissions

A submission from Turnstone Capital Limited proposed different zoning to that included in the PPC25 application. This assessment reviews the original PPC25 proposal but specific comment on the traffic aspects of the Turnstone submission are provided in Section 12.

A site visit was conducted on 16 August 2019 to observe the site and to understand any constraints or factors that may affect the requested land rezoning. The area is mainly rural in nature and much of it is inaccessible without land-owner permission.

1. Background

Auckland Council has recently completed a structure planning process for Warkworth, and this was approved in June 2019. The structure plan was developed with input from the Supporting Growth Alliance (SGA), an alliance consisting of Auckland Council, Auckland Transport and NZ Transport Agency (NZTA). The approved Warkworth Structure Plan (WSP) sets out the proposed zoning for Warkworth to meet the anticipated housing and employment needs of the area.

The structure plan includes a comprehensive suite of improvement to the transport network include new road links that provided a connected network to support the development of Warkworth, provide walking and cycling routes and provide public transport. The SGA developed an Integrated Transport Assessment (ITA) that informed the WSP of the required transport infrastructure, including the staging of its implementation in combination with the anticipated development. The ITA included detailed traffic modelling of the proposed zoning, road networks and intersections. The ITA also provided guidance on further analysis and information that would need to be provided with any future Integrated Transport Assessment developed to support a plan change.

The proposed road network from the SGA ITA is illustrated in the figure in Attachment 1. Of particular relevance to the PPC is the proposed Western Link Road (WLR) which connects SH1 to the north east with Mansel Drive in the south and the Matakana Link Road in the north which provides a connection between SH1 and Matakana Road.

The MLR has recently had a Notice of Requirement approved but is currently subject to a number of appeals. Some of these appeals may affect the location of the intersection of the road with SH1. As the WLR is proposed to connect into the SH1 / MLR intersection, the outcome of the appeals will influence the alignment of the WLR.

The WSP divided Warkworth into three separate areas (Warkworth North, South and North East) with anticipated timelines for the development of each area. Warkworth North, which incorporates the PPC 25 area, was anticipated to be the first area to be developed.

PPC25 has been developed in parallel with the Council's WSP and the PPC proposes a different mix of zones from the WSP. A submission on the PPC from the applicant proposes yet another zoning proposal. This zoning proposal has been commented on separately to the lodged PPC in Section 12.

2. Site Description

The area subject to PPC25 is to the north of the centre of Warkworth and is largely undeveloped rural land and is zoned Future Urban. The topography is undulating and has a series of streams and watercourses.

The land is bound to the north by the Ara Tuhono Warkworth Motorway which is currently under construction, by the existing SH1 and Business Light Industry to the north-east and east and a strip of open space to the south. Along the western boundary the land is predominantly zoned Future Urban but currently comprises large lot residential dwellings.

There are no formed roads within the PPC area except for Falls Road which passes east-west towards the southern end of the site. There are proposals for a road to connect Mansel Drive at the southern end of the site to SH1 towards the northern end; this road is referred to as the Western Link Road (WLR).

3. The Proposal

The proposed zones for PPC 25 consist of:

- 1,000 to 1,200 dwellings across Residential - Single House, Mixed Housing Suburban and Mixed Housing Urban zones
- Neighbourhood Centre (3000m²)
- Business Light Industrial Zone (13Ha)

The Auckland Council Structure¹ plan envisaged the following land uses:

- 785 dwellings across Residential Single house (421), Mixed Housing Suburban (172) and Mixed Housing Urban (192) zones
- Neighbourhood Centre (3,000m²)
- Business Light Industrial Zone (25.4Ha)

PPC 25 does not provide details of the number of dwellings in each of the proposed Residential zones. In addition to the land uses, the proposal allows for the provision of the Western Link Road through the site.

The development is proposed to be introduced in stages with development anticipated to occur generally from south of Falls Road, moving northwards to the northern end of the site.

4. Transportation Assessment

This section discusses the traffic assessment of the traffic effects of the proposed PPC presented in the Integrated Transport Assessment (ITA).

It is considered that the ITA is deficient in providing sufficient information and analysis on the traffic effects. Of particular regard is:

- a) No detail as to the forecast trips forecast to be generated by the proposed zoning
- b) Analysis based on traffic model data that has not been updated or refined for this specific proposal or the current proposed land uses within Warkworth as set out in the WSP (or earlier drafts)
- c) Insufficient assessment of the traffic effects of the PPC on the wider road network including link capacities and intersection operation
- d) No analysis of the staged proposed development and requirements for supporting transport infrastructure

The Addendum to the ITA prepared by the SGA² provided guidance as to the expectations as to issue and opportunities that should be addressed in ITAs that would support land use changes. It is acknowledged that this was produced after the PPC 25 ITA has been prepared, but this would assist in addressing the deficiencies in the PPC ITA.

These specific issues are discussed in the following sections.

4.1 Trip Generation and Distribution

Section 5.4.3 of the ITA discusses trip generation and distribution with regards to employment related trips. Details of how the number of employment trips have been derived have not been provided or other trip types. It is not possible to confirm the appropriateness of these numbers from the information provided.

The distribution of these employment trips to specific origins both outside and within Warkworth is supplied in the ITA. However, it is unknown how these have been applied to the traffic assessment.

¹ Appendix 3 Yield Calculations - Warkworth Structure Plan, June 2019, Auckland Council

² Supporting Growth Alliance, Integrated Transport Assessment Addendum, 4 July 2019, Table 2, Page 10

A comparison of the change in forecast trip generation for the proposed zoning in the PPC compared to the WSP (or previous anticipated zoning of the land) should be provided to understand the likely changes in quantum of traffic. This data should be used to feed into network traffic modelling.

4.2 *Traffic Modelling*

The traffic assessment of the proposed plan change is considered to be insufficient to be able to:

- Determine the traffic related effects of the proposed plan change
- To identify measures required to avoid, remedy or mitigate effects; or
- To identify when transport infrastructure will be required

The assessment of the traffic effects of the PPC presented in the Integrated Transport Assessment (ITA) is based on traffic modelling utilising projections from the Auckland Regional Transport (ART) model. The version of the ART model utilised was version i11. The ITA notes that there was an update to this (i11.4) but it appears that the assessment was largely undertaken using the earlier version of the model.

A description of the methodology of how the model was used is not provided. However, the inference in the ITA is that the model outputs have been used directly without refinement for the proposed land uses and scale of development proposed in PPC25.

It is understood that the land uses in the model are those that were included in the Future Urban Land Supply Strategy (FULSS). Significant work has been undertaken on the land use and transport planning in the Warkworth area since the release of the FULSS in 2017. Whilst the total quantum of dwellings and employment in the FULSS may be similar to that currently proposed in the WSP, the location and distribution is likely to have been refined. PPC25 proposes yet a different mix of zoning to the WSP (and likely in the FULSS) and hence the assumptions in the model data used would be out of date. Further, the ART model is a high level model as it is a regional model, has a relatively coarse zoning structure and does not contain all road links. Therefore, it is typical practice to use a more appropriate model when looking at a specific area. For instance, the ITA that was prepared by the SGA for the WSP utilised a combination of a Macro Strategic Model and SATURN modelling that was refined based on proposed dwelling and employment numbers and distribution. It would be expected that a similar modelling approach that includes an analysis of the proposed land uses to assess the traffic effects of PPC25 would have been adopted.

Whilst, it is acknowledged that a sense check was provided to the model outputs with regards to traffic volumes on the WLR compared to Hudson Road, this does not provide the confidence with regards to the wider distribution of trips either from PPC25 or from the surrounding areas. For instance, the sense check made assumptions that the volume of traffic on the Western Link Road (WLR) was of the order 15,650 vehicles per day (vpd)³. In contrast the SGA ITA forecast 18,000vpd⁴. Given the more robust nature of the SGA analysis, it casts doubt as the accuracy of the analysis undertaken for the plan change without further justification or confirmation of the modelling applied for the PPC.

³ Harrison Grierson, Integrated Transport Assessment, May 2019, Section 5.2, Page 22

⁴ Supporting Growth Alliance, Integrated Transport Assessment, 13 February 2019, Figure 26, Page 55

4.3 *Wider Network Assessment*

The assessment does not consider the wider transport network effects of the development but confines itself to the WLR and the intersections at either end. The assessment needs to consider the wider transport network to identify the traffic effects and whether infrastructure upgrades or mitigation works are required.

It is considered that key intersections should be examined, which would include at least Mansel Drive / Woodcocks Road, SH1 / Hill Street and Falls Road / Woodcocks Road. Other intersections may need to be considered.

In addition to intersections, the forecast traffic volumes on links within the surrounding network should be examined. For instance, Mansel Drive between Falls Road and Woodcocks Road is a wide two lane carriageway (single lane in each direction); the SGA ITA envisaged that this may need to be upgraded to four lanes in the future. As this is just south of the PPC area and connects to the proposed WLR / Falls Road / Mansel Drive intersection, this link may be adversely affected by the PPC and require some form of mitigation.

4.4 *Intersection Analysis*

The ITA undertakes an assessment of the intersections at either end of the WLR at SH1 and at Falls Road / Mansel Drive. These two intersections are discussed in turn below.

4.5.1 *SH1 / Matakana Link Road / Western Link Road*

The intersection has been modelled in SIDRA. The modelling is based on details in the report that was produced for the Matakana Link Road. Traffic volumes are taken from the modelling undertaken for the MLR but have been modified based on the distribution from the ART i11 model. As has been outlined above, it is not clear whether the traffic volumes used have taken into account the proposed land uses of PPC25 or whether these are based on other land use assumptions. The intersection was modelled for 2036 traffic volumes only, whereas the intersection of the Western Link Road / Falls Road / Mansel Drive was modelled for 2036 and 2046 (refer Section 4.5.2).

It is considered that traffic volumes should be derived from network modelling that includes relevant assumptions for land uses both for PPC25 and ideally for the WSP (acknowledging that the WSP was only approved in June 2019).

As a sense check, the modelled AM and PM peak hour traffic volumes for the Western Link Road have been converted to daily traffic volumes using the rule of thumb calculation referenced in Section 5.2 of the ITA; these have then been compared to the stated Post-Update 2036 flows (the same year as the SIDRA model flows) for the WLR. This indicates that the flows used in the intersection model were some 2,000 vpd lower (19%) than that assessed using the WLR.

This casts doubt over the robustness of the assessment undertaken in forecasting the volumes at the intersection.

The ITA states that the intersection is not at its maximum capacity. Examination of the detailed modelling results in the appendix to the ITA does show that the right turn movement from the Matakana Link Road in the PM peak has a degree of saturation of over 1. This is considered over capacity and some refinement of the intersection may be needed. A further assessment of the

operation of the intersection should be undertaken for 2046 (as was completed for the Falls Road / Mansel Drive intersection discussed below).

4.5.2 Western Link Road / Falls Road / Mansel Drive

For the intersection at the southern end of the WLR, different forms of intersection have been assessed in the ITA (priority control, roundabout and traffic signals). The ITA concludes that whilst the roundabout had the optimal performance from a traffic perspective, that the traffic signal arrangement would be more appropriate as this provides better pedestrian facilities, would be safer for cyclists and would be a more compact form of intersection.

Traffic volumes for the intersection have been derived from a turning count at the Falls Road / Hudson Road and modified for the WLR. It would appear that a variety of assumptions have been applied to determine forecast traffic turning volumes at the proposed intersection. Without details of these assumptions it is not possible to determine the appropriateness of the assessment.

The conclusion that traffic signals is the most appropriate form of intersection at this location is supported. However, further work would be needed on the analysis to confirm the traffic volumes and thus the intersection operation and layout.

4.6 Staging

The implementation of the PPC is proposed to be staged. The traffic assessment does not consider the effects of staging. This would be required to determine when specific transport infrastructure would be required. For instance, it is envisaged that the WLR would initially be constructed as a two lane road (single lane in each direction) but would require upgrading to four lanes in the future. The likely timing of the upgrade should be included in the assessment based on the staging of the PPC and of other developments in the area.

5 Proposed Road Network

5.1 Western Link Road

The Western Link Road (WLR) connects SH1 in the north to Mansel Drive in the south. The road runs predominantly through the PPC area, but it also passes through land that is not in the ownership of the Applicant and outside of the proposed PPC area at its northern end.

The alignment of the WLR is yet to be confirmed. The SGA is currently working to confirm the alignment. The alignment is dependent on various factors including the topography of the land, geotechnics, features such as watercourses, land use constraints and possible land use boundaries. It is intended that the WLR will form a crossroads intersection with the Matakana Link Road (MLR) where the two roads meet at State Highway 1 (SH1). Whilst the Notice of Requirement for Matakana Link Road was recently approved, it is currently subject to appeals. These appeals may alter the location of the intersection between MLR and SH1.

MLR is currently funded for construction. However, WLR is not yet funded.

The WLR will provide pedestrian and cycle facilities along its length. It will also be utilised as a public transport route.

It is intended that the WLR is a Limited Access Road such that direct vehicle access to properties is not provided from the road, rather development is accessed from collector or local roads that intersect with WLR. This is necessary to improve safety for pedestrians and cyclists along the route.

It is possible that the WLR maybe constructed in stages. The first stage would be to construct the road to collector standard as a two lane road (one lane in either direction) so that it would enable access to the land within PPC 25. The second stage would be to upgrade the road to arterial standard with four lanes (two lanes in either direction). An appropriate corridor would need to be protected to enable the future widening of the road and to allow for the necessary intersections along the route. As discussed in Section 4.6, an analysis of when the road is required and when it would need to be upgraded should be undertaken within the ITA but has not been provided.

The PPC shows an indicative alignment of the WLR on Precinct Plan 1. This alignment is understood to differ from the WSP alignment and that currently being investigated by SGA. A detailed assessment of the alternative alignment would be required. The outcomes of the appeals to the MLR will affect how the location of where the WLR would connect to the State highway and the MLR.

An assessment of the proposed PPC 25 alignment of the WLR in comparison to the alignment in the WSP is not included in the ITA to demonstrate why this alignment is preferred.

A cross-section of the WLR is presented in the ITA in Appendix 3 and is also included in the Precinct Plans. This cross-section is based on that proposed for the MLR. Auckland Transport in their submission has expressed a desire for the cross-section in the Precinct Plans to be removed and replaced by a general description in the Precinct Provisions of the elements to be provided. This is to provide flexibility as standards may change over time. This recommendation is supported as it would enable the road to be implemented to the appropriate standard at the actual time of construction.

5.2 *Local Roads*

Section 4.7.2 of the ITA discusses local roads within the PPC. This describes the proposed road widths and typical features that would make up the road cross-section.

The WSP envisaged that the roads within the development area would consist of collector roads and local roads. The collector roads would distribute traffic within the development and would connect to local roads. The collector roads would include separated cycle facilities that would connect to the WLR and other off-road cycle routes within the development. The collector roads are shown on the plans included in the WSP.

Precinct Plan 1 does not show any roads other than the indicative alignment of the WLR. Roads are shown on the Stormwater plans but then only within the sub-precinct area. These roads are all shown as indicative roads with no distinction or designation between collector or local roads.

It is considered that roads that would perform a collector function should be shown as indicative roads on Precinct Plan 1 to provide developers an understanding of the likely roading pattern within the development. Precinct Provisions should be included that describe the function and elements that would be make up the collector road cross-sections.

5.3 *Possible Future Road Connections*

The Precinct Plan shows location of “Possible Future Road Connections” around the boundary of the sub-precinct. These locations are shown to indicate where roads within the sub-precinct would connect to the remainder of the PPC area or make connections to the existing road network.

The principle is to establish connectivity and permeability through the development. A connected network enhances the ability for travel on foot and cycle as well as by vehicle.

Submissions have been received from a number of the land-owners on Viv Davie-Martin Drive which is located on the western boundary of the site. The properties on this road are larger lot countryside living. The submissions express concern about road connections to Viv Davie-Martin Drive impacting on individual properties and on the suitability for Viv Davie-Martin Drive to accommodate additional traffic.

The zoning of the Viv Davie-Martin Drive is currently Future Urban, but it is envisaged by the WSP that the land would be re-zoned Residential - Single House but with a larger minimum lot size than the standard 600m² as development is constrained by slopes, geotechnical issues and protected bush. Whilst this would prevent high density residential it would increase intensification. The WSP envisages that this would occur towards the end of the implementation of the structure plan.

The proposed future connections would enable Viv Davie-Martin Drive to be connected to the wider area including access to the WLR, employment opportunities and to the proposed Neighbourhood Centre.

The location of the Potential Future Road Connections should be positioned at locations where it is practical to do so taking into account physical and geotechnical constraints. If roads within the PPC terminate at the boundary of the area, and it is envisaged that the future connection would not be constructed for some time, the design of the road should include a suitable turning head or terminal.

5.4 *Laneways*

Section 4.7.3 of the ITA briefly describes laneways. Laneways provide rear vehicle entry to properties and enable the number of vehicle crossings to be limited. These would generally serve higher density developments such as terraced housing. Limiting vehicle crossings enhances the safety for pedestrians and cyclists. The use of laneways is supported, particularly where developments front collector roads where separated cycle ways are provided. The requirement for laneways should be included within the Precinct Provisions.

6 Walking and Cycling

Walking and cycling facilities are an essential part of an integrated transport system. Safe facilities are required that connect to key destinations such as public transport, employment areas or local shops and services.

Cycle facilities are proposed along the WLR on dedicated off-road cycle lanes on both sides of the road. The Structure Plan submitted with the PPC also proposes cycle or pedestrian only links within the PPC area (refer to Figure 13 of the Turnstone Structure Plan). These provide connections through the residential areas to the WLR and to the neighbourhood centre improving permeability through the area.

The Turnstone Structure Plan indicates that cyclists on local roads would share the road with traffic as traffic volumes would be low⁵. In contrast the ITA prepared by the SGA envisaged that for collector roads separated cycle facilities would be provided⁶; these are required to ensure facilities are direct, safe and connected to key destinations.

There are few cycle facilities in the area at present and as a result cycling numbers are low. The Rodney Local Board has developed a Greenways plan which seeks to provide cycling and walking facilities that are “safe and pleasant while also improving local ecology and access to recreational opportunities”⁷. Within the area of the plan change, the Greenways plan⁸ includes future Greenways along the WLR but also from the WLR connecting to Hudson Road towards the north and to Sanderson Road. A further connection is proposed from the most northern corner of the PPC area by the motorway interchange that cuts across to the WLR. These connections are not replicated in the PPC proposal.

Footpaths are proposed along the WLR and along the local roads within the PPC area. Precinct Plan 1 also shows a pedestrian connection from the Neighbourhood Centre that links to the east to the Business – Light Industry zone with a connection to a potential future road that would link to Hudson Road by Albert Road.

Facilities for pedestrians to cross the WLR are not discussed within the ITA, but it is envisaged that these would be required, particularly when the road is upgraded to four lanes.

To ensure that cycling and walking facilities are provided, it is considered that the key routes should be shown on the Precinct Plan and appropriate Precinct Provisions be included.

7 Public Transport

Specific provision for public transport is not proposed in the PPC. The ITA in Section 4.3 states that the design of the WLR does not preclude the use of this as a public transport route. The WSP envisaged that public transport would use the WLR.

A Park and Ride site is proposed in the northern corner of the PPC area close to the interchange with the new motorway. This is discussed in the WSP and it is envisaged that the Park and Ride site would only be located in this position temporarily. The facility would be moved in the longer term to be close to the southern facing ramps of the motorway once constructed in Stage 2 of the WSP between 2028 and 2032. Once the Park and Ride site is relocated, access to public transport would only be via any services utilising the WLR; these services are anticipated to connect with the Park and Ride site and Warkworth Town Centre.

8 Transport Infrastructure Requirements and Staging

The Auckland Transport Integrated Transport Assessment guidelines⁹ set out the expectation that an ITA should identify what mitigation is proposed, an estimated cost of such mitigation and when such mitigation is needed. Where funding is not available to Auckland Transport for the construction of mitigation works, details of how the project may be funded should also be provided.

⁵ Turnstone Structure Plan, Section 8.2.1, Page 57

⁶ Supporting Growth Alliance, Integrated Transport Assessment, Section 7.4

⁷ Auckland Council, Rodney Greenways: Paths and Trails Plan, May 2017, Section 1.3, Page 8

⁸ Auckland Council, Rodney Greenways: Paths and Trails Plan, May 2017, Map 4 of 8 - Warkworth

⁹ Auckland Transport, ITA Guidelines, January 2019, Section 3.6, Page 18

Section 8 of the PCC25 ITA presents a table of transport infrastructure that would be required to support the development.

For PPC25, a clear requirement for the development of the land is the construction of the WLR. This road is not funded, and it is anticipated that the developer would fund at least the initial stage of the construction of the road. The road may be constructed in stages depending on the timing of development. The ITA does not provide an estimate of the timing of the provision of the initial stage of the road nor of the future upgrade.

The table in the ITA additionally identifies local roads within the plan change area and the signalised intersection of Mansel Drive / Falls Road. As for the WLR timing of these is not provided or an estimate of the cost.

The absence of an estimate of the timing of upgrades creates uncertainty for developers of the land subject to the PPC, developers of land outside of the PPC area and for Auckland Transport and NZTA as the Road Controlling Authorities. As a result, development or other transport infrastructure that may be reliant on the upgrade may be delayed.

In addition to the infrastructure identified in the table in the ITA, other mitigation works may be required. However, it is considered that the ITA does not adequately assess the traffic effects and therefore it is not clear whether further infrastructure or mitigation works would be required to be provided by the developer or by another party.

Certainty would be required on the timing of the implementation of the relevant transport infrastructure for PPC 25 to enable the land to be live zoned.

9 Construction Traffic Management

Section 9.0 of the ITA discussed the management of construction traffic and states that it is usual practice to prepare a Construction Traffic Management Plan (CTMP).

It is agreed that a CTMP should be prepared and should cover the specific items that are described in the ITA. However, some of the roads in the vicinity of the PPC area would not necessarily be suitable for increased heavy vehicle movements or significant construction traffic volumes.

For instance, it is understood that the pavement along parts of Falls Road between Hudson Road and Mansel Road, as well as along Hudson Road needs strengthening, particularly to accommodate heavy vehicles. Auckland Transport (AT) has undertaken some localised repair works but not along the whole route. It is further understood that, other than for routine maintenance, AT has no current funding or plans for the comprehensive strengthening works along the route. If these routes were to be used for construction traffic this may accelerate the deterioration of the pavement and require funding to be undertaken sooner.

The issue of construction traffic has been raised by Auckland Transport in their submission and they have suggested that the Precinct Provisions be amended to address this matter. As the development may be undertaken by different contractors and at different times, it is concurred with AT that appropriate Precinct Provisions to deal with this matter would enable these effects to be managed.

10 Submissions

This section provides comment on submissions received for PPC25 where these relate to transport matters. For brevity, where different Submissions have provided the same submission, these have been commented on together.

Submission 2 – Chad and Carly Ranum, Submission 3 – Robert White, Submission 8 – Ross Brereton, Submission – 11 Robert and Maryanne Sikora, Submission 21 – David Oliver

The submissions request the removal of Potential Future Road Connections between PPC25 and Viv Davie-Martin Drive.

The future connections would provide permeability between the Viv Davie-Martin Drive area and the proposed PPC25 area including improving access to the Neighbourhood Centre, public transport and the WLR.

From a transport perspective ensuring that there is scope for connections to be provided in the future provides flexibility as areas develop and change. The WSP anticipates that the Viv Davie-Martin Drive area would be rezoned as Residential – Single House zone but with a larger minimum lot size due to constraints on the land preventing higher intensity of development. The WSP expects this to be towards the end of the anticipated development in Warkworth.

Where potential future road connections are proposed, these should be practical. It is noted that the proposed connection near 12 Viv Davie-Martin Drive shown in the lodged PPC is proposed to be removed in the Turnstone Submission due to difficulties in providing that connection.

The most northern future connection at 44 Viv Davie-Martin Drive would link to a collector loop road through the PPC area and is more strategic in nature than that connecting to 12 Viv Davie-Martin Drive which links.

The removal of the southern future road connection to Viv Davie-Martin Drive is supported if this is not a practical connection. However, the future northern connection is supported as this links to what would form a collector route through the PPC area subject to the practicality of providing that connection to Viv Davie-Martin Drive.

The suggested addition of the road names with regards to the Potential Future Road Connections to Activity Table 10.4.1 (A2) is supported to be more explicit, but it is considered that the reference to future road connections should remain as these are shown on the Precinct Plan.

Submission 9 – Dr Isobel Topham

The Submission raises concerns over the number of lanes on the proposed Western Link Road. The form of this link road is currently being developed by the Supporting Growth Alliance and the number of lanes, cross-section and provision for Public and Active Transport may change as it is developed.

The Precinct Provisions include an indicative cross-section of the proposed link road. As the requirements and staging of the road may change, so may the cross-section, including the number of lanes.

It is agreed that the neighbourhood centre should have good access for active modes (pedestrians and cyclists). Strengthening of the proposed Objectives and Policies of the Precinct Provisions in this

regard would assist in achieving this outcome. However, removal of road connections is not supported as the Neighbourhood centre would be available to not only residents within the immediate vicinity of the centre but those travelling along the WLR.

Submission 12 – Auckland Council

Auckland Council raise a number of matters regarding traffic and transportation issues which are on the whole in relation to providing additional information on the Precinct Plans and within the Precinct Provisions. These issues in summary are:

- Walking and cycling provision should be shown on the Precinct Plans and Precinct Provisions should identify that the developer would provide these facilities
- The Western Link Road should be shown on the Precinct Plans on the final alignment as determined by the SGA (the current PC25 Precinct Plan shows the WLR on a different alignment)
- The Precinct Plan 1 should be updated to show the indicative road layout within the development including future road connections to Viv Davie-Martin Drive
- The Precinct Provisions should be updated to include how the future road connections to Viv Davie-Martin Drive would be provided.
- The collector road to Sanderson Road should be shown on the Precinct Plan
- Provisions for staging should be included to ensure that development does not occur in advance of infrastructure required to support the development.
- “Rear loading” on collector roads should be required within the Precinct Provisions

The relief sought by Auckland Council is considered appropriate and the Precinct Provisions and plans should be amended accordingly.

Submission 13 – Middle Hill Ltd

The Submission seeks to have a comprehensive infrastructure and access solution. The Submission provides a plan that indicates that the WLR will cut a corner of their land, and states that they have provided a plan of how access to their site would be provided from the WLR. The submission did not appear to include this plan.

The existing site is accessed from State Highway 1. However, the access may be affected by the construction of the motorway connection to the existing State highway. It is assumed that an alternative access will be provided from SH1 as part of the motorway works.

The site is indicated to be developed as Stage 8A which is in the latter stages of development of the plan change area.

It is agreed that appropriate measures to provide access to sites are required. Whilst future road connections are shown on the Precinct Plan, no details of roads within the submitter’s land are shown.

The Precinct Plan should be updated to show indicative future roads across the whole precinct and timing of the provision of those roads indicated.

Submission 14 – Goatley Holdings Ltd

The Submission supports the provision of the Western Link Road as this is a key piece of transport infrastructure that provides connectivity to the wider area.

Submission 15 – Warkworth Properties (2010) Ltd

The Submission supports the proposed WLR but seeks that a Precinct provision be provided so that the alignment of the WLR is fixed for the first 100m from its connection with SH1 to the north and the first 100m from the intersection with Falls Road to the south. This is requested to provide certainty to land-owners and developers.

There is a general expectation that the WLR will form an intersection with MLR at SH1. The MLR is currently subject to an appeal which includes the potential for the alignment of the MLR to be modified. Until that appeal is resolved the MLR alignment cannot be confirmed, and hence the location of the connection to the WLR.

Notwithstanding, it is agreed that the alignment of the WLR should be identified within the Precinct Plans along the final route identified by SGA. This would be consistent with the relief sought from this and other Submissions.

Submission 16 – Auckland Transport

Auckland Transport oppose PPC 25 on a range of matters relating to transport. These matters are summarised below:

- Deficiencies in the transport information provided to support the plan change
- Deficiencies in the precinct plan provisions relating to transport matters
- Lack of funding or alternative mechanisms identified to ensure that the transport infrastructure and services required to support the rezoning will be provided
- Lack of certainty about how the Western Link Road will be route protected and provided for by the plan change
- Loss of potential employment land adversely affecting integration of land use and transport.

AT'S submission provides suggested changes and amendments to the Precinct Provisions, including Objectives, Policies and Rules that would provide greater certainty over the required transport infrastructure to support PPC25. The amendments are supported and would also address matters raised by other submitters, including the NZTA. Changes to the Precinct Provisions are discussed in Section 11.

In the submission, AT details deficiencies in the Integrated Transport Assessment and information required to address those deficiencies. In summary, the additional information required is:

- An assessment of the potential effects of the proposal on the transport network (including the transport network outside the plan change area), including use of appropriate transport models
- Identification of transport infrastructure required to support the development including staging in relation to the development and funding mechanisms.
- An assessment of internal road network, including road types to effectively service the development.
- Details of key intersections, walking and cycling routes and indicative road alignments to provide a well-connected transport network within the plan change area and to the wider network.

The request for additional information is supported.

Submission 17 – Warwick and Hueline Massey

This submission supports Submission 24 by the Warkworth Area Liaison Group submission. Specific comment on this aspect is included under that submission.

The submitter is concerned about the potential traffic effects of the PPC prior to the construction of the WLR, particularly on Hudson Road, Falls Road and View Road. To address this potential issue, the submission seeks that the WLR is constructed prior to development commencing.

The PPC does not currently provide for the staging of infrastructure in relation to the timing of development. The WLR will be required as the main route for traffic travelling through the area and to provide connections to the land within PPC 25. Therefore, this piece of roading infrastructure will be likely be required early in the development of the PPC25. Further work would be needed to identify when the WLR should be constructed and that its timing should be included within the Precinct Provisions. However, the general premise that the WLR would be in place prior to development of the PPC 25 area is supported.

Submission 19 – Somerset Villages (Warkworth) Ltd

The submission raises concerns about the traffic effects of the proposed PPC on Mansel Drive including increase in traffic volumes, potential intersection upgrades and ability for mitigation on this road.

Concern is expressed about the potential for widening of Mansel Drive and detail is sought about the timings of such an upgrade.

The ITA submitted does not provide details of the forecast traffic volumes on Mansel Drive as a result of PPC25. The only assessment is around the form of a potential intersection between the WLR and Mansel Drive / Falls Road. It is therefore not possible at this stage to comment on the potential effects of the plan change on Mansel Drive. However, it is noted that the road has been constructed to a modern standard with a single lane in each direction with no parking permitted.

The ITA should consider the requirement for a future upgrade of Mansel Drive as a result of the plan change, although it is acknowledged that other development as outlined within the WSP will also have a bearing on the future operation of this road.

Submission 22 – NZ Transport Agency

The submission does not oppose the plan change but seeks amendments to the precinct plan and further information.

The NZTA considers that the ITA does not provide sufficient confidence that the transport effects of the PPC on the transport network, including the NZTA network have been sufficiently identified. As a result, the Transport Agency is seeking a revised ITA that has been developed using a methodology agreed with NZTA and Auckland Transport and that uses appropriate trip generation rates for the proposed zoning of the land.

The NZTA recognises the extensive work that was undertaken in developing the WSP including the allocation of zoning and roading networks. It seeks to understand the implications of the change in zoning from that identified in the WSP.

The NZTA opposes the Notification rule that would enable an application to be considered on a non-notified basis where this may affect the WLR. If an application were to be assessed on a non-notified basis, this creates a risk that an application may adversely affect the WLR. This concern is acknowledged and proposed changes to the Notification Rule are supported.

The NZTA seeks amendments to Precinct Objectives, Policies and Rules to reflect the importance of the WLR in providing for the transport infrastructure through the PPC area and for the wider Warkworth transport network. The suggested changes to the objectives, policies and rules are generally supported. In some areas additional refinement to further strengthen the Precinct Provisions are considered necessary. Submission 16 (Auckland Transport) proposed amendments to the Precinct Provisions and these would equally address the concerns raised by NZTA and provide greater clarification and certainty. Refer to Section 11 for discussion on the Precinct Provisions.

Submission 23 – Turnstone Capital Ltd

This submission is from the application for PPC 25 and seeks a comprehensive change to the zoning from that in the PPC25. This submission is discussed separately in Section 12.

Submission 24 – Warkworth Area Liaison Group

The submitter is concerned that the traffic modelling used to assess the PPC is based on incorrect assumptions on household population, growth in surrounding areas (such as Matakana, Omaha and Snells Beach) as well not taking into account potential changes in use of holiday homes to permanent homes as transport links to Auckland are improved (such as with the extension of the motorway). As a result of these assumptions, the transport infrastructure and timing of the infrastructure may not be appropriately identified.

Whilst the specific inputs into the modelling have not been included in the ITA, it is considered that the modelling undertaken by SGA should be utilised and refined as is necessary for the proposed zoning of PPC25 as well as other known developments or zone changes since the SGA model was created. This would provide consistency with the assessments that have been undertaken to support the WSP and relevant transport infrastructure (such as the WLR) and enable changes to the affects due to PPC25 to be more easily identified.

The submitter expresses concern that the proposed PPC staging will result in the WLR being constructed towards the end of the development of the area resulting in the use of roads such as Hudson Road and Hill Street. It is agreed that these routes are unsuitable for significant additional traffic volumes due to their current condition and capacity. The ITA with the PPC fails to undertake any analysis of the potential staging of transport infrastructure including when the WLR would be required. Further analysis is required by the applicant and appropriate standards and rules are needed in the Precinct Provisions in this regard.

Submission 27 – Allison and Steve Haycock

The submission is in support of the provision of pedestrian and cycle facilities along the stream on the eastern boundary of the development.

The submitter suggests that the WLR should be constructed as soon as possible to support the population growth in the area, increased traffic with the opening of the motorway and to facilitate the movement of construction traffic associated with the development.

The ITA for the PPC does not assess the timing of the WLR and further analysis is needed to determine when this would be built either as a two lane or four lane road. To control development in relation to the necessary transport infrastructure, appropriate Precinct Provisions will be required.

The submitter supports the coordination of good public transport with the development. It is concurred that links to public transport will be necessary to avoid reliance on private motor vehicles both within Warkworth and to the wider Auckland area.

Further Submissions

Nine further submissions were received and have been reviewed. These further submissions generally retain the original position of the submitters.

11 Precinct Provisions

The proposed Precinct Provisions have been examined to determine whether they are appropriate to manage the traffic and transportation effects of the proposed Private Plan Change. The submissions of Auckland Transport and NZTA also provided comments on the Precinct Provisions. Based on this review the following provides recommendations for amendments to the Precinct Provisions.

11.1 Objectives and Policies

The Objectives and Policies do not provide sufficient guidance and direction as to the necessary requirements for the transportation needs of the precinct. For instance, Objective I1.2(1)(a) refers to a connection to Mansel Drive but does not necessarily require a connection to SH1.

Specific Objectives and Policies that deal with the transport requirements of the precinct will assist in providing guidance to developers about the expectations of the precinct and enable proposed transport measures to be tested with greater robustness. AT has suggested a number of amendments to the Objectives and Policies and these suggestions are supported. The AT suggested changes are replicated below with the addition of Objective 5 in the list:

Objectives

1. A safe efficient and integrated transport system is established within the precinct including strategic road connections, a choice of travel modes and measures which facilitate walking, cycling and use of public transport.
2. Subdivision and development is co-ordinated with the delivery of the transport infrastructure and services required to provide for development within the precinct and connect it to the wider transport network.
3. Subdivision and development within the precinct occurs in a manner which avoids remedies or mitigates adverse effects on the safe and efficient operation of transport infrastructure and services.
4. Subdivision and development recognises, protects and supports strategic transport connections through the precinct which support growth in the wider Warkworth area (including the Western Link).
5. Provides for the Western Link Road between SH1 and the Mansel Drive extension.

Policies

1. Require subdivision and development to be staged to align with the provision of transport infrastructure and services identified in the precinct plan.

2. Require subdivision and development to provide transport connections within and beyond the precinct.
3. Restrict direct vehicle access onto the Western Link Road and across any cycling facility (including any shared use path) to support the safe and efficient operation of the transport network for walking, cycling and public transport.
- 4 Recognise and protect the route for the proposed Western Link Road within the precinct as a future strategic transport route connecting with State Highway 1 to the north and with the Mansel Drive / Falls Road intersection to the south.
5. Require the Western Link Road to be constructed to an interim standard to service subdivision and development within the precinct with provision made for upgrading to provide a strategic transport connection.'

With the above changes, consequential amendments will be required with the deletion of Objective I1.2(1)(a) and Policy I1.3(3).

11.2 Activity Tables

Activity A(1) and A(2) in Activity Table I0.4.1 are ambiguous as to the land that these activities reference. The wording of these activities should be amended to be clear as to the land that is subject to these restrictions.

Auckland Transport and NZTA in their submissions raise concern over the robustness of these two activities and suggest that where development or subdivision does not meet specific rules that require the construction of the WLR to at least collector standard, that these activities should be non-complying. As the development of the Precinct is predominantly reliant on the WLR for access, it is concurred that non-complying status should be appropriate, including development that does not comply with Standard I1.6.1. Standard I1.6.1 is discussed further below.

Auckland Transport raises concern that the assessment of whether Activities (A6) and (A7) meet the outcomes of Policy I1.3(7) is subjective and would be difficult to assess whether an activity would meet the test to be Restricted Discretionary or Non-complying. The wording of the activities would need to be amended to be more precise to enable users to more readily determine the activity status type of development in the Neighbourhood centre. Reference to Standard I1.6.3 (with the proposed amendments as discussed below) would help to improve clarity.

11.3 Notification

The Notification requirements I1.5(2)(a) would enable a resource consent application for the provision for the WLR to be made without Notification. Due to the importance of the link for the wider Warkworth transport network and connections to SH1, it is necessary that applications should be subject to the normal notification tests to ensure that Auckland Transport (and NZTA) as potential affected parties are able to provide submissions on proposals that may affect their ability to provide or operate the route. The Notification requirement I1.5(2)(a) for the WLR should be deleted.

11.4 Standards

Standard I1.6.1 (Western Link Road) does not provide sufficient detail to ensure that the road is constructed to a suitable standard nor include the features to provide an effective transport link (for

all appropriate modes). It does not necessarily ensure the road would be constructed in a form that would allow the development to be serviced and upgraded to arterial when required in the future. The standard should refer to the requirement for the road to have a Vehicle Access Restriction (VAR) to reduce conflicts between pedestrian and cyclists and for the promotion of its design as a road for the movement of people and goods to the development and wider Warkworth area rather than an access function.

Auckland Transport's submission provides an example of the Redhill's Precinct Provision standards (I610.4.2(1)(c)(ii)). The following wording of the purpose of Standard I1.6.1 is suggested by AT and is supported:

'To provide for the transport needs of the precinct while allowing for the indicative Western Link Road to be upgraded to form part of a network serving the wider Warkworth area.'

The following replacement of paragraph I1.6.1(1) is also suggested:

- (1) An interim standard for the Western Link Road may be approved as part of a subdivision consent which could authorise only two traffic lanes to be constructed in the interim, provided that a 30m road reserve is set aside to enable future widening of arterial roads identified on the Precinct plan. The interim road cross-section authorised by subdivision consent could include one of the following options:
 - (a) Option to be agreed
 - (b) Option to be agreed
- (2) The Western Link Road shall be constructed to the Standard in Table xxx
- (3) The Western Link Road shall have a Vehicle Access Restriction General Vehicle Control for the full length of the road in accordance with the Standard Vehicle Access Restriction rules. The Vehicle Access Restriction shall apply for any interim cross-section constructed and for an upgraded road cross-section.

The details of the Table reference in the Standard should provide the expected width of the carriageway, cycle and pedestrian facilities and should be developed and agreed with Auckland Transport and NZTA. The table should replace the cross-section shown on Precinct Plan 3.

For Standard 1.6.3 (Neighbourhood Centre), Auckland Transport suggests changes to the standards to ensure the robustness of the standard. The proposed changes are supported and are repeated below:

'11.6.3. Standards for pedestrian connections to the Neighbourhood Centre

'Purpose:

- To achieve an ~~versatile~~, accessible and high-quality pedestrian connection to the Neighbourhood Centre that provides positively for the needs ~~to~~ of the local community.
 - (1) A pedestrian connection shall be provided between the Neighbourhood Centre and Hudson Road to the eastern side of the Mahurangi river tributary as indicated on the Precinct Plan 1.
 - (2) Pedestrian connections shall be provided to the adjoining indicative open space areas.'

Auckland Transport's submission requests that a Vehicle Access Restriction be imposed on Falls Road as this will be a key walking and cycling route connecting to Hill Street, schools and the town centre. Such a restriction is supported, and an appropriate standard should be included in the provisions. The following wording is suggested:

1.6.x. Standards for Vehicle Access Restriction: Falls Road

Purpose:

- provide for the safe and efficient movement of cyclists and pedestrians along Falls Road to schools and town centre.
- (1) Falls Road shall have a Vehicle Access Restriction General Vehicle Control for the full length of the road in accordance with the Standard Vehicle Access Restriction rules.

Other than the indicative alignment of the WLR, there are no other roads shown on Precinct Plan 1. The Stormwater Catchment plans (Precinct Plan 2) show indicative roads. The SGA ITA which supported the WSP indicated a network of collector roads. To assist developers and to provide some surety as to the layout of the roading network within the precinct, indicative Collector Roads should be shown on Precinct Plan 1 and appropriate standards be added to the Precinct Provisions as to the minimum requirements for the road cross-section including providing separate cycle facilities along these roads.

1.6.x. Standards for Collector Roads

Purpose:

- provide for the safe and efficient movement of cyclists and pedestrians within the precinct and to the wider transport network.
- (1) Collector Roads shall have separated cycle facilities on one or both sides of the road.
- (2) Where there is a requirement for access or loading to development that fronts onto a Collector Road, this requirement shall be achieved through the provision of "rear loading" or laneways.
- (3) Pedestrian footpaths shall be provided on both sides of the road and be separate from cycle facilities.
- (4) The typical cross-section of a collector road shall comprise the elements in Table xxx
- (5) Collector roads shall not form cul-de-sacs.

Auckland Transport highlight that there is the possibility that an interim Park and Ride facility may be provided in the northern part of the plan change area. The Precinct Plan 1 should be updated to highlight this area and to provide appropriate provisions.

For consistency, a standard for Local Roads should be included in the precinct provisions. This should set out the expectations for these roads including the requirement to avoid, where possible the use of cul-de-sacs. Cul-de-sacs can deter cycling and walking, particularly in residential areas as they can result in poor connectivity. The following wording is suggested.

1.6.x. Standards for Local Roads

Purpose:

- provide for a connected road network that supports walking and cycling.
 - (1) Pedestrian footpaths shall be provided on both sides of the road.
 - (2) The design of roads shall seek to limit vehicle speeds to no more than 30km/h.
 - (3) The typical cross-section of a local road shall comprise the elements in Table xxx
 - (4) Local roads shall not form cul-de-sacs.

11.5 *Staging Rules and Triggers*

Mitigation measures or transport infrastructure is required to support the PPC and to avoid, remedy or mitigate the effects. The Precinct Provisions should be updated to ensure that the development is delivered with the relevant transport infrastructure. The identified transport infrastructure and the timing of that infrastructure in relation to the development shall be included together with assessment criteria or triggers. As has been outlined in this report further assessment is required to clearly identify what transport measures are required and the timing of those measures.

11.6 *Other Rules / Standards*

Auckland Transport has requested provisions around the monitoring of construction traffic effects. It is agreed that appropriate conditions are required to ensure that adverse effects of construction traffic, such as damage to roads, can be identified. Particular conditions should cover topics such as:

- identify routes for heavy construction vehicles
- undertake pavement strength testing to determine its suitability for use by heavy construction vehicles, and to set a baseline
- monitor damage during construction
- avoid, remedy and mitigate damage to roads including by strengthening, repairing and rebuilding roads.

Potential Future Road Connections are proposed between the sub-precinct and the wider precinct and wide network. The provisions should be updated to include details of how these future connections will be provided and the routes protected from being affected by development before they are made. This is of particular importance to those connections to Viv Davie-Martin Drive where the connections are shown at property boundaries where the properties have already been developed.

11.7 *Assessment Criteria and Matters for Discretion*

The Matters of Discretion for restricted discretionary activities are not sufficiently robust to ensure the appropriate transport outcomes. The matters of discretion should be updated and strengthened. Based on feedback from AT and NZTA the following wording is suggested:

11.8.1(1) Transport Roadway Infrastructure

- (a) Safe, efficient Practical and effective connectivity to adjacent land within and beyond the precinct for vehicles and active transport modes; and
- (b) Appropriateness of design construction standard to fulfil the transport network purpose function of the road;

- (c) Provision for active transport modes; and
- (d) Provision of transport network upgrades that support the development within the precinct.

11.8 Precinct Plans

Precinct Plan 1 should be updated to include:

- Indicative Collector Roads.
- Pedestrian and cycle routes and connections within the precinct (as shown on the drawing in Section 8.2.1, page 57 of the Turnstone Structure Plan).
- Show indicatively the location of intersection upgrades or connections at WLR / Falls Road / Mansel Drive and WLR / SH1 / MLR.
- Collector Road connection to Sanderson Road
- Possible interim park and ride location in the northern area of the Precinct.

12 Turnstone Capital Limited Submission

This section discusses the transport implications of the Turnstone Capital Ltd submission (Submission 23) that seeks a comprehensive change to the zoning proposed for PPC25.

The submission seeks substantial changes to the PPC25 proposed zoning including converting Residential – Single House to Mixed Housing Suburban, changes to the Business-Light Industry to Business-Mixed Use and increasing the size of the Neighbourhood Centre to a Local Centre.

The submission provides commentary to support the zoning changes from a planning and land use perspective but does not provide supporting information with regards to the possible transport effects of the change to the zoning compared to either PPC25 or the WPS. Whilst no trip generation information for the amended zoning is provided, it is considered that the more intensive use of the land, including conversion of the Neighbourhood Centre to a Local Centre, Business – Mixed Use and Mixed Housing Suburban will increase the traffic generation. The changes will also affect the distribution of trips within the wider Warkworth area including along the existing SH1, along the motorway and along the proposed new roads (WLR and MLR). As a result, the operation of key intersections along the WLR and in the wider area will be affected.

The proposals to convert the Neighbourhood Centre to a local centre increases the size of this centre from that envisaged in the WSP and also from the lodged PPC. The submission also proposes changing the types of business in the centre to be more permissive to provide a greater range of employment opportunities and community facilities (such as a swimming pool) for the wider Warkworth community rather than just the immediate surrounding neighbourhood. This will result in increased trips to the centre from both within the local area and from wider afield. As a result, the provision of quality walking and cycling facilities to the centre will be more important to provide alternatives to private vehicle use (from both within and outside of the local area).

Higher trip rates to the local centre may require a different response to the roading design to ensure that this operates safely and efficiently and provides appropriately for pedestrians and cyclists.

The PPC proposed an amended alignment of the WLR compared to that proposed by Council and the WSP. The submitter does not support the indicative alignment of the WSP and is of the opinion that

the alignment in the PPC25 would provide “better urban design, engineering, planning and community outcomes”. The proposed alignment in the PPC would need further investigation to determine whether it is compatible with the final route of the WLR that is currently being developed by SGA.

In proposing the more intensive Residential-Mixed Housing Suburban from Single House zoning, the submission notes that it will “presumably” be close to public transport with routes along the WLR and that it would be within 1km walking distance of the proposed Park and Ride site at 80 Great North Road, Warkworth. It is noted that the WSP envisages that the Park and Ride site on Great North Road is a temporary location until such time as the southern interchange on the motorway is constructed. At that time, the Park and Ride site is proposed to be relocated close to this interchange.

Some changes to the Precinct Plan have been proposed in the submission to reflect the changes to the zoning. In addition, minor changes to the Precinct Provisions have also been made to strengthen the assessment of the roading connections with regards to connectivity. Precinct Plan 1 has been updated with a reduction in the number of “Proposed Future Road Connections” with a connection being removed from each of the western, northern and eastern boundaries of the Sub-Precinct. The pedestrian connection that was provided between the neighbourhood centre and Hudson Road has been omitted from the plan included in the submission. Further changes to the Precinct Provisions Plan are required to ensure that the necessary transport outcomes are achieved in the development of the precinct.

There is no assessment of the transport effects of the proposed zoning. An Integrated Transport Assessment that fully assesses the proposed zoning and addressed the concerns raised with the ITA for PPC 25 would be required. It is therefore not possible to support the changes proposed to the zoning in this submission from a traffic and transportation perspective with the information available.

13 Conclusions

The traffic and transportation effects of the Private Plan Change 25 have been reviewed and it is concluded that the Integrated Transport Assessment (ITA) provides insufficient analysis to be able to determine the effects of the plan change and to identify measures required to avoid, remedy or mitigate those effects.

It is considered that the ITA fails to:

- Identify the forecast trip generation or traffic distribution from PPC 25 including how this compares to either the Future Urban Land Supply Strategy (FULSS) zoning for the area or the Warkworth Structure Plan (final or draft versions)
- Provide robust traffic modelling analysis to determine the traffic effects of the plan change on either the immediate or wider transport network including intersection and link capacity
- Identify mitigation works needed to address the effects of the plan change (other than the provision of the intersections at either end of the Western Link Road)
- Determine the timing / staging of transport infrastructure required to support the plan change, the cost of such measures and who would be responsible for providing those measures.

The ITA should be updated to address those issues outlined above and should take into consideration the recommended additional information and analysis set out by the Supporting Growth Analysis in the Addendum to the ITA that was prepared for the Warkworth Structure Plan.

Notwithstanding, significant changes to the Precinct Provisions and Precinct Plans are considered necessary to provide clarity and greater certainty over transport infrastructure that would be provided, including the staging of the provision of such infrastructure in line with development. More detailed and robust analysis would be required in the ITA to inform the Precinct Provisions regarding necessary transport improvements and their timing.

The Applicant provided a submission on PPC 25 (Submission 23). This proposed a significant change to the zoning of the PPC 25 area. No supporting traffic assessment was provided with the submission and therefore, at this stage, it is not possible to support changes proposed to the zoning from a traffic and transport perspective.

On the basis of the assessment, it is not possible to support the Private Plan Change 25 from a traffic and transport perspective.

Yours sincerely

A handwritten signature in black ink, appearing to read "Martin Peake". The signature is fluid and cursive, with a prominent initial "M".

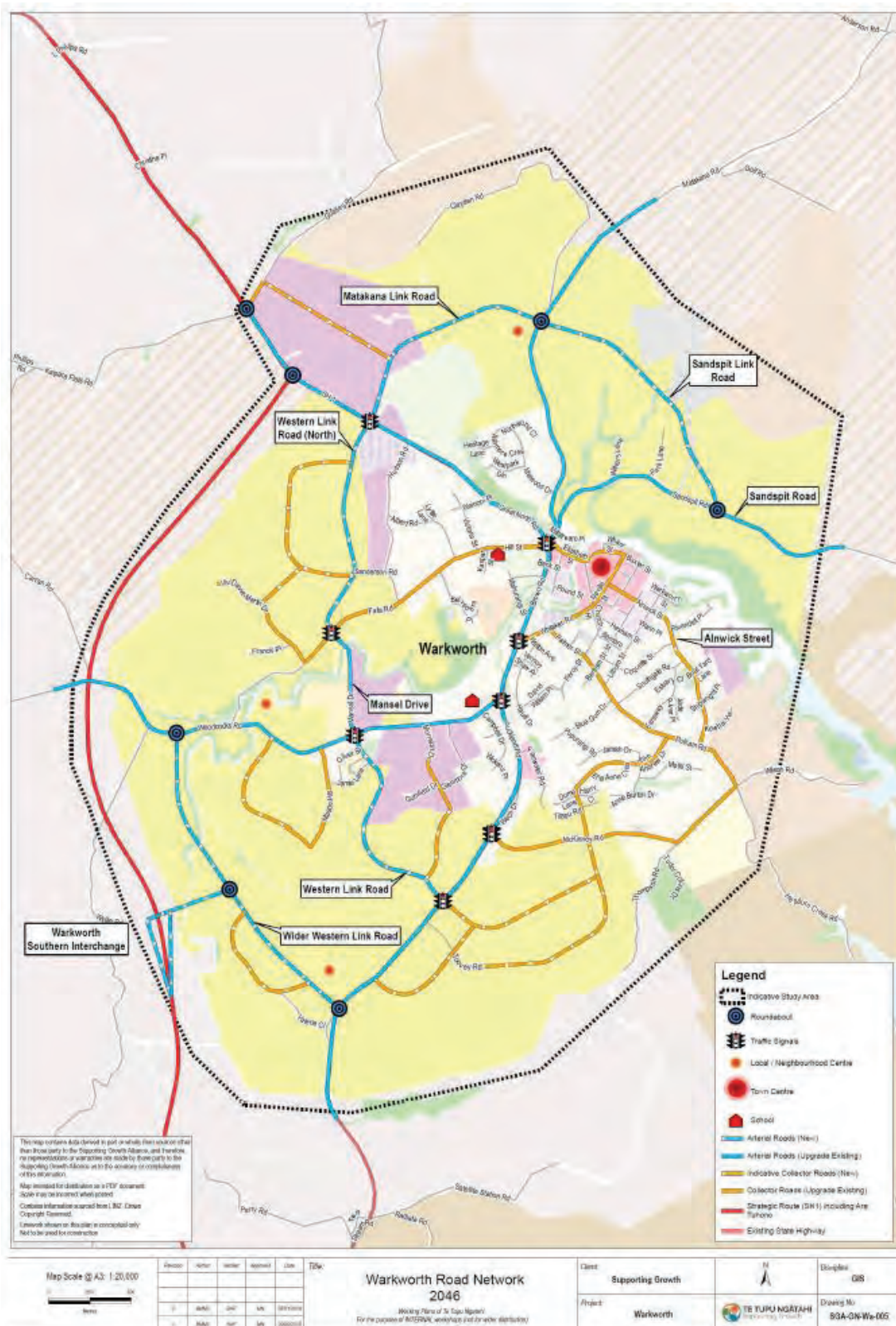
Martin Peake

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Attachment 1 – Proposed Road Arterial and Collector Road Network¹⁰



¹⁰ Supporting Growth Alliance, Integrated Transport Assessment, February 2019, Figure 36



3 October 2019

Ila Daniels
Campbell Brown Planning Limited
Level 1, 56 Brown Street
Ponsonby

Dear Ila

Re: Turnstone Capital Private Plan Change 25 for Warkworth North
Urban Design Review

This review addresses the effects of Turnstone Capital's proposed plan change for their landholding in Warkworth North purely from an urban design perspective, taking into account the intent of the Warkworth Structure Plan (WSP), submissions to the plan change and other existing or proposed land uses and infrastructure in the vicinity of the plan change. In particular, it addresses the following matters:

1. The overall zoning response, with specific reference to the variance between the PPC25 and the WSP, in particular to the extent of Light Industrial zone (LIZ) proposed and the relationship of the LIZ to residential zones higher up the valley.
2. The further amendments sought by the applicant in its submission to PPC25 (submission 23) in light of the intent of the WSP.
3. The quality of the gateway to Warkworth from SH1 north, given the live zoning of General Business and the proposed Light Industrial zone, with specific reference to the submission by the applicant.
4. Location and size of a possible Neighbourhood/Local Centre and the applicant's suggested additional Urban Design precinct provisions.
5. Appropriate interface with the stream, including supporting public access along the banks of the stream.
6. Impact of PPC25 on residents of Viv Davie-Martin Drive and what interface might be appropriate in the short-medium term, with reference to submissions from residents of Viv Davie-Martin Drive seeking a buffer strip and lower intensity zones.
7. Appropriateness of proposed zoning to Falls Road, particularly in light of submission by AT (submission 16).
8. Auckland Council's submission (submission 12) seeking bespoke precinct provisions

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Director

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1. Overall zoning response

The applicant, Turnstone Capital, seeks to rezone approximately 99 hectares of land to the northwest of the existing Warkworth town, south-west of state highway 1 (SH1), from Future Urban to a mix of business and residential zones with some provision for open space. This is part of the land included within the Warkworth Structure Plan (WSP), which was adopted in June of this year. The private plan change request was submitted in January, and therefore precedes adoption of the WSP.

The land is more or less defined by the existing SH1 to the north-east, the alignment of the Puhoi-Wellsford extension to SH1 along its north-western edge, the lifestyle lots of Viv Davie-Martin Drive to the west, a tributary of the Mahurangi River along much of its eastern edge and the Mahurangi River to the south. In its s32 report, Barker and Associates state the proposed plan change responds to the specific characteristics of the site and its surrounding area. The overall topography is undulating. The north-western corner being the most elevated. Some areas of flatter land are located in the valley adjoining the stream and in proximity to Falls Road. On the southern side of Falls Road, the land is steeper, punctuated by short gullies sloping towards the river.

Overall the applicant and its advisers have taken a reasonable approach to zoning that responds to the topography and natural features. Similar to the WSP, business activities are focused on the flatter and most accessible parts of the site, in proximity to existing business zoned land to the east and to the north-east. However, PPC25 has taken a markedly different spatial approach to the WSP, focusing more of the business zoned land to the northern edge of the plan change area (Areas A and B on figure 1), with a pocket of LIZ south of Sanderson Road. Unlike the WSP, the latter does not extend to Falls Road. Like the WSP, PPC25 also identifies a pocket of 3,000sqm Business - Neighbourhood Centre zone, surrounded by residential.

The proposed business zoned land in PPC25 comprises some 13.4 hectares LIZ. This represents a shortfall of almost half the business zoned land identified for the subject site within the WSP. There is a desire to ensure sufficient business zoned land throughout the entire Warkworth area, including both live zoned land and Future Urban, to ensure employment opportunities within proximity to homes. I am not an economic expert and therefore cannot comment on the extent of business zoned land, however, I do support the strategy employed by the WSP to extend existing areas of light industrial land wherever possible to enable efficient access to transport and infrastructure and to establish spatial separation via roads, or other means, to avoid reverse sensitivity issues with the residential interface, wherever possible.

A comprehensive Neighbourhood Design Statement was prepared by Pacific Environments NZ to accompany the Proposed Plan Change. This provides compelling arguments for the proposed type and extent of zoning, in particular the use of natural features (in this case the stream corridor) as buffers between business and residential uses. Higher density Mixed Housing Urban (MHU) residential is identified along much of the stream edge, with Mixed Housing Suburban (MHS) around the southern area of LIZ (Areas C and D in figure 1). Notwithstanding volume of business zoned land required,

there is merit in the applicant’s approach to zoning as it uses the stream corridor as both a physical and visual buffer to the existing LIZ land to the east and provides considerable amenity to the future community within the higher intensity residential areas.

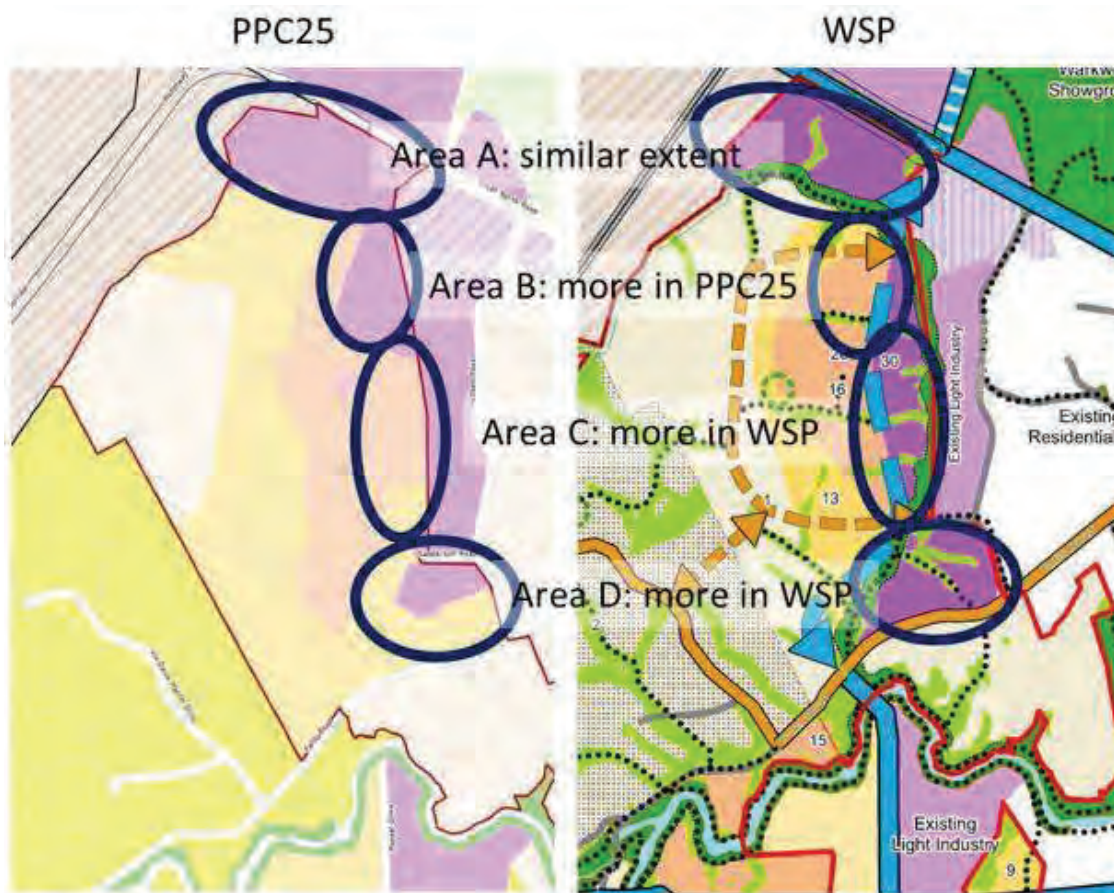


Figure 1: Approaches to zoning in PPC25 and the WSP

The WSP takes the approach that the Western Link Road is a significant barrier and creates the logical boundary between the business zone to the east and residential to the west. This approach of using the road as the method to separate the industrial land from the residential land allows flexibility for refinements to both the zoning and the final alignment of the Western Link Road following the detailed investigation for the designation. It also offers the opportunity for amenity planting to reduce the visual prominence of light industrial activities when viewed from residential properties on the steeper slopes above the valley.

The zoning approach in PPC25, particularly the location of residential MHU and MHS as identified in Area C in figure 1, has failed to take into account the future alignment of the Western Link Road. The concern is that the residential zoning proposed in PPC25 is likely to give rise to an unconnected island of residential development between the eastern edge of the proposed road and the western side of the stream corridor.

It is acknowledged that there is a lack of clarity around the future alignment and typology of the Western Link Road, which affects the outcomes for any zoning approach. However, it is likely to be a significant arterial road. In my opinion if the Western Link Road is a four-lane arterial of up to 30m in width, with likely limited access roads/points, it will act as a relatively impermeable transport corridor particularly for pedestrians that will create segregated neighbourhoods and will not promote a high-quality, connected residential environment.

Auckland Council's submission (submission 12) to PPC25 seeks closer alignment with the WSP, particularly in relation to the zoning of the land between the Western Link Road and Hudson light industrial area. I discuss Areas A, B C and D in greater detail in subsequent paragraphs, particularly in relation to the gateway to Warkworth, the interface with the stream and the appropriateness of proposed zoning to Falls Road respectively. I also discuss residential zoning in relation to proximity to Viv Davie-Martin Drive in section 6 of this memo.

2. Further amendments sought by the applicant in its submission (23)

In its submission (23) to PPC25, Turnstone Capital seeks further amendments to the proposed zoning, following the adoption of the WSP. This represents a significant departure from the spatial direction of the WSP. While the applicant supports the principles of the WSP, it considers its proposed changes to PPC25 better align with the principles.

The submission proposes to increase the size and zoning of the proposed centre from a compact Neighbourhood Centre to a larger Local Centre in Area C adjacent to the proposed Western Link Road, between the likely alignment of the road and a proposed area of Open Space zone. I discuss this in greater detail in terms of the zoning, size and location in section 4 below.

As notified PPC25 did not propose any open space zoning. This proposed area, situated between the centre zone and the stream, is identified as informal recreation. The combination of a centre with open space would provide considerable amenity for both the existing community on the north-western side of Warkworth and the future residential population.

The submission also seeks to amend the residential zones by extending the areas identified as MHU and MHS, with SHZ confined to that area of land south of Falls Road. The rationale for location of MHU around the centre reflects the WSP. The MHS is proposed over much of the area previously identified for SHZ, as it is considered MHS can provide a greater degree of flexibility and housing choice than the SHZ. From an urban design perspective, I agree with much of this approach, particularly the ability for design flexibility that works with the topography. However, I reiterate my concerns about the impact of the final alignment of the Western Link Road on the quality of residential environment and consider this needs to be confirmed and designated prior to finalising the zoning around it.

The greatest divergence from the WSP is in the identification of the type of business zoned land, as depicted in figure 2. The submission states it does not seek any extension to the existing Business - Light Industrial zone (LIZ), other than across the two existing sites to the south of Sanderson Road to reflect those established activities.

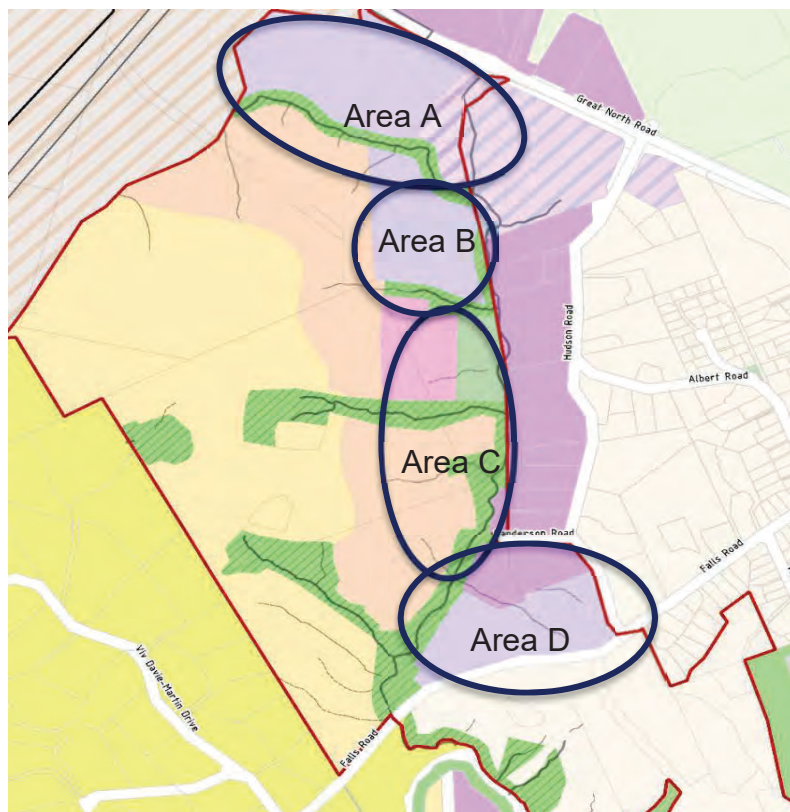


Figure 2: Submission no 23 to PPC25

Although there is no additional LIZ land, overall the submission seeks to increase the area of business zoned land from that identified in PPC25 to a total of 22 hectares, comprising Business - Local Centre and Business Mixed Use (MUZ) zones. This area in total is closer to the volume of business zoned land identified to be required in this area in the WSP than the PPC25 offered, albeit different types and configurations.

Where LIZ had been identified in PPC25, the applicant seeks to replace it with MUZ in Areas A and B and a small area of General Business zone (GBZ) in Area A, and amend the zoning from MHS to MUZ in Area D. The rationale for MUZ is that it provides for a greater range of employment options and is suitable adjoining both residential and business zones. While I cannot comment on the employment requirements for the area, from an urban design perspective I concur with the applicant that overall the MUZ does create a better bridging zone between residential and light industrial activities, and is less likely to give rise to reverse sensitivity issues than LIZ. However, I have some reservations about the extent and appropriateness of MUZ in some of the locations proposed. I discuss the relative merits of the zones in relation to the specific areas in

more detail in relation to the gateway to Warkworth, the interface with the stream and the appropriateness of proposed zoning to Falls Road.

3. Quality of Gateway to Warkworth from SH1

In both PPC25 and the WSP, an area of LIZ is identified adjoining the existing SH1 to the north and the alignment of the new motorway to the northwest. The rationale for this zoning is that it is relatively flat land that faces existing LIZ land on the opposite side of SH1. It is also adjacent to the motorway interchange which allows for good freight access. The southern boundary of the land adjoins a stream, that is anticipated to trigger an esplanade reserve to be vested upon subdivision. This will provide a buffer between the LIZ land and residentially zoned land to the south.

As discussed in section 2 of this memo, through their submission to the PPC25, the applicant is proposing to amend the LIZ to MUZ at the Gateway to Warkworth from the North, with a small area of GBZ, contiguous with the live zoned land. This is supported in submissions by Middle Hill Limited (submission 13) and Goatley Holdings (submission 14). Goatley Holdings, represented by the same Planner and Economist as the applicant, are the owner of a portion of the live zoned LIZ land to the north. The latter opposes the LIZ in PPC25 and the WSP, because the submitter considers it to be oversupply of industrially zoned land. Middle Hill Limited, as trustee for the Tyne Trust, own land within the PPC25 area, and, like Turnstone Capital, seek to re-zone the land identified as LIZ to MUZ, also citing oversupply of industrial land. The latter also refers to the gateway into Warkworth, stating that Mixed Use is markedly superior as it has design controls to produce better built outcomes. In response to submissions seeking that the LIZ be amended to MUZ, while I would agree that Mixed Use has stronger design controls that could provide a better entrance than LIZ, this needs to be considered in the context of the motorway and the existing light industry on the northern side, also at the entrance to Warkworth, when approaching from the northwest.

Stephen Brown's response to the landscape effects of PPC25 on behalf of Auckland Council, recognises that this land, including the live zoned LIZ and GBZ land, represents the "new gateway" into Warkworth when entering from the north. He notes, and I agree, that while it is not unusual in many provincial towns around New Zealand to have light industrial areas at the edges, or gateways, these do not provide the most attractive point of entry. In line with the WSP, Stephen recommends a significant setback from the road and planting along the lines of an avenue of mature native trees. The Auckland Council submission (submission 12) similarly seeks provisions be included in PPC25 to require landscape screening along this frontage. From an urban design perspective, I would support incorporation into the plan change of an identified area of planting and related provisions to require this in order to create a pleasant, treed entrance to the northern edge of the town and to avoid the low amenity appearance too often associated with industrial areas. I consider that requirement would create an appropriate gateway to Warkworth, regardless of the zoning. Taking into account the above, this is a reasonable location for additional LIZ land, if indeed it is required according to the economic specialists.

4. Location and size of a possible Neighbourhood/Local Centre

According to the economic forecasting that informed the WSP, to retain the existing town centre as the main focus of Warkworth, only small centres are required for the local convenience needs of surrounding residential areas. The Neighbourhood Centre zone applies to small shopping strips located in residential neighbourhoods to provide residents with frequent retail and commercial service needs.

Both the WSP and PPC25 identify an area of Business - Neighbourhood Centre zone surrounded by MHU zoning, which is appropriate to support local amenities within walking distance of the higher intensity residential neighbourhoods.

As described in the further amendments sought by the applicant in its submission (submission 23), the applicant proposes a considerably larger Business - Local Centre zone in a similar location (within Area C). The rationale is that the Local Centre provides greater opportunity for an array of local services and community facilities to an immediate residential catchment. There was considerable support amongst local submitters, particularly those with property interests (residents and/or ratepayers) in the vicinity of the plan change area (submissions 2, 3, 14, 21, 26, 27, 30, 32, 33, 34, 35, 36) for the land identified as Neighbourhood Centre to be zoned as a Local Centre.

The area identified for the Local Centre is 5.7 hectares, apparently 290 jobs. I am not an economic expert and therefore cannot provide comment on the extent of land identified for the Local Centre, other than noting it appears to be over double the size of The Grange retail area in Warkworth (at approximately 2.5 hectares) and considerably larger than the average Local Centres in Auckland's established suburbs that Market Economics referred to in their background reports to the WSP.

I agree with the applicant's urban design expert, Pacific Environments NZ, that a Local Centre offers an opportunity for a vibrant community hub for a community beyond the immediate plan change area, including existing residential neighbourhoods to the west of the structure plan area. This needs to be considered in the context of the existing and proposed settlement, as well as the projected growth of an additional 20,000 people that would effectively quadruple the existing population of Warkworth. While a local centre could be supportable on the basis that it offers an array of local services commensurate with the anticipated population on this side of Warkworth, it should be of a land area that supports, rather than competes with the existing Town Centre.

In principle, I support the change in zone from Neighbourhood to Local Centre from an urban design perspective as it will create a vibrant hub for the north-western neighbourhoods in the proposed location within proximity to Open Space and MHU zoned land. However, I am concerned at the extent of land area zoned and would recommend further investigation into the appropriate land area required for a local centre that services a residential population within a walkable catchment. I also consider the location should relate better to residential areas and therefore would be better located on the western side of the Western Link Road, rather than between the road and the stream.

The proposed precinct provisions include objectives, policies and standards to provide for an accessible and high-quality built form in the Local Centre. New development within the Local Centre is RD at the minimum, with assessment criteria focused on design and connectivity. An application for subdivision or development in the Local Centre is required to be accompanied by an urban design assessment demonstrating how the development achieves these matters. While not overly prescriptive, in my opinion these are acceptable standards and criteria to achieve quality built outcomes in the centre.

5. Appropriate interface with the stream

One of the greatest degrees of variation between PPC25 and the WSP is in the proposed zoning adjoining the stream at the bottom of the valley, in the area identified as Area C on figure 1. The WSP identifies this area for LIZ as an extension to the Hudson Road industrial area as it is relatively flat land, within close proximity to the existing industrially zoned land. In contrast PPC25 proposed MHU zoning. In its submission to PPC25, the applicant proposes to amend this to Open Space – Informal Recreation (OSZ) adjoining the stream, an extensive area of Business – Local Centre (as discussed in section 4 of this memo) with MHU to the south of this.

The applicant makes the observation that the extension to the Hudson Road LIZ proposed will create an impermeable seam of industrial development, either side of the river. Many of the submitters including Forest and Bird (submission 25), as well as submissions 4, 10, 17, 24, 27, support the proposed zoning in PPC25 over the LIZ as identified in the WSP, considering it offers better outcomes for the stream and its immediate environment and also allows for better development of walkways and cycleways. While other submitters such as Atlas Concrete Ltd (20) oppose PPC25 and support the direction of the WSP as providing for a stronger planted and physical buffer between industrial and residential uses.

Other experts will comment on the ecological health of the stream, as that is outside my area of expertise. From an urban design and CPTED perspective, the critical issue in terms of the stream interface is having a well-defined, and accessible walkway (and possibly cycleway) adjacent to the stream with regenerative planting immediately adjacent to the stream. I support the proposed provision and spatial extent of the OSZ as identified in submission 23, as I consider it will provide a public connection to the stream edge, in addition to valuable neighbourhood amenity on flatter land within the valley floor. I also support the indicative open space network adjacent the full length of the stream corridor, noting this is similarly identified in the WSP, which will need provisions to ensure it will be vested as esplanade reserve upon subdivision of the adjoining land and which will provide for development of walkways and potentially cycleways as envisaged in both the WSP and PPC25. However, in my opinion, with the exception of the identified area of OSZ, which enables enhanced outcomes, the type of zoning next to the open space network is less important.

In response to submitters who consider residential would be a better adjoining use, we know from other locations that residential development often does little to activate waterway edges unless it is fronting onto them. Therefore, there is no guarantee that

residentially zoned land would provide a better outcome for stream access and health than light industrial zoned land. The bottom line is there needs to be a continuous network of linear open spaces with good connections to and from them, and points of activation, and this needs to be specifically provided for in the provisions of the plan change.

6. Submissions from and interface with residents of Viv Davie-Martin Drive

The Viv Davie-Martin Drive area currently supports rural-residential lifestyle properties, surrounded by a small number of larger rural blocks. The land is located just beyond the southwestern edge of the PPC25 area. It is zoned Future Urban in the AUP, with the intention of being one of the last areas for development and has been identified in the WSP as Single House zone (SHZ), with an overlay signalling an area for potential increase to the minimum site size, reflecting both the existing subdivision pattern and geotechnical constraints.

Several submissions were received from Viv Davie-Martin Drive residents (submissions 2, 3, 8, 10, 11, 21, 26, 30, 32, 33, 34, 35, 36). Submissions 26, 30, 32-36 are identical submissions from the owners and occupiers of 62A, 62B and 62C Viv Davie-Martin Drive, 3 houses on the southern edge of the PPC25 area. The submissions from Viv Davie-Martin Drive residents are generally supportive of PPC25, in particular the location of a Neighbourhood Centre, which many of these submitters requested be increased to Local Centre size, reduction in area of industrially zoned land within proximity to the stream corridor and extent of residentially zoned land, which will provide potentially affordable housing within the greater Warkworth area.

The concerns expressed by the submitters are primarily with the interface between the higher intensity residential zones and their existing lifestyle properties. In summary these are seeking an open space buffer between the PPC25 area and their properties to create both a distinct separation between types of residential uses and provide visual amenity to existing and future residential population and removal of indicative road connections to Viv Davie-Martin Drive.

In considering the submissions from Viv Davie-Martin Drive residents, seeking an open space zone buffer and/or extension to the increase to the minimum site size in the lots abutting their properties, it is important to think about how these spaces might be used and developed in the medium-longer term.

Open space will be required as the Future Urban land is rezoned and developed to provide for the growing population. These parks need to be accessible and able to be managed and maintained. There are already substantial fingers of existing vegetation protection (presumably some have existing bush covenants), which are identified for potential acquisition and augmentation to create an opportunity for potential walkways within the WSP. In my opinion, given the steep slopes and lack of connections, additional open space in the form of a planted buffer would do little to serve the area, beyond providing a screen for existing properties in a location that will be changing over time, and therefore would not be the best use of the land along the boundary to the Viv Davie-

Martin Drive area. Furthermore, the applicant, in its submission (submission 23) is seeking to include an open space zone for informal recreation, adjacent to the stream on the flatter land of the valley. In my opinion the flatter valley is a preferable location for open space for informal recreation.

The other alternative is to extend the proposed increase to the minimum site size in the lots abutting the properties within that area. It does need to be acknowledged that these properties were developed under a previous Countryside Living zoning and therefore are considerably different to suburban type properties in their size, layout, building design, and expectation of spaciousness and outlook. The WSP recognises that these are lifestyle properties and also acknowledges that the land to the north-east of the Viv Davie-Martin area is not suitable for higher density residential development due to its slopes and geotechnical issues so has sleeved this with a large area of SHZ, graduating the intensity of residential development through MHS and MHU down to the flatter land abutting the proposed Western Link Road. I understand the prudence of reducing the likelihood of reverse sensitivity while recognising the need for a graduated intensity of housing in this location.

PPC25 also proposes graduated intensity of zones but has taken a slightly different approach with a much greater area of MHS zone that extends to the edge of the existing properties and consequently much smaller area of SHZ in the western corner of the site, adjoining the future Puhoi to Wellsford motorway corridor. In its submission to PPC25, the applicant proposes to replace any SHZ with MHS, thereby further reducing any prospect of lower density residential adjoining the Viv Davie-Martin Drive area.

I consider, from an urban design perspective, the mixed housing zones are capable of producing better integrated residential environments than the SHZ and therefore support the direction of the submission 23. Designing to accommodate the slope, which has been acknowledged in the Neighbourhood Design Statement by Pacific Environments NZ accompanying- PPC25, will be critical. However, I consider to alleviate the concerns expressed by submitters and acknowledge the existing character, the plan change should include a subdivision overlay in the properties along the boundary to the Viv Davie-Martin Drive area with a larger minimum site size, and an identified area for a planted buffer.

I note the applicant also proposes to remove one of the indicative road connections through to Viv Davie-Martin Drive. The combination of these moves should serve to ease concerns expressed by submitters in this area and produce a favourable outcome.

7. Appropriateness of proposed zoning to Falls Road

The WSP identifies extension of the established Hudson Road industrial area south from Sanderson Road down to Falls Road (refer to Area D in figure 1). This is logical as a suitable location to provide for more potential employment land as it is connected to the existing LIZ zoned land, providing a considerable area of additional employment land. It should be noted that although the land is only zoned FUZ in the AUP, there are already light industrial type activities located on the two lots fronting the southern side of Sanderson Road in the form of the Warkworth Water Treatment Plant and a consented and established storage facility.

PPC25 seeks to confine the LIZ area to only those lots already developed and provide MHS zone fronting Falls Road, with SHZ on the steeper slopes on the southern side of the Falls Road, as per the WSP. There is some merit, from an urban design perspective, in providing residential on both sides of the two-lane Falls Road as these would be more compatible than Light Industry adjacent to and facing residential. However, that would be if there were not already established industrial uses on the land. The zoning approach presented in PPC25 would mean that the MHS would be directly abutting light industrial activity, which has the potential to generate significant conflicts between the residential and industrial uses. In my opinion it is appropriate to use Falls Road as a means of separating business and residential activities provided specific standards and assessment criteria are applied to require a higher standard of amenity for those sites facing residential development across a road.

It appears from the AT submission (submission 16) that Auckland Transport would wish to seek limited vehicle access from Falls Road, when it is upgraded to an urban road with separated walking and cycling facilities. This would presumably still enable a new road to be located servicing whatever activity ended up being provided for in here, but would limit the number vehicle crossings and therefore suggests a commercial zone might be more appropriate than a low-medium intensity residential zone.

The submission (submission 23) from the applicant seeks the MHS identified in PPC25 in this location be amended to Business - Mixed Use zone (MUZ). I concur with Pacific Environments NZ regarding MUZ as the appropriate zoning. In my opinion MUZ would be the optimal zone in this location as it is intended as a transitional zone between business and residential areas. It also has a higher degree of design control than LIZ, which would be preferable as an interface to the SHZ on the southern side of Falls Road. Finally, I consider it allows a greater flexibility than the LIZ, including a range of employment options as well as residential uses, but would not prejudice the existing light industrial activities on Sanderson and Hudson Roads, in the same way an immediately adjacent residential zone might.

Should the zones default to the WSP, the interface between the residential and industrial areas along Falls Road will require specific and detailed provisions to protect both residential and streetscape amenity and manage potential reverse sensitivity issues for the light industry.

8. Auckland Council's submissions seeking bespoke precinct provisions

As discussed elsewhere in this memo, PPC25 includes a Warkworth North Precinct (proposed precinct). This was revised and included with submission 23 by the applicant. Auckland Council's submission (submission 12) identifies a number of matters that should be included within the Warkworth North Precinct. Many of these matters are outlined within the WSP to facilitate good urban design outcomes including:

- Managing the interface between industrial and residential areas;
- Managing the interface of industrial sites with residential development on the Western Link Road to facilitate good urban design outcomes;
- Design of subdivision to retain mature trees/shelter belts as features;
- "Rear loading" on collector roads to minimise interruption to separated cycle facilities

As highlighted in section 3 of this memo, a significant landscaped buffer strip (of approximately 20m depth) along the frontage of SH1 was recommended in the WSP. Regardless of where the final plan change zoning ends, this planted area will help to maintain a green, treed entrance to the northern edge of Warkworth. Provisions need to be incorporated into the proposed precinct and associated maps identifying and providing for such a buffer to create an appropriate gateway to Warkworth.

The proposed precinct is largely silent on the issue of managing the interface between industrial and residential areas, including managing the interface of industrial sites with residential development on the Western Link Road. Managing the interface with specific, detailed provisions will be required regardless of where the final plan change zoning ends because of the extent of existing industrial land within proximity to the plan change area, and the extent of proposed residentially zoned adjacent. The main considerations for provisions should be protection both residential and streetscape amenity and managing potential reverse sensitivity issues for the light industry, which could inform a new policy for the proposed precinct. Additional standards could be included requiring a planted buffer of 2-5m depth on street frontages facing or adjoining residential areas and requiring all new development in those LIZ locations to be RD activities with criteria included to ensure a high standard of amenity commensurate with the residential environment they are facing.

Objectives and policies are included within the proposed precinct plan to enhance ecological values, retain and enhance areas of open space for recreation and connectivity. However, the standards are less specific. In order to ensure the outcomes intended by the WSP and the objectives and policies of PPC25, the proposed precinct needs to include additional standards for design of subdivision not only to retain mature trees on the slopes but also to retain natural values of, and importantly public access to, watercourses and their corridors and to require enhancement planting of riparian margins to create continuous green corridors.

Policies in the proposed precinct provide for residential zones to achieve a range of living options to respond to the environmental characteristics of the area. However, there are

no specific standards relating to residential development. As discussed in relation to Viv Davie-Martin Drive, in section 6 of this memo, the precinct provisions should include a subdivision overlay in residential properties along the boundary to the Viv Davie-Martin Drive area with a larger minimum site size, and an identified area for a planted buffer. While policy E38.3 within the AUP requires subdivision design to respond to the natural landscapes by locating and designing roads, access and infrastructure in a manner which minimises earthworks and locating roads and development to follow land contours, this could be augmented by specific illustrative guidance/criteria in the proposed precinct for residential development to also minimise earthworks and accommodate slope.

There is very little detail within the precinct provisions on the location of roads, walking and cycling network. While I recognise this requires further detailed investigation and would be somewhat premature to lock in, I agree with Auckland Council that the precinct plan should identify indicative layout as per the WSP, to confirm a high level of connectivity is intended. The proposed precinct could more explicitly provide for active transport as intended by the WSP. Objectives and policies could clearly identify this and standards could require “rear loading” of developments on collector roads to minimise interruption to separated cycle facilities.

Conclusions

Overall PPC25 and the subsequent amendments proposed in the applicant’s submission have considerable merit and have properly considered the urban design impacts of the development on the existing and intended future environment of Warkworth. In particular I support the approach to residential zoning, the inclusion of a local centre zone (albeit not the proposed scale), the inclusion of an identified area of open space for informal recreation, the intention to improve the accessibility to and quality of the stream environs and the area identified for Mixed Use adjoining Falls Road. However, in my discussion above I express my concern regarding the zoning approach adopted by the applicant in relation to the Western Link Road and the business zoned land fronting SH1 to the north. I consider the approach to these areas as presented in the WSP is more appropriate. Finally, amendments to the proposed plan change and Warkworth North Precinct, identified in my memo would, in my opinion, improve urban design outcomes.



Lisa Mein

MA (Urban Design), BPlan, MNZPI

ATTACHMENT 7

**CLAUSE 23 REQUESTS AND
APPLICANTS RESPONSE**

From: Michele Perwick
To: BurnetteO@barker.co.nz
Cc: [Rachel Morgan](#); [Peter Vari](#)
Subject: Warknorth Private Plan Change request - Council request for further information
Date: Monday, 30 April 2018 3:16:00 p.m.
Attachments: [Council RFI Warkworth North PPC 20180430.pdf](#)
[Appendix 1 Clause 23.pdf](#)
[Appendix 2 Further information request 20180430.pdf](#)
[Appendix 3 Advisory notes.pdf](#)
Importance: High

Hi Burnette, Please find attached council's request for further information. I will call later in the week to work out a suitable meeting time.

Regards Michele

Michele Perwick | Principal Planner
Planning North, West and Islands / Plans and Places
Mob 021 684 208 DDI 09 365 3910 Extn (49) 6910
Auckland Council, Level 23 135 Albert St, Auckland City
Visit our website: www.aucklandcouncil.govt.nz

30 April 2018

Ms Burnette O'Connor

C/-Barker and Associates Ltd
PO Box 1986
Shortland Street
AUCKLAND 1140

Dear Burnette

RE: Clause 23 RMA Further Information Warkworth North - Private Plan Change Request

Further to your lodgement of the Warkworth private plan change [by Turnstone Capital Limited], Council has now completed an assessment of the information supplied.

Pursuant to Clause 23 of the First Schedule to the Resource Management Act 1991 (please see appendix 1) Council does require further information before it is able to formally consider the request for the Warkworth North private plan change.

The table in Appendix 2 attached to this letter sets out the nature of the further information required, the critical timing for the information and reasons for its request. The table in Appendix 3 attached to this letter are advisory notes which are designed to assist Turnstone Capital Ltd progress this private plan change request. These matters could have a substantive bearing on the recommendation of any s42A hearing report.

Should you wish to discuss this matter or seek a meeting to clarify points in this letter please do not hesitate to contact Michele Perwick, Principal Planner.

Yours sincerely



Peter Vari
Acting Manager North West and Islands
Plans and Places
Chief Planning Office
Ph 021 596 420

Appendix 1

Basis for the Information Sought

First Schedule to the Resource Management Act 1991

Clause 23 Further information may be required

(1) Where a local authority receives a request from any person under [clause 21](#), it may within 20 working days, by written notice, require that person to provide further information necessary to enable the local authority to better understand—

- (a) the nature of the request in respect of the effect it will have on the environment, including taking into account the provisions of [Schedule 4](#); or
- (b) the ways in which any adverse effects may be mitigated; or
- (c) the benefits and costs, the efficiency and effectiveness, and any possible alternatives to the request; or
- (d) the nature of any consultation undertaken or required to be undertaken—

if such information is appropriate to the scale and significance of the actual or potential environmental effects anticipated from the implementation of the change or plan.

(2) A local authority, within 15 working days of receiving any information under this clause, may require additional information relating to the request.

(3) A local authority may, within 20 working days of receiving a request under [clause 21](#), or, if further or additional information is sought under subclause (1) or subclause (2), within 15 working days of receiving that information, commission a report in relation to the request and shall notify the person who made the request that such a report has been commissioned.

(4) A local authority must specify in writing its reasons for requiring further or additional information or for commissioning a report under this clause.

(5) The person who made the request—

- (a) may decline, in writing, to provide the further or additional information or to agree to the commissioning of a report; and
- (b) may require the local authority to proceed with considering the request.

(6) To avoid doubt, if the person who made the request declines under subclause (5) to provide the further or additional information, the local authority may at any time reject the request or decide not to approve the plan change requested, if it considers that it has insufficient information to enable it to consider or approve the request.

Appendix 2:

Further information requested under clause 23 First Schedule of the Resource Management Act 1991

#	Category of information	Specific Request	Reasons for request
1	Auckland Plan and Auckland Unitary Plan - objectives and policies	<p>Undertake a more robust assessment of the proposal in relation to the Auckland Plan (AP) and Auckland Unitary Plan (AUP) objectives and policies. Examples of concerns raised by our specialist reviews include:</p> <ul style="list-style-type: none"> • the RPS transport objectives and policies at B3.31 have not been addressed at all. District Plan objectives in E27.2 have been commented on in the Integrated Transport Assessment (ITA) but Objectives E27.2(1) and (2) should be given greater attention. It is noted that Objective E27.2(1) has not been quoted in full so that no consideration has been given to enabling the benefits of an integrated transport network to be realised. • lack of clarity as to how the stormwater management approach proposed will impact on the objectives of the High use aquifers and High use streams overlays • whether the proposed approach to water quality is consistent with the RPS policy (B7.3.3(6) to "Restore and enhance freshwater systems where practicable when development, change of land use, and subdivision occur". 	<p>A robust assessment of the proposal against the relevant provisions of the AP and AUP is required to better understand the effects of the request on the environment and whether the objectives will be given effect to. A broad range of matters need to be assessed including urban growth and development, natural resources, natural heritage, infrastructure and natural hazards.</p> <p>Provide cross references of this analysis to the appropriate reports to provide clarity and context.</p>
2	Implementation	<p>Explain in more detail how the mitigation measures proposed in the specialist and structure plan reports will be implemented. In particular this should address how implementation will be achieved in the absence of a precinct or any rules being introduced into the AUP as part of the plan change.</p>	<p>The Warkworth North Structure plans will not have any explicit legal status or effect unless it is incorporated into the Auckland Unitary Plan. As outlined in the Structure Plan Guidelines Council supports the use of the use of precincts to provide specific place based provisions.</p> <p>It is not clear how the adverse effects of the land use and</p>

#	Category of information	Specific Request	Reasons for request
		<p>In particular explain how:</p> <ul style="list-style-type: none"> o the alignment and function of the Western Collector as a strategic transport connection will be accommodated without being compromised by development o the intended methods for preventing driveway access to the Western Collector road o the proposed masterplan for the Local Centre, outlined in the Neighbourhood Design Statement, would be developed and applied to future development following 'live' zoning o freshwater and terrestrial ecological enhancement and restoration outcomes are to be delivered o the Neighbourhood Design Statement (NDS) design principles and stated outcomes will be delivered. This includes the following <ul style="list-style-type: none"> ▪ Design Principles pgs. 17-20 ▪ Structure Plan Proposal pgs. 21-22 ▪ Parks & Green Spaces pg. 23 ▪ Movement & Connections pgs. 24-28 ▪ Neighbourhoods & Building Typologies pgs. 28-29 o policy E1.3(10) relating to an integrated stormwater management approach could be implemented in an integrated and consistent manner 	<p>development are to be avoided, remedied or mitigated using the resource consent process.</p> <p>Council needs to better understand the ways in which adverse effects may be mitigated and the benefits and costs, the efficiency and effectiveness, and any possible alternatives to the PPC request.</p> <p>When assessing a resource consent application non regulatory structure plans would only be considered as an 'other matter'.</p> <p>Resource consents would not set up a long term management framework for Warkworth North. This does not provide certainty to the local community and others as to whether the outcomes expressed in the application material will be able to be achieved.</p>
3	Integrated planning approach	<p>Explain how the structure plan area will integrate with the wider road network and natural environment. This would include:</p> <ul style="list-style-type: none"> • whether any collector roads are proposed. Apart from the Western Collector (which will be an arterial once completed), it appears that all other roads are 'local' 	<p>To better assess transport and ecological effects and the extent to which integration of transport and environmental values and land use has been planned.</p>

#	Category of information	Specific Request	Reasons for request
		<p>rather than 'collector' roads.</p> <ul style="list-style-type: none"> • explain the relationship between the proposed zones (including types and intensities of land use) and the existing and proposed transport network , including public transport (such an explanation should be included in the ITA) • explain the transport effects of the proposal on: <ul style="list-style-type: none"> ○ the Western Collector links to the bridge in the south ○ Falls Road ○ Hill Street/SH1 intersection • how the neighbourhood street design and catchments will meet the outcomes sought in the Warkworth North Structure Plan – particularly the finer-grained future roads, walkable catchments, pedestrian and cycle links; links to open space, the Warkworth town centre, schools and other facilities. • identify and assess possible future road connections from the plan change area to Viv Davie Martin Drive (west), Hudson Road (east), and possible surplus motorway land (north). These are identified in the structure plan but are not discussed in the ITA. • identify and assess the ecological opportunities linking to the wider area. For example; ecosystem enhancement / restorations; wildlife corridor connections, improvements to freshwater habitats through the reduction of erosion hot spots, riparian planting and fish passage improvements. • assess the cumulative ecological effects of the proposed 	

#	Category of information	Specific Request	Reasons for request
		development within the wider catchment.	
4	Implementation	<p>Explain how the proposal relies on the funding and completion of the:</p> <ul style="list-style-type: none"> • Ara Tuhono-Puhoi motorway • Western Collector Road • Matakana Link Road <p>Since the rezoning is proposing to proceed ahead of NZTA and AT planning for the intersection of SH1 with the Western Collector, this will need to be addressed by the applicant.</p>	<p>To better understand effects on infrastructure and the justification for live zoning ahead of these key infrastructure projects being finished.</p>
5	Implementation	<p>Provide further information to:</p> <ul style="list-style-type: none"> • identify timing of each stage in relation to the provision of key infrastructure • explain the matters used to determine each stage and how these were considered to determine the sequence of the staging. • identify any future funding agreements that Turnstone Capital Ltd intend to enter into with Auckland Council/and or its CCOs; and • confirm whether such funding agreements can be finalised prior to any hearing • identify whether the measure is currently included in the Long Term Plan or Regional Land Transport Plan and the estimated cost • confirm who is responsible for delivering the components of the transport network. <p>Similarly the ITA would need to include an implementation plan.</p>	<p>The structure plan and ITA need to clearly outline how infrastructure effects will be managed through necessary infrastructure upgrades or mitigation implemented in a sequence that aligns with the staging of the development. Currently the request does not present this information in a clear manner. This is fundamental to assessing the infrastructure effects of the proposal.</p> <p>Council's infrastructure funding agreement team require that an IFA has to be signed between all relevant developers/ landowners and AT to link all transport works put forward by the ITA prior to any hearing for the private plan change. This will ensure that the transport works are appropriately cost shared and funded</p> <p>A table format is recommended. see p30 of AT ITA Guidelines.</p>
6	Consultation	<p>In addition to the mana whenua consultation report provided, explain whether or not consultation has also occurred with the following iwi groups:</p> <ul style="list-style-type: none"> • Ngāti Maru 	<p>The First Schedule to the RMA sets out the statutory requirements for consultation, including with tangata whenua [through iwi authorities] of the area who may be affected.</p>

#	Category of information	Specific Request	Reasons for request
		<ul style="list-style-type: none"> • Ngāti Paoa • Ngāti Whanaunga • Ngāti Whātua Orakei • Ngāti Whātua o Kaipara • Te Runanga O Ngāti Whātua • Nga Tai ki Tamaki • Ngāti Te Ata <p>Provide feedback from these groups on the aspects of the application that are relevant to their interests.</p>	<p>Council is aware that these groups have expressed an interest in the Warkworth area including the structure plan area.</p>
7	Consultation	<p>Explain how the matters raised during consultation with mana whenua and others have been considered in the development of the structure plan.</p>	<p>The various reports are not clear as to how such matters have been considered.</p>
8	Reverse sensitivity	<p>Assess how reverse sensitivity effects (noise, amenity and air quality) between the Ara Tuhono-Puhoi motorway and the western boundary of the Warkworth North Structure Plan will be avoided, remedied or mitigated.</p>	<p>This potential adverse effect was raised as an issue in the Neighbourhood Design Statement and has not been addressed.</p>
9	Geotechnical	<p>Appendix 17 Section 6.1 - Please provide the KGA report referenced in Appendix 17, entitled "Initial Geotechnical Assessment Report, ref 9585-3, 2 September 2016"</p>	<p>The 223 Falls Road site is noted as having features likely to be associated with large scale landslides. The geomorphological assessment described in this report will assist with assessing the risk of natural hazards.</p>
10	Geotechnical	<p>Appendix 17 Section 6.2 – Please provide a cross-section interpretation of the landslide features described based on the geomorphological (and any other) evidence available.</p>	<p>The site is clearly a very significant landslide, which (based on the presence of some leaning trees observed during a site visit) may still be active. Presentation of the preliminary ground model will assist with assessing the risk of natural hazards.</p>
11	Geotechnical	<p>Appendix 17 Section 7.2 – Please provide the results and interpretation of the ground investigation described as having been undertaken for the 47 Lot subdivision at 223 Falls Road</p>	<p>The 223 Falls Road site is noted as having features likely to be associated with large scale landslides. The data and interpretation described in this report will assist with assessing the risk of natural hazards.</p>
12	Geotechnical	<p>Appendix 17 Section 7.3 – Please provide the results and interpretation of the ground investigation described (including</p>	<p>The site contains a large and significant landslide, which (based on the presence of some leaning trees observed during a site visit)</p>

#	Category of information	Specific Request	Reasons for request
		machine borehole drilling and cone penetrometer testing) over the Stubbs Farm Estate.	may still be active. The data and interpretation described in this report will assist with assessing the risk of natural hazards.
13	Land Development (Appendix 14)	Update the plans included in the Chester Land Development Report – Appendix B: Land Formation	All the plans in Appendix B are marked as 'draft'. Updated plans are required to give confidence to the reader as to their status.
14	Flooding	Confirm the flood modelling undertaken by Chesters is consistent with the Mahurangi Catchment 2017 model outputs prepared by Council.	Any differences between the two models must be reconciled to enable council to adequately determine the extent of the flood plain and the management of any flooding.
15	Hydrology mitigation	Clarify the approach proposed for hydrology mitigation by: <ul style="list-style-type: none"> confirming the information considered providing an assessment of the appropriateness in applying SMAF, including an explanation of how SMAF 1 would mitigate hydrology impacts such as stream erosion. confirming the specific tools proposed to meet hydrology mitigation requirements of SMAF across the Structure Plan area 	Appendix 14 acknowledges the soil type in the structure plan area is not appropriate for infiltration. While there is some soil testing information provided, the suites of measures proposed to meet SMAF are generic. It is unclear what specific measures are to be applied in the structure plan area and if they have been assessed as appropriate. SMAF 1 is a hydrology mitigation measure but on its own may not adequately protect streams from erosive effects of additional flows.
16	Water quality	A full assessment of potential effects and effectiveness of measures must be provided, to clarify the water quality approach proposed. What evidence is there that relying solely on the AUP E9 (Stormwater Quality – High contaminant generating car parks and high use road) provisions will provide for adequate water quality, given the sensitive receiving environment, existing high water quality and the AUP directive to minimise contaminants in greenfield sites.	Maintaining good water quality is a requirement under the NPS-FM and AUP.
17	Streams	Provide more information on the methodology used for the identification and classification of streams, including what enhancement opportunities were identified.	Further information on stream classification is required due to the known differences in streams data between the council data and application. This raises questions about the robustness of

#	Category of information	Specific Request	Reasons for request
			<p>information used to support future resource consent applications to remove streams or use as an offset site.</p> <p>Enhancement opportunities are commonly identified in watercourse assessments. These go beyond riparian planting and consider what can be done to enhance the function of the freshwater system including naturalisation of the stream channel, work to reduce in stream erosion hot spots, work to improve fish passage, restoration of wetlands for inanga spawning.</p>
18	Wetlands	<p>Accurately identify and classify on a plan the location of all wetlands throughout structure plan area. Recommend that a wetland delineation tool is used classifying all wetlands to natural, induced / naturalised (i.e. stock trampling) or wholly man-made / artificial (i.e. farm ponds / utility).</p>	<p>The ecological report identifies wetlands in text, none are adequately mapped, especially those within the flood extents of the main waterbodies. Pg95 Figure 3 of the Biosearches report only classifies streams. Wetlands have equal protection under AUP, as they can contain rare and threatened ecosystems.</p>
19	Ecology	<p>More information is required in the ecological report to specifically respond to the effects of the proposed development on the site's ecology. This should include consideration of the mitigating adverse effects from stream and wetland loss (which are highly likely given the topography of the site).</p>	<p>Currently the Ecological Report is restricted to site constraints and values. Comments within the report about retaining vegetation are heavily caveated. This information will enable council to better assess the ecological effects and proposed mitigation measures.</p>
20	Urban Design (urban form & function)	<p>Area 1 identified in the "Evaluation of topographical impact on development" (refer Neighbourhood Design Statement page 15) is not considered suitable for business development. This is endorsed in the Neighbourhood Design Statement to be more suitable for residential type development.</p> <p>However both the Warkworth North Structure Plan and the Proposed zoning map show the General Business Zone extending into Area 1.</p> <p>Please provide information that clarifies the Evaluation of Topographical information (source Fig 15 Topographical Constraints Summary) with where the proposed zoning areas</p>	<p>To provide clarity about the suitability of the land for the proposed types of building form and development</p>

#	Category of information	Specific Request	Reasons for request
		<p>will be located for the Structure Plan area as well as the location of existing zoned areas along Hudson Rd and Great North Rd</p> <p>For any areas in the structure plan area where the land use differs from the land use suitability (assessed on slope constraints) please provide geotechnical information that specifically outlines what is required to achieve such land development outcome.</p> <p>Note: If the proposed land use/ extent of Unitary Plan zone is amended to align with the topographical constraints summary this would satisfy this aspect of the information request.</p>	
21	Economics	<p>Further information is required about the potential yield of the proposed GBZ for offices, retail and other centres-based activity. That additional information should consider the uncertainty in what activities might be accommodated in the GBZ, given the range of activities envisaged in the GBZ by the Unitary Plan.</p>	<p>That information would help to understand how the PPC would change that supply within Warkworth, and will be used as supply-side input to understand the potential effects on Warkworth's centres.</p>
22	Economics	<p>Further information is required about the projected demand arising from both Warkworth North and wider Warkworth for the types of retail and other centres-based activity that might locate in the GBZ. Comparable information is provided in relation to the proposed Local Centre zone in Attachment 2 of the McDermott Consultants report.</p>	<p>That information is important to understand the demand side of the supply-demand equation, and hence the potential effects on Warkworth's centres of the GBZ.</p>
23	Economics	<p>Drawing together the additional demand side and supply side economics information requested above, an assessment of the demand-supply balance for future offices, retail space and other centres space in Warkworth is requested. This assessment should assess how much of that will be supplied by Warkworth North. The response should take into consideration: the yield of the proposed Local Centre; vacant capacity consented at Kowhai Falls; the complementary functions and total capacity of the proposed Local Centre and</p>	<p>That information is important to understand the potential effects on Warkworth's centres (particularly the Town Centre) of creating 11.3ha of GBZ alongside a 4ha Local Centre, and other extant vacant supply in the town. The key concern in relation to this matter is whether the proposed Local Centre and GBZ together might contribute to an oversupply of retail and office space in Warkworth, to the detriment of the Town and other centres. It is not considered that there is adequate information provided to evaluate the potential effect on centres, given the potential capacity of the GBZ has not</p>

#	Category of information	Specific Request	Reasons for request
		GBZ; and the strengths of the location of the centre near the future main entry point into Warkworth.	been assessed.
24	Economics	In light of the information requested in items 21-23, an updated conclusion is requested as to the size and nature of effects on existing Warkworth centres, and centres elsewhere such as Wellsford (as relevant), as a result of the PPC. This may include commentary on any recommended limitations to mitigate effects, such as the timing of development, or a maximum total quantum of retail or offices floor space.	This confirmation is required to understand the potential effects on Warkworth's centres (particularly the Town Centre) of the proposed Local Centre and GBZ.
25	Economics	Clarification is requested about the data in Table 7 (p34). That table shows 1ha of GBZ as both the current and the proposed area.	This clarification may be relevant to the effects assessment, and in particular the spatial distribution of activity within Warkworth.

Appendix 3: Advisory notes

#	Category of information	Advice	Reasons for advice
1	Trees	<p>Address the role of street trees in providing ecological corridors through the structure plan area with specific reference to council's Strategy for Auckland's Urban Ngahere (2018).</p> <p>Identify how trees of sufficient quality and quantity will be accommodated in the road reserve.</p>	<p>To understand how the structure plan will align with council's Strategy for Auckland's Urban Ngahere (forest). A key strategy of which is to increase canopy cover across Auckland's urban area up to 30 per cent.</p> <p>To assist in identifying appropriate road widths</p>
2	Notable trees	Provide an arboricultural assessment for any individual specimen, or groups of trees within the structure plan area, not included in Significant Ecological Areas (SEAs).	To better understand the quality of existing trees and groups of trees in the structure plan area and if warranted to consider mechanisms for their possible protection.
3	Habitat Protection Areas	Identify and assess Habitat Protection Areas [covenants] within or immediately adjacent to, the proposed plan change area.	This is to better understand the context of the existing environment and to assess potential green corridor connections. [Council is able to help identify these on land adjacent to the proposal]
4	Transport (ITA)	<p>Include in the ITA the following:</p> <ul style="list-style-type: none"> an explanation of the Supporting Growth - Delivering Transport Networks and its relationship to the plan change area. identify possible future layout of internal roads to service development. 	<p>While this information does appear in other application documents, it is also expected to be explicitly addressed in the ITA.</p> <p>Inclusion of an assessment of the Supporting Growth report will enable the ITA to better address the wider transport planning context of the proposal. Identification of internal roads allows a better assessment of traffic effects and the extent to which integration of transport and land use has been planned for.</p>
5	Transport (ITA) -	Undertake additional transportation modelling. Apart from one intersection where	To better understand transport effects.

#	Category of information	Advice	Reasons for advice
	modelling	SIDRA has been used, the modelling is quite high level using ART. Lower level modelling such as SATURN and SIDRA is appropriate for an ITA.	
6	Transport (ITA) - modelling	Review the assumption in Section 5.4.4 Stage 4, that the local centre will not generate external trips if developed prior to a connection between the Western Collector with the existing SH1. The land uses in the local centre are not known and some uses such as food and beverage may generate trips external to the plan change area.	To better assess transport effects.
7	Transport (ITA) - modelling	Review and amend the comments in Section 5.3 Key intersection analysis, about the congestion for the side roads, and the alternative routes. In the case of Falls Road, the western side exits at a ford (partly submerged stream crossing).	To better assess transport effects.
8	Transport (ITA) - Western Collector	Consider use of roundabouts as threshold treatments for the commercial section of the Western Collector. Roundabouts support a change in speed environment in a way that signals or priority intersections cannot.	To better assess transport effects.
9	Transport (ITA) - Western Collector	Further consider the implications of the Western Collector passing through the Local Centre. AT generally does not support locating new centres around new arterial roads. Address the implications in this situation, particularly the effects on the efficiency of the Western Collector.	To better assess transport effects and the extent to which integration of transport and land use has been planned for.
10	Transport (ITA) - Western Collector - southern intersection	Further consider both signals and roundabout options for the southern intersection with the Western Collector. Identify any space constraints that would hinder delivery of a roundabout at this intersection. Amend Appendix 3 Intersection and SIDRA Analysis, to provide 2036 and 2046 models for the signals and the roundabout. Advise whether any specific designs have been considered for this intersection.	To assist in assessing traffic effects at this intersection, and different ways in which the adverse effects may be mitigated. The ITA appears to assume that a signal intersection is preferable to a roundabout at the intersection between Western Collector and Falls / Hill. Further options assessment is required, based on considering roundabout model results alongside signal results.
11	Transport (ITA) - public transport	Clarify statement in Section 3.3 Public transport accessibility. Paragraph 7 suggests that the road cross-sections proposed are of adequate width for provide for additional bus services as they are required. This would appear to be a reference to the Western Collector cross-section, rather than the local roads which are likely to have 3m traffic lanes (one lane in each direction) as described in	For accuracy and to assist in identifying future provision for public transport.

#	Category of information	Advice	Reasons for advice
		Section 4.4.4 Local roads. To provide for future public transport routes, road cross-sections and design may need to provide for bus services along the following road connections: the road through to the Park and Ride; the road intersecting with Albert Road and Hudson Road; the road connecting through to Vic Davie-Martin Drive.	
12	Transport (ITA) - Western Collector	Confirm that there is no driveway access from the Western Collector - this is stated for the non-commercial section, but not the commercial section. Suggest that 'no driveway access' be clearly marked on the cross-sections.	For certainty.
13	Transport (ITA) - roading	Advise whether any traffic calming is proposed.	To provide more complete information.
14	Transport (ITA) - roading	Amend Section 6 of the ITA to show that regard has been had to the process set out in AT's Roads and Streets Framework when identifying road categories and network proposals for all user modes. This should particularly inform decisions about Falls Road and Hudson Road and issues such as access to education destinations.	To provide more complete information about transport and land use integration.
15	Transport (ITA) - trip generation	AFC (Auckland Forecasting Centre) will need to review the trip generation to allow for route choice out of the area, especially for the FUZ to the south-west, where travel via existing SH1 to Puhoi may be preferred. Journey time comparison is needed. The assumptions of local to regional destination split for employment needs to be tested for reasonableness.	Advising of future review that will be required.
16	Transport (ITA) - format / edit	<ul style="list-style-type: none"> • Check figure labels. Figures in Section 4.4.3 are not labelled – referred in the text as Figures 8, 9, and 10. However later figures in the document, which are labelled, are also identified as 8 and 9. • Incorrect reference to Appendix 4 (appears it should be Appendix 3) in last paragraph of 5.3. • Last sentence of Section 5.4 Development staging - clarify which appendix is being referred to. • First sentence of Section 5.5 Effect on the local network - make it clear that the reference to the Western Collector being widened to four lanes means two lanes in each direction. • First sentence of Section 5.5 Effect on the local network - make it clear 	To assist the reader

#	Category of information	Advice	Reasons for advice
		<p>that the reference to the Western Collector being widened to four lanes means two lanes in each direction.</p> <ul style="list-style-type: none"> • First sentence of Section 5.5 Effect on the local network - make it clear that the reference to the Western Collector being widened to four lanes means two lanes in each direction. • Be consistent in references to the southern intersection with the Western Collector within the plan change area - or at least explain the different descriptions. It is sometimes referred to as the Western Collector / Hill Street intersection (see Appendix 3). Also referred to as the Western Collector / Falls Road / Mansell Drive intersection (see 5.3). • Add page numbers to the document • Include executive summary at start of the ITA • Include a figure showing the proposed zoning plan in the ITA so that the relationship between the zoning pattern and the transport network can be better understood while reading the ITA. 	
17	Transport (ITA) - Western Collector	Identify pinch points between road construction platform and stream embankment, to ensure that required earthworks will not harm the riparian zone of the stream. Two or three pinch points should have specific land survey and 3D design before confirming the road centreline horizontal location.	To assist in identifying road alignment.
18	Transport (ITA) - walking & cycling	Section 4.4.2 Western Collector commercial area cross section – the commercial cross-section shows adequate width provision for cycling on both sides of the street. Careful design will be required to minimise conflict between people walking from parked cars across the berm and cycle path to the footpath. The level change between footpath and cycle path is supported and will assist in creating a legible distinction between active modes – the transition however should be a 1/3 (minimum) 65mm high mountable flush kerb, not vertical, with the cycle path being an asphalt surface. The central and side berms that contain specimen trees are supported in that they provide an enclosed threshold for the commercial centre and a high level of amenity and greening for pedestrians.	To assist the applicant.
19	Transport (ITA) - walking & cycling	Section 4.4.3 Western Collector non-commercial cross sections – the eastern footpath is shown at +/- 0.5m below street level (up to a maximum of 0.75m) – how far will this continue along the collector? It is recommended that the pedestrian path be at street level due to negative perception and experience of	To assist the applicant.

#	Category of information	Advice	Reasons for advice
		<p>being below traffic despite the provision of a berm, and cycle path – this will be exacerbated when the corridor has four lanes. The widths of the road, western cycle path / pedestrian buffer, and provision of a median need to be reviewed in the context of the Roads and Streets Framework – similar to the Matakana Link Road. It is possible that additional width may become available through the Roads and Streets Framework evaluation that would enable the footpath to be at street level. Question the provision of parking given that the Western Collector has limited access into order to improve 'flow'.</p> <p>Intersections – the quality of service for cycle paths and pedestrian paths needs to be consistent through both the midblock and intersections – they need to remain separate at un-signalised, signalised intersections, and roundabouts.</p>	
20	Transport (ITA) - walking & cycling	Section 4.4.4 Local roads – the functionality of local roads can vary, particularly where a greenway/pathway is identified. The 17m width for local roads must not preclude the provision of greenways / pathways to enable bicycling for transport.	To assist the applicant.
21	Transport (ITA) - walking & cycling	Section 4.4.5 Laneways – support laneways to provide lateral connectivity across the development. The path width should be 3m minimum with a strong focus on CPTED. What are the maximum block lengths?	To assist the applicant.
22	Transport (ITA) - walking & cycling	Section 6.6 Auckland Cycle Network – support the intention of this, however the high level connections identified will not be accessible to everyone unless the local road conditions and legibility enable people on bikes to access the separated facilities.	To assist the applicant
23	Transport (ITA) - walking and cycling	AT is currently working on new guidance to inform the development of cycle networks in new growth areas. This guidance is expected to be available in June 2018.	Information.
24	Geotechnical	Appendix 17 Section 7.3 – A description is included of piled foundations for the structures in the existing industrial area adjacent to Hudson Road. Please provide any information available on the depth of these foundations.	The depth to bedrock will inform an assessment of the risk of natural hazards in adjacent sites.
25	Geotechnical	Appendix 17 Section 7.3 – This section concludes, “the formation of large scale level areas for light industrial use will be difficult on the sloping western portion of Area B”. Please clarify whether this area coincides with the proposed ‘Business – Local Centre Zone’	This information will assist with assessing whether large excavations may be required in the toe of the landslide, and therefore enable a more robust assessment of the impact of natural hazards.

#	Category of information	Advice	Reasons for advice
26	Geotechnical	Appendix 17 Plan 2 (Geomorphological Plan) – This plan does well to identify the large landslide west of Hudson Road, but may have missed two other significant slips. One lies immediately south west of the first, between this slip and Viv Davie-Martin Drive. The second may encompass the bulk of the area described as Area A. Please provide commentary to demonstrate that the presence of these large landslides has been assessed and discounted.	This commentary will assist with assessing the risk of natural hazards.
27	Geotechnical	Appendix 14 Section 1 – Please confirm that the proposed earthworks and retaining have taken into account the possible presence of deep unstable ground.	This commentary will assist with assessing the risk of natural hazards.
28	Geotechnical / hydrology	What are the current rates of stream bank / bed erosion, and to what degree would the proposed developments impact on stream erosion?	In the unstable terrain at this site, toe erosion of slopes is one of the key triggers to reactivate landslides. This information will assist with assessing the risk of natural hazards.
29	Geotechnical	Appendix 17 Section 7.3 – A description is included of piled foundations for the structures in the existing industrial area adjacent to Hudson Road. Please provide any information available on the depth of these foundations.	The depth to bedrock will inform an assessment of the risk of natural hazards in adjacent sites.
30	Land Development (Appendix 14)	Update the plans included in the Chester Land Development Report – Appendix B: Land Formation	All the plans in Appendix B are marked as 'draft'. Updated plans are required to give confidence to the reader as to their status.
31	Geotechnical	Appendix 9 Figure 13 shows an area of land described as Area 1A, highlighted due to low slope angle. The following text (subsequent page) notes that this land is more efficient to develop for large lot and floorplate development than land over 12.5% slope. I suggest that this advice is reconsidered for this site.	The area marked as Area 1A is almost exactly the boundaries of a large landslide. This is the primary reason that the slope angle is lower in this area. Any development on this unstable land is likely to be more challenging and costly than on steeper but more stable land, and thus the advice that it would be more efficient to develop this land could be incorrect.
32	Geotechnical	The site has been split into Areas A, B and C based on land parcel boundaries, which do not reflect the natural boundaries between zones with different geotechnical challenges. I suggest consideration is given to re-defining the zones to represent ground conditions rather than ownership.	There are geological and geomorphological features (such as landslides and rock types) that cross the defined areas but are described in only the predominant area in which they occur. This gives a potentially misleading impression that they are not an issue in the other areas. For example,

#	Category of information	Advice	Reasons for advice
			the slope stability issues are described in Area B, but not Area C despite the landslide backscarps extending into this area. Likewise, Area C is described as being underlain by Mahurangi Limestone, despite this being mapped under only part of the area.
33	Geotechnical	NZGS/MBIE guidance document "Module 2: Geotechnical investigations for earthquake engineering" gives a useful indication of the expected density of physical ground investigations at plan change stage in Tables 2.1 and 2.2.	Given the challenging ground conditions at this site, it is expected that intrusive investigations at suitable densities to assess the geotechnical hazards should be undertaken. This should have particular reference to the risk of deep and shallow slope stability, and for liquefaction prone soils, to allow an assessment of natural hazards.
34	Community facilities (edit and format)	<p>Appendix 11 corrections:</p> <ul style="list-style-type: none"> • Change the figure of 33m² / 1000 to 41m² / 1000 in the Libraries part of Table 1 of the Community Facility provision guidelines (page 6). • In Table 4 under paragraph 3.3 Community Facilities Network Action Plan regarding the Priority Action 1) Upgrade of Warkworth Town Hall add in that this action has been completed. (page 14) • The Mahurangi East Library is located within the Mahurangi East Community Centre. (page 13) • There are a number of community leases on council land. The Women's Bowling Club is now a shared facility and is called the Shoemith Hall and is located on Shoemith Reserve. <p>There are a number of incorrect references to documents or supporting material;</p> <ul style="list-style-type: none"> • The Air Land Water Plan was replaced by the Auckland Unitary Plan Operative in Part – update the SMP to reflect the AUP accordingly, • GD01 is the technical document that supports the guidance given in GD04 and will replace TP10 in the future. Healthy Waters recommends GD01 practice is reflected in the SMP. 	For accuracy
35	Stormwater (edit/format)	<p>There are a number of incorrect references to documents or supporting material;</p> <ul style="list-style-type: none"> • The Air Land Water Plan was replaced by the Auckland Unitary Plan Operative in Part – update the SMP to reflect the AUP accordingly, • GD01 is the technical document that supports the guidance given in GD04 and will replace TP10 in the future. Healthy Waters recommends GD01 practice is reflected in the SMP. 	For accuracy
36	Flooding	There is an updated flood model available from council for the Mahurangi Catchment. (Mahurangi Catchment 2017). An offer was made to the applicant last	To assist the applicant

#	Category of information	Advice	Reasons for advice
37	Stormwater outfalls	<p>year to access this model to inform their SMP.</p> <p>Discharge to streams after treatment is proposed. This will require some stormwater outfalls. Please outline the design philosophy that will be used for stormwater outfalls.</p>	<p>The design and location of stormwater outfalls can avoid adverse effects such as:</p> <ul style="list-style-type: none"> • Stream bank and channel erosion, • Constraints on flood conveyance function, • Public safety risk • Amenity effects • Constraints on fish passage into stream tributaries.
38	Contamination	<p>Provide further information to inform and support the Detailed Site Investigation on the nature, extent and timeframe of activities on the south western portion of Lot 2 DP 209013 which appears to be quarrying and/or filling.</p>	<p>The Environmental Site Investigation has not identified potential HAIL activities occurring on the south western portion of Lot 2 DP 209013 adjacent the river and the northern end of 54 Woodcocks Road across the river. 2001-2006 aerials show activity occurring which appears to be quarrying and/or filling being undertaken, which are HAIL activities.</p> <p>The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>
39	Contamination	<p>Provide detail on the scale and timeframe of historical commercial abattoir activity on 11 Sanderson Road (Lot 2 DP 37501) involving discharge of wastewater to land, including placement or disposal of any wastes or treated materials on site, the decommissioning method used for wastewater treatment facilities and structures, and any remedial works. Any filling activities, deposits or remediated areas should be identified on plan to scale.</p>	<p>The Environmental Site Investigation has not provided sufficient information in relation to potential HAIL activities carried out on 11 Sanderson Road (Lot 2 DP 37501). In particular whether the commercial abattoir had any storage/use of fuels for boiler heat/steam generation, and the decommissioning of wastewater treatment ponds. The 2006 aerial (Auckland Council GIS) appears to show the outline of treatment ponds on the South West side</p>

#	Category of information	Advice	Reasons for advice
40	Contamination	Provide information relating to HAIL associated with current or post-abattoir land use activities including waste bin operations on 11 Sanderson Road (Lot 2 DP 37501). This should address vehicle maintenance and refuelling, bin cleaning, waste deposits, filling and stockpiling. Information on any consents or approvals for the current land use operation should be provided.	<p>of the site) which although unlikely to result in heavy metal or persistent chemical residues from the activity, if improperly desludged may contain organic materials which under breakdown may create gasses, potentially microorganism spores, or have non-engineered fill (contaminants, non-engineered).</p> <p>The potential effects are to human health, to receiving environment, or to structures from contaminants (e.g. corrosive ground conditions, gas, instability) from contaminated materials and deposits.</p> <p>The Environmental Site Investigation has not provided sufficient evidence in relation to potential HAIL activities carried out on 11 Sanderson Road (Lot 2 DP 37501). Other potential waste disposal activities or deposits may have occurred on site relating to redevelopment and the current land use activity which appears to be commercial waste bin operations that historically have proven to have poor site management practices. The yard does not appear to be paved. Is there any Industrial Trade Processes consent required? The potential effects on human health, discharges to the receiving environment, or structures from contaminants and physical properties (e.g. instability, corrosive ground conditions, gas) of deposits and contaminated materials.</p>
41	Contamination	Development of the area will require Unexpected Discovery Protocols to be in place. Demolition of buildings will require survey for asbestos containing materials and if identified their safe removal, potentially extending to soil testing if they are external cladding/roofing and are in a deteriorated state. Refer Health and Safety	<p>The Environmental Site Investigation has relied upon limited information that at its most recent appears to be property files, with analysis of 2011/12 aerials but no site walkover or interviews to ascertain current land use activities. The</p>

#	Category of information	Advice	Reasons for advice
42	Contamination	<p>at Work (Asbestos) Regulations 2016 and New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ 2017.</p> <p>Should any new contaminating activities be undertaken on any of the properties (including 220 and 223 Falls Road, 102 Hudson Rd and 12 Sanderson Road) from the time of the completion of the investigations, then further investigation may be required.</p>	<p>potential for HAIL activities such as farm waste dumps, refuelling tanks, and potentially sheep dips have not been fully discounted.</p> <p>The investigation stands at the time it was conducted, along with its caveats. Any new activities undertaken since the investigation will need to be assessed whether they are categorised as HAIL.</p> <p>It is understood that recent development of a water treatment facility by Watercare Services Limited (anecdotal, location not known) would likely involve the storage and use of hazardous substances and that this would need to be acknowledged and considered in terms of land use planning.</p>
43	Contamination	<p>102 Sanderson Road cleanfilling activities should have validation sampling undertaken to demonstrate that soils are compliant with the soil contaminant standard for Commercial Industrial outdoor worker (unpaved) in view of the proposed Business Light Industry zoning. Test for asbestos in accordance with the New Zealand Guidelines for Assessing and Managing Asbestos in Soil, BRANZ November 2017 for commercial and industrial land use.</p>	<p>Review of the Environmental Site Investigation reports for 220 Falls Road, 102 Hudson Rd & 12 Sanderson Road, and 223 Falls Road), Warkworth (For SF Estate Ltd, Babbage) do not appear to indicate any HAIL activities having been undertaken. Cleanfilling was noted to have occurred on 102 Sanderson Road and while cleanfill itself is not HAIL, there is insufficient information to confirm or verify that the site received only cleanfill. Note the source of cleanfill soil was indicated in the report to have come from Hudson road widening, which is adjacent to a number of industrial activities which may be identified as HAIL. Excessive organic material content in the fill has been noted to be an issue in the past, however was not qualified in terms of placement, percentage, and depth of fill, or any quantitative validation of its removal provided.</p>

#	Category of information	Advice	Reasons for advice
44	Urban form and design	<p>The NDS offers very high level information as to what is intended to be included as part of the master planning information and we would like to have a more detailed content outline together with a detailed explanation for each aspect of the content to describe what information will be developed for the master planning supporting information.</p> <p>We would expect the following aspects to be part of the content addressed:</p> <p>Detail for all streets, block layout sizes, intended location of building frontage controls - key retail frontage & general commercial frontage, car parking areas, public transport routes and stops, pedestrian and cycle network routes, open space (informal recreation space) relationship with centre including connectivity and street frontages, location urban public space(s), demonstrate how the 3 separated areas of the local centre will operate as a connected total centre, managing the connectivity of the town centre with the proposed Western Collector arterial which will be located through part of the Local Centre.</p> <p>Note: The above is not an exhaustive list of the content to be addressed but we would expect as part of the master planning information to be developed to include detail relating to these matters.</p>	<p>The breakdown of organic material could, under some circumstances, pose a risk as a source of methane and other gases.</p> <p>To provide necessary detail to assess the proposed local centre</p>
45	Urban design	<p>Clarification is sought as to whether neighbourhood centres are to be provided within the structure plan area, and their proposed location. The NDS (page 19) refers to a well-connected local centre and envisages an outcome of local amenities being provided within a 400m walking distance rather than the 1.4km walking distance to the town centre edge. It is assumed the town centre refers to main Warkworth centre.</p>	<p>The NDS design principles and the proposed residential zones shown in the structure plan map appear to be inconsistent.</p>
46	Climate change	<p>Please outline and provide details of how the land-use and development proposed</p>	<p>The effects of climate change should be</p>

#	Category of information	Advice	Reasons for advice
47	Flood plain	<p>in the structure plan will respond and adapt to the effects of climate change. To understand the effects of climate change in the context of Warkworth North, the latest NIWA climate change projections for Auckland should be considered.</p> <p>Provide an assessment of the impact of post-development flood flows in Stubbs Stream on the frequency (if any) of stormwater overtopping of Falls Road for up to a 10 year storm event.</p>	<p>recognised and provided for to avoid the creation of new risks to people, property and infrastructure.</p> <p>Council concurs with the Chester assessment that flood mitigation would be of little use and even possibly detrimental to downstream flood levels for larger storm events (circa 20yr return period or greater). However council will need confirmation that the catchment to be developed under the proposed structure plan will not increase the frequency of flooding at the Falls Road Bridge for events up to the 10 year storm.</p>

From: Michele Perwick
To: BurnetteO@barker.co.nz
Cc: [Peter Vari](#)
Subject: Warkworth North PPC - cl 23 additional information request
Date: Monday, 30 July 2018 4:29:00 p.m.
Attachments: [Att 1 Additional information request Final.pdf](#)
[Att 2 Additional advisory notes Final.pdf](#)
Importance: High

Good afternoon Burnette,

Following Turnstone Capital Ltd's (Turnstone) response to council request for further information, council specialists have now completed an assessment of the further information supplied.

Pursuant to clause 23 of the First Schedule of the Resource Management Act 1991, council does require additional information before it is able to formally consider the request for the Warkworth North private plan change. Additional information is sought in respect of:

- Auckland Unitary Plan (operative in part) (AUP) objectives and policies
- Implementation including:
 - precinct plan
 - stormwater management plan
 - roads and open space networks
 - road network
 - streams
- Section 32 evaluation report
- Urban design
- Geotechnical
- Water quality
- Flooding
- Streams

No further information is sought in respect of the economic and contamination assessments.

The table in Attachment 1 sets out the nature of the additional information requests required and the reasons this request. The table in Attachment 2 provides advisory notes which are designed to assist Turnstone progress this private plan change request.

These matters could have a substantive bearing on the recommendation of any s42A hearing report. Please note that council does not seek to commission any reports in relation to this request.

Should you wish to discuss this matter or seek a meeting to clarify points raised in the attachments or this letter, please do not hesitate to contact the writer.

Regards

Michele

Michele Perwick | Principal Planner

Planning North, West and Islands / Plans and Places

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Visit our website: www.aucklandcouncil.govt.nz

Attachment 1

Additional information requested under clause 23 First Schedule of the Resource Management Act 1991

# ¹	Category of information	Specific Request	Reasons for request
1 (1&15)	Objectives and policies	<p>Provide a more detailed assessment of the AUP objectives and policies of :</p> <ul style="list-style-type: none"> • Regional Policy Statement - B7.3 (Freshwater systems) particularly B7.3.1 Objectives. • Auckland Wide E1 (Water quality and integrated management) particularly policies and E1.3.8-10. <p>In particular provide further information and assessment that supports and qualifies the approach to use hydrological mitigation (equivalent to SMAF1), particularly in relation to reasonable alternative options.</p> <p>This information is expected to justify the application of and appropriateness of each objective and policy in E1 to the proposed greenfield development. (SMAF1). Particular emphasis must be placed on the relationship of the greenfield plan change and hydrological mitigation (equivalent to SMAF1) approach to the appropriateness of policies 8 and 10 in a greenfield application.</p>	<p>Additional assessment is required to better understand how adverse effects of increased hydrology within streams have been avoided and will be mitigated by the proposal.</p> <p>While a planning assessment has been made against the objectives of E1, a planning assessment has not been provided against the E1 policies.</p> <p>The reliance on SMAF to mitigate the effects of hydrological impacts of urban development would seem to align best with the directive standard in policy E1.3.9 for brownfield intensification. Therefore hydrology mitigation (equivalent to SMAF) is not considered an appropriate mitigation (alone) in greenfield development areas.</p> <p>Such an approach is not likely to be supported by Healthy Waters given the existing sensitive stream Policy E1.3.8 is for greenfield developments and requires development to "Avoid as far as practicable, etc.</p> <p>Application of SMAF is one approach to hydrology mitigation but is not necessarily all that can be done to avoid or remedy the adverse effects of development through changes to hydrology. Refer Policy E1.3.10 where regard must be had to the greater opportunity for integrated stormwater management in greenfield areas than smaller developments (like those where hydrology mitigation such as SMAF is considered appropriate in the Plan, i.e. policy E1.3.9).</p>

¹ The numbering used column 1 is the same as that used in the Council's earlier Request for Information dated 30 April 2018

# ¹	Category of information	Specific Request	Reasons for request
2	Implementation	<p>The proposed precinct needs to provide a framework for objectives and policies which link to the precinct rules.</p> <p>Objectives and policies are also required for Sub-Precinct Area.</p> <p>Overlay extensions across the structure plan area also needs to be addressed by the precinct provisions.</p> <p>The activity status of the rules needs to be clearly explained</p> <p>The precinct needs to clearly identify where the rules will apply to specific zones, overlays or Auckland-wide provisions and which rules apply to Sub-Precinct A.</p> <p>Please provide a precinct plan showing all (existing and potential) ecological enhancement opportunities.</p> <p>A rule is proposed that would require all streams and wetland shown on a plan (Plan XX) to be 'protected'. Further information is requested to determine what this protection is, what plan is referred to and what potential opportunities are being lost.</p> <p>Further information is also required on how the applicant intends to respond to the noise mitigation recommendations made by their acoustic consultant</p>	<p>The planning assessment references SMAF1 hydrology mitigation in TR35. However the AUP objectives and policies in E1 now set the outcomes. The AUP has prescribed locations for SMAF as appropriate for brownfields development.</p> <p>The applicant has now provided a precinct plan to manage land use and development.</p> <p>District plans are required under section 75 of the RMA to provide objectives, policies and rules. Precincts by enabling local differences to the zones, overlays and Auckland-wide provisions of the Auckland Unitary Plan must also meet the requirement of s75.</p> <p>Linkages are required between the rules to objectives and policies. The activity status of the rules is needed to determine how the rules will be given effect to.</p> <p>The proposed rules could be challenged in submissions and in the hearing report where they do not meet accepted best practice.</p> <p>The applicant has relied on the underlying zones to convey the key features the precinct is seeking to protect or to provide for. The precinct plan needs to be more explicit in identifying these features; ensuring future subdivision and development applications can be assessed against the precinct provisions.</p> <p>The structure and format of the proposed precinct does not conform to the Auckland Unitary Plan precinct template. A copy of the precinct template is attached to assist the applicant in further developing the precinct provisions.</p>

# ¹	Category of information	Specific Request	Reasons for request
		<p>Jon Styles.</p> <p>The proposed precinct plan needs to identify:</p> <ul style="list-style-type: none"> • the location of the civic space described in the Local Centre rules • protected areas of ecological significance • existing and potential ecological enhancement opportunities • riparian margins • wetlands • potential notable trees (if any) • open space • location of any noise mitigation measures • any other proposed spatial provisions • <p>The rules should be written to ensure they are:</p> <ul style="list-style-type: none"> • within the scope of the RMA • certain and enforceable • do not unlawfully reserve discretion <p>The precinct needs to follow the precinct structure and format of the Auckland Unitary Plan.</p>	
3	Section 32 report	Amend the evaluation report in accordance with section 32 of the RMA.	The additional information and changes sought to the precinct plan provisions are significant and will require the evaluation report to be revisited in order to satisfy the requirements of s32 of the RMA.
4 (2)	Implementation (road and open space networks)	<p>Further address how the proposed precinct plan will accommodate the alignment and function of the Western Collector as a strategic transport connection without being compromised by development.</p> <p>Further address the intended methods for preventing driveway access to the Western Collector Road.</p>	<p>To better understand the ways in which adverse effects may be mitigated.</p> <p>Accommodating the Western Collector The application now includes a precinct plan. The 'indicative collector road' is now shown on the precinct plan map, and there are three associated rules. It is not clear how the rules</p>

# ¹	Category of information	Specific Request	Reasons for request
		<p>Further address the intended methods for enabling an integrated road, including walkways and cycleways, and open space networks within the structure plan area</p> <p>Further address the intended methods to enable a safe and efficient road network, including walking cycling connections, between the two proposed local centre areas and also to the residential and business areas across the proposed Western Collector Road</p>	<p>would be given effect to, or how they relate to subdivision and development within the precinct. One rule includes a reference to a cross-section which is not included. Another rule includes an unclear reference to construction of the Collector Road being proportionally funded. Funding is not a resource management issue</p> <p>The situation with the Western Collector is currently uncertain as the plan change is proceeding ahead of the preferred route being determined by the Strategic Growth Alliance. In addition there is no funding allocated for its construction in the Regional Land Transport Plan. If the plan change is to proceed ahead of these matters being progressed, then the precinct plan provisions need to be flexible.</p> <p>As well as rules relating to the Western Collector, the precinct plan should include a relevant objective and policies.</p> <p>Driveway access to the Western Collector</p> <p>The situation regarding driveway (vehicle crossing) access to the Western Collector is still unclear and further clarification would be helpful. The applicant's specific response to the Council's RFI Appendix 2 states: <i>'Our understanding is that if the Western Collector road is in this or a similar location then it will be a Limited Access Road under s346 of the Local Government Act. With this in mind the development on SF Estate has been designed to facilitate access from other local roads.'</i> However the ITA (p22) suggests that driveway access won't be prevented, but the number of access points will be minimised. If the work of the Strategic Growth Alliance does identify the alignment of the Western Collector Road as being in this location, AT would support controlling vehicle crossings in the precinct plan rules by applying a restricted discretionary status to the construction and use of vehicle crossings on this road.</p>

# ¹	Category of information	Specific Request	Reasons for request
			<p>The applicant's specific response to the Council's RFI Appendix 2 states: <i>'The indicative road layout for the Collector road on the Precinct Plan and related provisions will ensure development on other land holdings will also be designed to access from Local Roads rather than the Western Collector.'</i></p> <p>It is not clear how this statement is given effect to in the precinct plan.</p> <p>Integrated road and open space network</p> <p>The applicant's Neighbourhood Design Statement identifies opportunities for links and connections to the surrounding area (Sanderson Road and Albert Road) and for public roads to be located alongside natural features such as ecological corridors.</p> <p>However, it is not clear how these matters will be given effect to as they are not addressed in the proposed precinct plan.</p> <p>In the absence of developing any spatial information (masterplan) for how the proposed local centre will be developed, the reliance will be on the precinct plan provisions to ensure future land use and subdivision applications adhere to an integrated development outcome for the local centre.</p>
5 (3)	Integrated planning approach	<p>Further explain how the structure plan area will integrate with the wider road network. This would include:</p> <ul style="list-style-type: none"> explaining the relationship between the proposed zones (including types and intensities of land use) and the existing and proposed transport network, including public transport (such an explanation should be included in the ITA) explaining the transport effects of the proposal on the Hill Street/SH1 intersection 	<p>To better assess transport effects and the extent to which integration of transport and land use has been planned.</p> <p>Relationship between proposed zones and transport network</p> <p>The ITA still does not explain the relationship between the proposed zones and the existing and proposed transport network. The applicant's response to Appendix 2 of the Council's RFI indicates that this has been addressed in the updated ITA - however this is not the case.</p> <p>Transport effects</p>

# ¹	Category of information	Specific Request	Reasons for request
		<ul style="list-style-type: none"> identifying and assessing possible future road connections from the plan change area to Viv Davie Martin Drive (west), Hudson Road (east), and possible surplus motorway land (north). These are identified in the structure plan but are not discussed in the ITA. 	<p>Section 5.6 Effect on the local network of the updated ITA (p32) does discuss Jacob's report which includes the Hill Street / SH1 intersection. However this additional information in the ITA does not address the transport effects of the plan change proposal on this intersection. The Jacob's report also has not been named or referenced.</p> <p>Future road connections</p> <p>The application now includes a precinct plan. There are 'potential future road connections' identified on a precinct plan map. There is also a proposed rule stating that 'local road connections shall be enabled to the north, west and east generally as indicated on the Precinct Plan XX'. It is not clear how this rule would be given effect to or how it relates to subdivision and development within the precinct. There is also brief reference to these connections in the updated ITA (section 6.5 Other land beyond this site, p34), but there is no discussion or analysis. The ITA states that the proposed roading layout would provide connections, but it is not clear how this would occur.</p>
6 (4)	Implementation (road network)	<p>Explain how the proposal relies on the funding and completion of the Matakana Link Road.</p> <p>Correction re comment on the Western Collector / SH1 intersection</p>	<p>The applicant's specific response to the Council's RFI Appendix 2 addresses the Ara Tuho-no-Puhoi motorway, and the Western Collector Road, but not the Matakana Link Road.</p> <p>The applicant's specific response to the Council's RFI Appendix 2 states: <i>If the Western Collector is located as shown on the Precinct Plan our understanding is that provision for that intersection has been secured in the NZTA widening works on the existing State Highway 1 related to the motorway extension.</i></p> <p>AT advises that any intersection at this point is likely to be subject to all the standard designation processes, and will</p>

# ¹	Category of information	Specific Request	Reasons for request
7 (2)	Urban design	Further explain how master planning for the local centre is to be enabled, in a way that will ensure a comprehensive development outcome and the aspirations of the Neighbourhood Design Statement (NDS) can be achieved.	<p>require agreements with the landowner (Foodstuffs), and NX2 (Northern Express Group) who are constructing Ara Tūhono.</p> <p>The applicant's NDS (page 21) states future master planning will address:</p> <ul style="list-style-type: none"> • Mix of residential apartment sizes and price points including affordable • A hierarchy of height and varied roof forms • Quality of the built environment. <p>A proposed precinct plan has now been provided which introduces several rules as to how the local centre zone should develop. These rules, including the precinct plan, are not linked to any objectives and policies and their activity status is not known. The precinct does not address the master planning content described in the NDS.</p> <p>In the absence of developing any spatial information (masterplan) for how the proposed local centre will be developed, the reliance will be on the precinct plan provisions to ensure future land use and subdivision applications adhere to a comprehensive development outcome for the local centre.</p>
8 (9& 10)	Geotechnical	<p>Please provide the geological model for Area A (including cross section) that covers the full length of the slope including the large scarp at the crest.</p> <p>Please justify the statements in App 17 section 7.2 that "This area (Area A) is classified as having a medium slope instability potential", and that "Area A would be suitable for residential development in terms of geotechnical constraints" considering this geological model.</p>	<p>The geotechnical section provided in response for Area A only goes half way up the slope, and does not extend to the scarp near the crest discussed in our meeting. This is an important landscape feature likely defining the back of a large landslide. In addition, it is noted in the updated report that, "The mechanism of the large scale feature to the east of the site is difficult to define". This raises a question as to how the suitability of the site for the proposed development has been justified if the mechanism of the landslide isn't understood.</p>

# ¹	Category of information	Specific Request	Reasons for request
9 (16)	Stormwater management approach	<p>The SMP needs to explicitly state what measures are being applied and what assessment there has been on how far each of those measures would go in avoiding, remedying or otherwise mitigating adverse effects of development as directed by E1 policies of the AUP. What residual effects could be expected should the proposed mitigation not be implemented as intended (due to geotechnical constraints for example)</p>	<p>This information is required to understand how adverse effects will be avoided, remedied or mitigated through stormwater management measures.</p>
10 (2)	Implementation	<p>Provide additional information to show how land use and development will be managed to :</p> <ul style="list-style-type: none"> • Avoid -flooding and mitigate downstream flooding effects particularly on the Falls Road bridge during 10year events • Provide stormwater conveyance and development setbacks • Provide stormwater treatment (roads and general) • Avoid stream loss (including encroachment) • Improve stream resilience over a 30 year timeframe • Avoid ecological loss • Encourage ecological advancement 	<p>While some information has been provided it is not sufficient to understand the efficiency and effectiveness of the plan change and also to understand the proposed mitigation in relation to the various bullet points.</p>
11 (16)	Water quality	<p>Further explain how water quality outcomes stated in the AUP will be met, noting that protection of good water quality and progressive improvement of degraded water quality is required.</p>	<p>This matter has not been adequately addressed in the applicant's response. Stormwater measures to meet AUP E9 rules are anticipated but how treatment of the rest of impervious surface will be achieved is not clearly articulated.</p> <p>Some level of treatment is required for low use road (<5000vpd) given the relatively good water quality in the catchment and to meet E1 policies.</p>
12	Streams	<p>Please provide further information on how it is</p>	<p>To better understand the benefits, costs, efficiency,</p>

# ¹	Category of information	Specific Request	Reasons for request
(2)		<p>intended to protect the stream enhancements in perpetuity including any and all relevant agreements in place with key stakeholders, however preliminary.</p> <p>Provide information confirming the type and locations for any devices.</p>	<p>effectiveness and possible alternatives to the proposal and effects on the environment and mitigations for stormwater runoff.</p>
13	Flooding	<p>Provide information demonstrating</p> <ul style="list-style-type: none"> • 1%AEP floodplain extent, • flood sensitive areas extent and • floodplain extents along watercourses <p>In the pre-development scenario and the post-development and Maximum Probable Development catchment scenarios.</p>	<p>To understand the how the proposal will mitigate flooding effects.</p> <p>Identification and assessment of these potential issues may require additional mitigations to be included. This information is considered necessary given the scale, intensity and current proposed mitigations to understand the effects and mitigations appropriately.</p>
15	Streams	<p>Provide further assessment to demonstrate effects on watercourses and how those effects will be mitigated. It is expected a proper SEV and ECR assessment is undertaken and provided to account for these effects in accordance with best practice and AUP requirements.</p>	<p>To understand what effects exist on streams and what mitigation is proposed.</p> <p>The Bioresearches report states minor discrepancies in stream classification transition points were discussed with Healthy Waters. However, this relates merely to classification and not assessment to understand effects. Assessment extends beyond stream classification and includes quantifying the effects and the extent to which those effects will be mitigated. Best practice effects assessment (as set out in the AUP Structure Plan Guidelines (Appendix 1) includes evaluation/investigation and not only identification.</p>
16	Streams	<p>Provide further information to support the assertion that the stream loss cannot practicably be avoided.</p>	<p>Avoidance has not yet been demonstrated by the applicant, which is required by E3 of the AUP.</p> <p>Further information is requested to justify that the proposed development is unsustainable without the stream loss and that the stream loss does represent a sustainable use of natural resources.</p>

# ¹	Category of information	Specific Request	Reasons for request
17 (17)	Streams	Provide further information on the existing and potential values of all watercourses and the associated values to determine the base line against which effects have been assessed.	<p>In considering your response, please note that a current degraded state is not considered to be the relevant baseline to consider environmental effects and as yet, no alternative routes or options have been discussed in the application material.</p> <p>A recurring theme through the application documents is the downplaying of the value of the watercourses within the subject area which is not supported by a clear and robust assessment methodology.</p> <p>Auckland Council promotes the use of the robust and well tested SEV/ECR methodology as described in Auckland Council TR2016/023 for intermittent streams and TR2011/009 for permanent streams which are well tested, robust and multi-faceted approaches.</p>
18 (17)	Streams	<p>Provide further information to support the methodology used to determine that no-net-loss of ecological function will be achieved.</p> <p>Provide further information to justify why the freshwater related impacts and enhancements are not matched on a like-for-like basis.</p> <p>Please include supporting information to justify the assertion that permanent streams have a higher value than intermittent streams, an assertion that is not supported by Auckland Council at this time.</p>	<p>Whilst the AUP does recognise the use of the Guidelines on Good Practice in Biodiversity Offsetting (GGPBO), the GGPBO still requires transparent accounting processes to support the no-net-loss assessment. One available method of providing this detail is the Biodiversity Offset Accounting Model that has been developed to support the GGPBO (2014). No such alternative transparent accounting model has been presented as part of the application.</p>
19 (17 & 19)	Streams	Provide further information on the environmental enhancement actions that would occur as a result of	At present whilst the area of stream loss is reported, but under described and assessed, the corresponding environmental enhancements are not addressed, and where

# ¹	Category of information	Specific Request	Reasons for request
		the future development of this area.	<p>reported are heavily caveated.</p> <p>Please note that Auckland Council does not support the use of stormwater devices as ecological compensation as the values enhanced do not relate to those impacted as a stormwater treatment device does not replace a natural system. In addition the practicalities of a stormwater device such as the need for on-going maintenance and poor water quality are not appropriate environments for freshwater enhancement actions.</p>
20 (17)	Streams	Further information is requested to support the assertion that the loss of 386m2 of intermittent stream and wetland habitat 'modification' does not have significant ecological effects.	Given the comments above around the need to consider potential values, enhancement actions and the concerns raised around the ECR assessment and assessment methodology it is considered that this statement cannot be supported at this time.
21 (1, 2, 3 & 17)	Implementation and streams	<p>Further information demonstrating (identifying, investigating and addressing) how freshwater and terrestrial ecological enhancement and restoration will be implemented through development in support of AUP policies.</p> <p>How mitigation for residual adverse effects resulting from development will be done within the site or offset. Information needs to include assessment of stream values across the full spectrum of stream values and a robust methodology for offsetting or compensation for residual adverse effects</p>	<p>The BioResearch's report outlined general methods for ecological enhancement (including native planting) and a range of in-stream structures that can be implemented in any stream but has failed to demonstrate the type and location of restorations and enhancements that will be provided within the subject site. Effects may be as a result of construction effects and also avoiding, remedying and mitigating long term effects of development within streams (ie. stream enhancement for resilience). Therefore, adverse effects of the plan change on stream values, functions and ecology within the site are not demonstrated to be mitigated, nor positive effects are fully accounted. Providing certainty on these matters will assist the assessor to understand the application and its effects. This may be proposed by way of SMP and precinct plan rules.</p>

Attachment 2

Additional advisory notes in response to further information received from the applicant

# ¹	Category of information	Advice	Reasons for advice
1	Notable Trees	<p>Ecology Supplementary Report (North Warkworth Structure Plan) 21 June 2018</p> <p>The section on Notable Trees (Appendix 3: Advisory Note, Table 4) needs to be completed in accordance with Auckland Council's 'Guidance for Nominating a Notable Tree for Evaluation' and 'Notable Tree Assessment Form' (both attached)</p>	<p>This issue has not been adequately addressed. It appears that the consultants have simply used the existing notable tree layer, which did not include areas of Future Urban considerations. Auckland Council has compiled a new method and criteria for adding trees to the Schedule and this was formally adopted via the PAUP notified hearing process. Trees in the proposed area need to be assessed against this adopted methodology.</p>
2	S32 evaluation	Please update documentation and provide two hard copies of the final application to council	This will avoid confusion with superseded documents and assist council staff and councillors in considering this request.
3 (4)	Transport (ITA)	Identify in the ITA the possible future layout of internal roads to service development	<p>While this information does appear in other application documents, it is also expected to be explicitly addressed in the ITA. Identification of internal roads allows a better assessment of traffic effects and the extent to which integration of transport and land use has been planned for.</p> <p>The applicant's response to Appendix 3 of the Council's RFI indicates that this has been addressed in the updated ITA - however this is not the case.</p>
4 (5)	Transport (ITA) modelling	Undertake additional transportation modelling. Apart from one intersection where SIDRA has been used, the modelling is quite high level using ART. Lower level modelling such as SATURN and SIDRA is appropriate for an ITA.	<p>To better assess transport effects.</p> <p>The only additional information included in the updated ITA on this matter is a paragraph about the (unreferenced and unnamed) Jacob's report related to the Matakana Link Road project (see Section 5.6 Effect on the local network, p32 of the ITA). Additional modelling is still needed.</p>

¹ The numbering in brackets used column 1 is the same as that used in the Council's earlier Request for Information dated 30 April 2018

# ¹	Category of information	Advice	Reasons for advice
6 (7)	Transport (ITA) modelling	Review and amend the comments in Section 5.4 Key intersection analysis, about the congestion for the side roads, and the alternative routes. In the case of Falls Road, the western side exits at a ford (partly submerged stream crossing).	To better assess transport effects. The applicant's response to Appendix 3 of the Council's RFI indicates that this has been addressed in the updated ITA - however this is not the case.
7 (9)	Transport (ITA) - Western Collector	<p>Previous advice was to further consider the implications of the Western Collector Road passing through the Local Centre, particularly the effects on the efficiency of the Western Collector Road. AT generally does not support locating new centres around new arterial roads.</p> <p>However it appears from the new Precinct Plan map that the Western Collector Road would not pass through the centre, but instead be located on the western boundary of the centre zoning. This is not consistent with the cross-section shown on p20 of the ITA. This cross section shows commercial development on both sides of the road. The Section 32 Report (p50) also does note that the Local Centre does interface with the Mixed Housing Urban zone on western side of the Western Collector Road. The location of the Local Centre zone in relation to the Western Collector Road should be clarified. In comparing Figure 25 Proposed structure plan, from the updated Neighbourhood Design Statement, with the previous version of this figure, it is evident that the indicative location of the Western Collector has shifted to the west. The section locations and collector road residential cross-sections on p23 and 24 of the ITA need to be reviewed accordingly. The cross-sections still assume that open space reserve would be located along the eastern side of the road, and that much of the</p>	<p>To better assess transport effects and the extent to which integration of transport and land use has been planned for.</p> <p>The applicant's response to Appendix 3 of the Council's RFI indicates that the previous advice has been addressed in the updated ITA - however this is not the case. A sentence has been added at the end of Section 4.7.3 Western Collector commercial area cross section (p21 of the ITA), but its meaning is unclear.</p> <p>To clarify the indicative location of the Western Collector and ensure consistency between the ITA, the precinct plan map, and the Neighbourhood Design Statement.</p>

# ¹	Category of information	Advice	Reasons for advice
8 (16)	Transport (ITA) - format / edit	<p>footpath south of the commercial area could be provided in the open space rather than within the road reserve.</p> <p>ITA would still benefit from the inclusion of a figure showing the proposed zoning plan in the ITA so that the relationship between the zoning pattern and the transport network can be better understood while reading the ITA.</p> <p>There is still an incorrect reference to Appendix 4 (appears it should be Appendix 3) in last paragraph of 5.4 Key intersection analysis.</p> <p>There are noticeable spelling and grammar errors in the new material added. Suggest that these be corrected before public release of this document.</p>	To assist the reader.
9 (46)	Climate change	<p>Further demonstrate how the Auckland Unitary Plan RPS objectives and policies relating to responding and adapting to the impacts of climate change are to be considered and addressed in the structure plan and how any response will be given effect to.</p> <p>The relevant RPS objectives and policies are:</p> <ul style="list-style-type: none"> • B2.3. A quality built environment • B10.2. Natural hazards and climate change 	<p>The effects of climate change should be recognised and provided for to avoid the creation of new risks to people, property and infrastructure.</p> <p>An assessment should also consider the NIWA report 'Auckland region climate change projections and impacts' (see link below). It should be noted that while extreme rainfall intensity is one of the projected impacts of climate change, as recognised by the applicant, other impacts should also be considered and appropriate responses to adapt to these impacts demonstrated in the design response and structure plan proposal.</p> <p>http://www.knowledgeauckland.org.nz/publication/?mid=1747</p>

# ¹	Category of information	Advice	Reasons for advice
10 (47)	Flood plain	Provide further information explaining that the Falls Road bridge will not be overtopped at an increased frequency as a result of the proposed development.	Repeated from the original RFI. The flood modelling demonstrated mitigation of peak flows but did not clearly address the frequency question.

16 October 2018

Auckland Council
Private Bag 92300
Victoria Street West
AUCKLAND 1142

Attention: Michele Perwick

Dear Michele,

This cover letter advises of the attachments and additional assessments that we are providing in full response to the Council's second request for further information and advisory notes received on 30th July 2018.

The following is provided in response:

- Response to transport related questions prepared by Harrison Grierson, dated 12 October 2018.
- Engineering response prepared by Chester Consultants dated 18th September 2018.
- Ecology Supplementary report – Freshwater Compensation, dated 4 October 2018.
- Notable Trees assessment prepared by Tree Consultancy.
- Updated Precinct provisions and precinct plans.
- Geotechnical response prepared by KGA dated 3 August 2018
- Updated s32 analysis and s32 Assessment Table, both showing track changes for your reading ease.

The above assessments provide full response to all matters raised. Once we have feedback from Council of the acceptability of the information our team will finalise the technical reports so that there is just one technical report for each discipline that reflects and incorporates the responses provided to the RFI and Advisory notes.

The only additional matter raised is that of the acoustic effects of the motorway on future development. I have further checked with Mr. Jon Styles and he confirms that my understanding is correct in that the proposed plan change meets the NZTA standards and therefore mitigation is not required. This outcomes was already reflected in the previous s32 sent to Council in July 2018 and therefore no further changes have been incorporated. Given this statement of fact there is no need to address the issue of noise and reverse



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sensitivity with respect to the motorway any further and consequently the Warkworth North Precinct does not propose any noise rules.

I trust that the response is clear and answers all of the questions posed by the Council team.

We optimistically look forward to progressing the plan change to notification as soon as possible.

Yours faithfully

Barker & Associates Ltd



Burnette O'Connor

Senior Associate

Mob: 021 422 346

Email: burnetteo@barker.co.nz

B&A

Urban & Environmental

ATTACHMENT 8

**COUNCILS DECISION TO ACCEPT
PPC25 FOR PROCESSING**

Auckland Unitary Plan (Operative in Part) - Private Plan Change Request from Turnstone Capital Limited – Warkworth North

An amended agenda Attachment E was tabled and a PowerPoint presentation was provided. Copies have been placed on the official minutes and are available on the Auckland Council website minutes attachments.

Note: changes to the original motion were incorporated under subclause a) ii) and the addition of new subclauses a) iv), a) v) and a) vi), with the agreement of the meeting.

MOVED by Chairperson C Darby, seconded by Deputy Chairperson R Hills:

That the Planning Committee:

- a) accept the private plan change request by Turnstone Capital Limited for Warkworth North, included as Attachments A and B to the agenda report, pursuant to clause 25(2)(b) of Schedule 1 to the Resource Management Act for the following reasons:
- i) The proposal does not undermine the Auckland Plan 2050 (2018) or the Future Urban Land Supply Strategy (2017) in terms of the timing of development and provision of bulk infrastructure.
 - ii) Overall, the bulk infrastructure required for the Warkworth North is advancing, with key water and transport elements already under construction.
 - iii) The applicant has prepared a structure plan to inform the plan change in accordance with Appendix 1 Structure Plan Guidelines of the Auckland Unitary Plan.
 - iv) the council can make a submission on the private plan change to seek that it aligns with the council's Warkworth Structure Plan and address any outstanding infrastructure issues.
 - v) the council's own plan change process for Warkworth North may ultimately join or supersede the private plan change.
 - vi) council notes that the applicant recognises the benefit of delaying notification until further progress has been made on the Warkworth Structure Plan.
 - vii) The request does not meet the criteria for rejection under clause 25(4) of the Schedule 1 of the RMA (having regard to relevant case law). It is not possible to deal with the request as a resource application as the request seeks to rezone land, and it is more appropriate to accept the request than adopt it given the need for further progress to be made with the council's Warkworth Structure Plan and associated infrastructure planning/funding decisions.
- b) delegate authority to the Manager North West and Islands Planning to undertake the required notification and other statutory processes associated with processing the private plan change request by Turnstone Capital Limited pursuant to Schedule 1 of the Resource Management Act 1991.

MOVED by Cr C Casey, seconded by Cr W Walker, an amendment to subclause a) vi) by way of replacement:

- vi) council notes that while the applicant recognises the benefit of delaying notification until after the close of submissions on the Warkworth Structure Plan, the applicant is requested to review the submissions and make consequential amendments to their proposal for notification.

A division was called for, voting on which was as follows:

For

Cr J Bartley
Cr C Casey
Cr M Lee
Cr G Sayers
Cr S Stewart
Cr W Walker
Cr J Watson
Cr P Young

Against

Deputy Mayor BC Cashmore
Cr R Clow
Cr L Cooper
Chairperson C Darby
Cr A Filipaina
Mayor P Goff
Deputy Chairperson R Hills
Cr P Hulse

Abstained

IMSB Member T Henare
IMSB Member L Ngamane

Cr D Newman
 Cr D Simpson
 Cr J Walker

The motion was declared LOST by 8 votes to 11.

The substantive motion was put.

Resolution number PLA/2019/4

MOVED by Chairperson C Darby, seconded by Deputy Chairperson R Hills:

That the Planning Committee:

- a) **accept the private plan change request by Turnstone Capital Limited for Warkworth North, included as Attachments A and B to the agenda report, pursuant to clause 25(2)(b) of Schedule 1 to the Resource Management Act for the following reasons:**
- i) **The proposal does not undermine the Auckland Plan 2050 (2018) or the Future Urban Land Supply Strategy (2017) in terms of the timing of development and provision of bulk infrastructure.**
 - ii) **Overall, the bulk infrastructure required for the Warkworth North is advancing, with key water and transport elements already under construction.**
 - iii) **The applicant has prepared a structure plan to inform the plan change in accordance with Appendix 1 Structure Plan Guidelines of the Auckland Unitary Plan.**
 - iv) **the council can make a submission on the private plan change to seek that it aligns with the council's Warkworth Structure Plan and address any outstanding infrastructure issues.**
 - v) **the council's own plan change process for Warkworth North may ultimately join or supersede the private plan change.**
 - vi) **council notes that the applicant recognises the benefit of delaying notification until further progress has been made on the Warkworth Structure Plan.**
 - vii) **The request does not meet the criteria for rejection under clause 25(4) of the Schedule 1 of the RMA (having regard to relevant case law). It is not possible to deal with the request as a resource application as the request seeks to rezone land, and it is more appropriate to accept the request than adopt it given the need for further progress to be made with the council's Warkworth Structure Plan and associated infrastructure planning/funding decisions.**
- b) **delegate authority to the Manager North West and Islands Planning to undertake the required notification and other statutory processes associated with processing the private plan change request by Turnstone Capital Limited pursuant to Schedule 1 of the Resource Management Act 1991.**

CARRIED

Note: Pursuant to Standing Order 1.8.6 the following councillors requested that their dissenting votes be recorded:

- Cr C Casey
- Cr D Newman against subclauses a) iv), a) v) and a vi)
- Cr W Walker

Attachments

- A 5 February 2019, Planning Committee: Item 9 - Auckland Unitary Plan (Operative in Part) - Private Plan Change Request from Turnstone Capital Limited – Warkworth North, Item 9 Warkworth tabled document - Letter Agreeing to Process for Notification
- B 5 February 2019, Planning Committee: Item 9 - Auckland Unitary Plan (Operative in Part) - Private Plan Change Request from Turnstone Capital Limited, presentation

ATTACHMENT 9

ADOPTED WARKWORTH STRUCTURE PLAN JUNE 2019

Warkworth Structure Plan

June 2019



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1 Summary

Auckland is growing rapidly and to accommodate a portion of the region's growth Warkworth has been identified as a Satellite Town and earmarked to support significant future business and residential development. Around 1,000ha's of land immediately surrounding Warkworth has been zoned Future Urban. Before any urban development of the Future Urban zone can occur, the land must be structure planned.

The Warkworth Structure Plan sets out a pattern of land uses and the supporting infrastructure network for the Future Urban zoned land around Warkworth. The plan has been prepared in the context of the existing town of Warkworth and seeks to weave the new development areas back into the fabric of the existing urban area.

The structure plan set out in this document builds on the opportunities and constraints in and around the Future Urban zone. It also has taken into account feedback from a number of public engagement stages, including community workshops held to generate ideas for how Warkworth's Future Urban zone could be laid out and public feedback on a draft version of the plan. It also responds to the feedback from Hui with the relevant iwi.

Some of the key high-level features of the Warkworth Structure Plan include:

- Ecological and stormwater areas are set aside from any built urban development.
- The new residential areas across the Future Urban zone enable around 7,500 dwellings¹ and offer a range of living types from spacious sections around the fringe to more intensive dwellings such as town houses and apartments around the new small centres and along public transport routes.
- Warkworth's local and rural character is protected through various measures including provisions to protect the bush-clad town centre backdrop by the Mahurangi River and retaining the Morrison's Heritage Orchard as a rural feature of the town.
- New employment areas are identified, comprising land for new industry (e.g. warehousing, manufacturing, wholesalers, repair services) and land for small centres (e.g. convenience retail, local offices, restaurants/cafés). The existing Warkworth town centre by the Mahurangi River will remain as the focal point of the town.

The land uses are supported by infrastructure including:

- Prioritising active transport in Warkworth through a separated walking and cycling network providing connectivity to new and existing centres, employment areas, schools and public transport stations.
- A roading network including a potential southern interchange on Ara Tūhono – Pūhoi to Warkworth (south facing ramps only).
- A public transport network built upon the recently introduced 'New Network for Warkworth' and in the long term has a bus station/interchange in Warkworth's southern Local Centre and a Park and Ride near the potential Ara Tūhono – Pūhoi to Warkworth southern interchange.

¹ Refer to the yield calculations in **Appendix 3**

- Other infrastructure providers for utilities such as wastewater, water, power supply, telephone, broadband, community facilities, schools, and healthcare have plans underway to service the planned growth of Warkworth.

The development of Warkworth's Future Urban zone will occur over the long-term and is sequenced in stages over the next 20 years as bulk infrastructure capacity allows.

This structure plan will be implemented through a series of plan changes to rezone the Future Urban zone in accordance with land use indications in the final adopted Warkworth Structure Plan.

The features of the Warkworth Structure Plan are shown on the maps in Figures 1-5.

The remainder of this plan is divided into two further sections. Section 2 introduces the context for the Warkworth Structure Plan including the study area and process followed to prepare it. Section 3 sets out the vision and planning principles for the structure plan area and outlines the structure plan itself, describing in detail the elements that are shown on the structure plan maps.

Appendices 1-4 cover the background and explanatory information that led to the structure plan identified in section 3. Together, these sections cover the material required to be considered in the Auckland Unitary Plan's Structure Plan Guidelines.

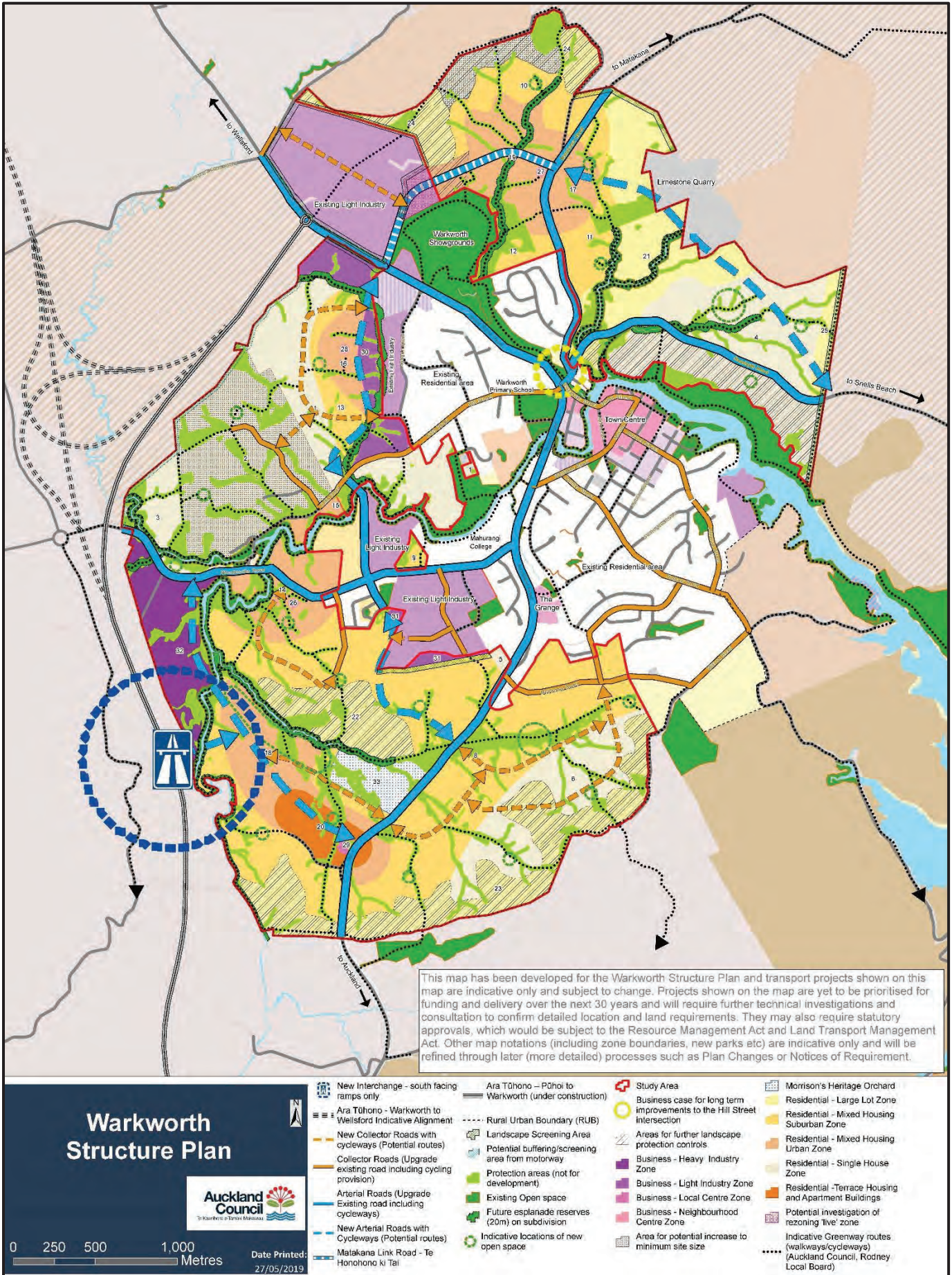


Figure 1: Warkworth Structure Plan – Land use plan

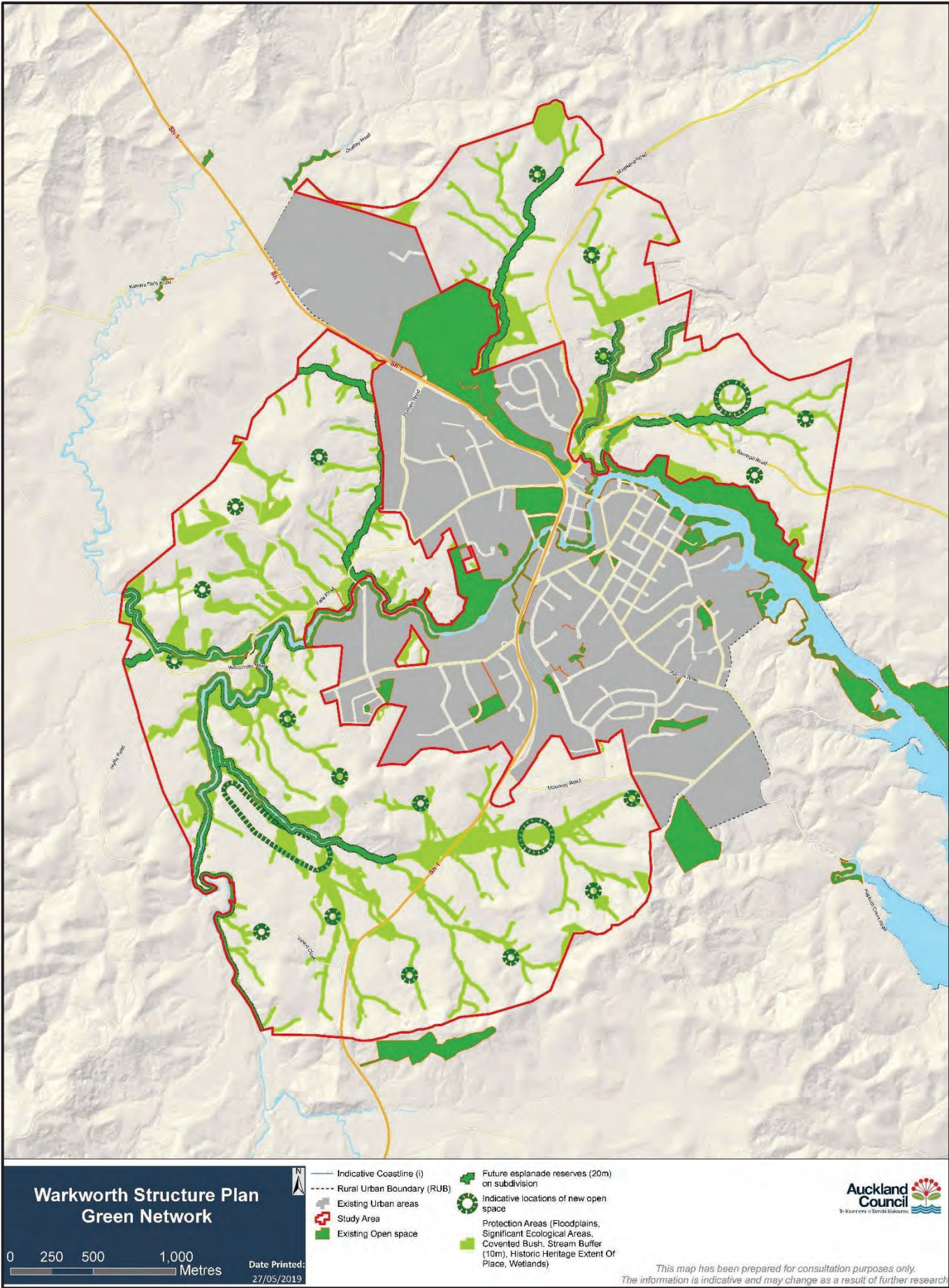


Figure 2: Warkworth Structure Plan – Green Network plan

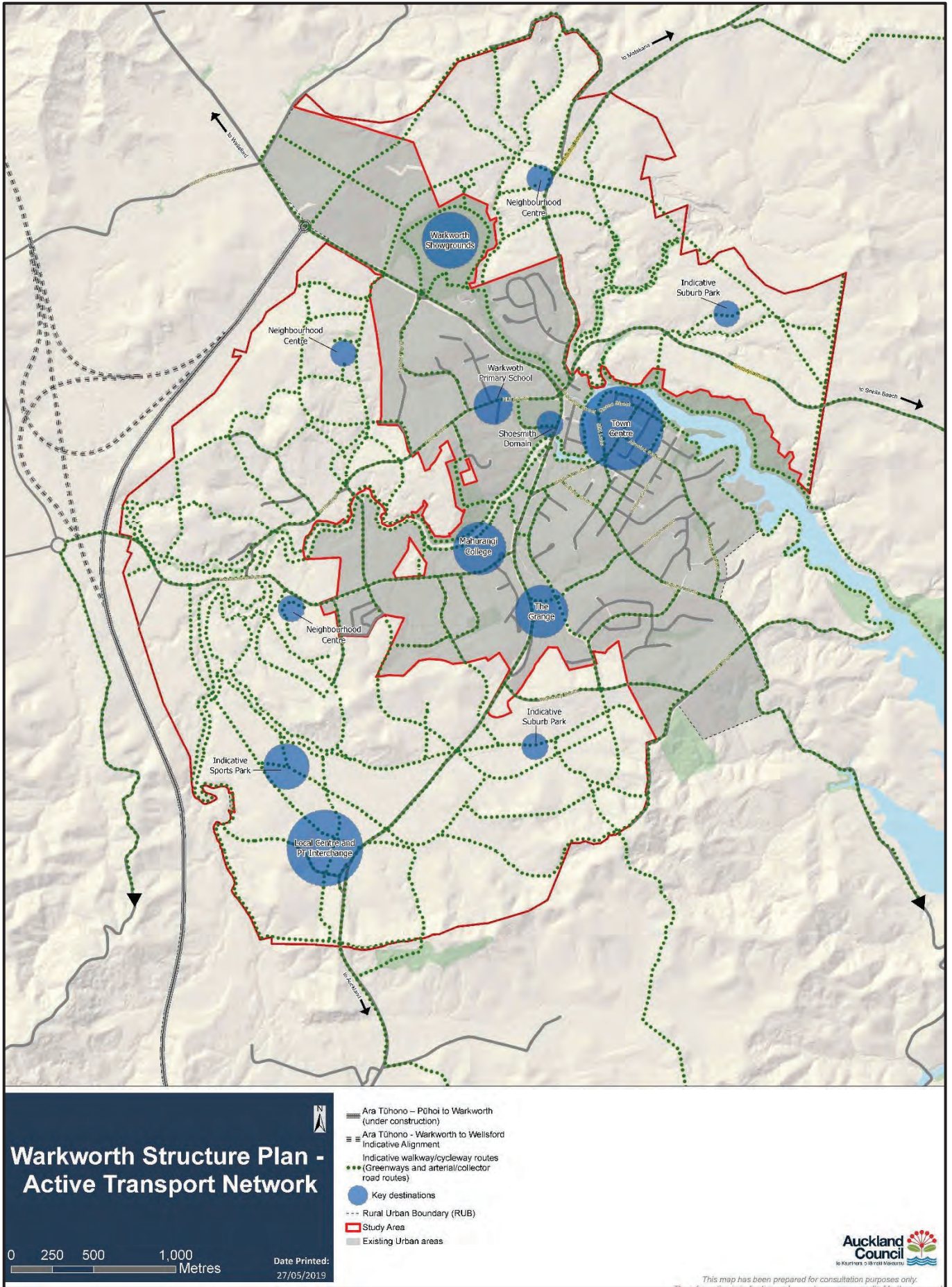


Figure 3: Warkworth Structure Plan – Active transport network plan

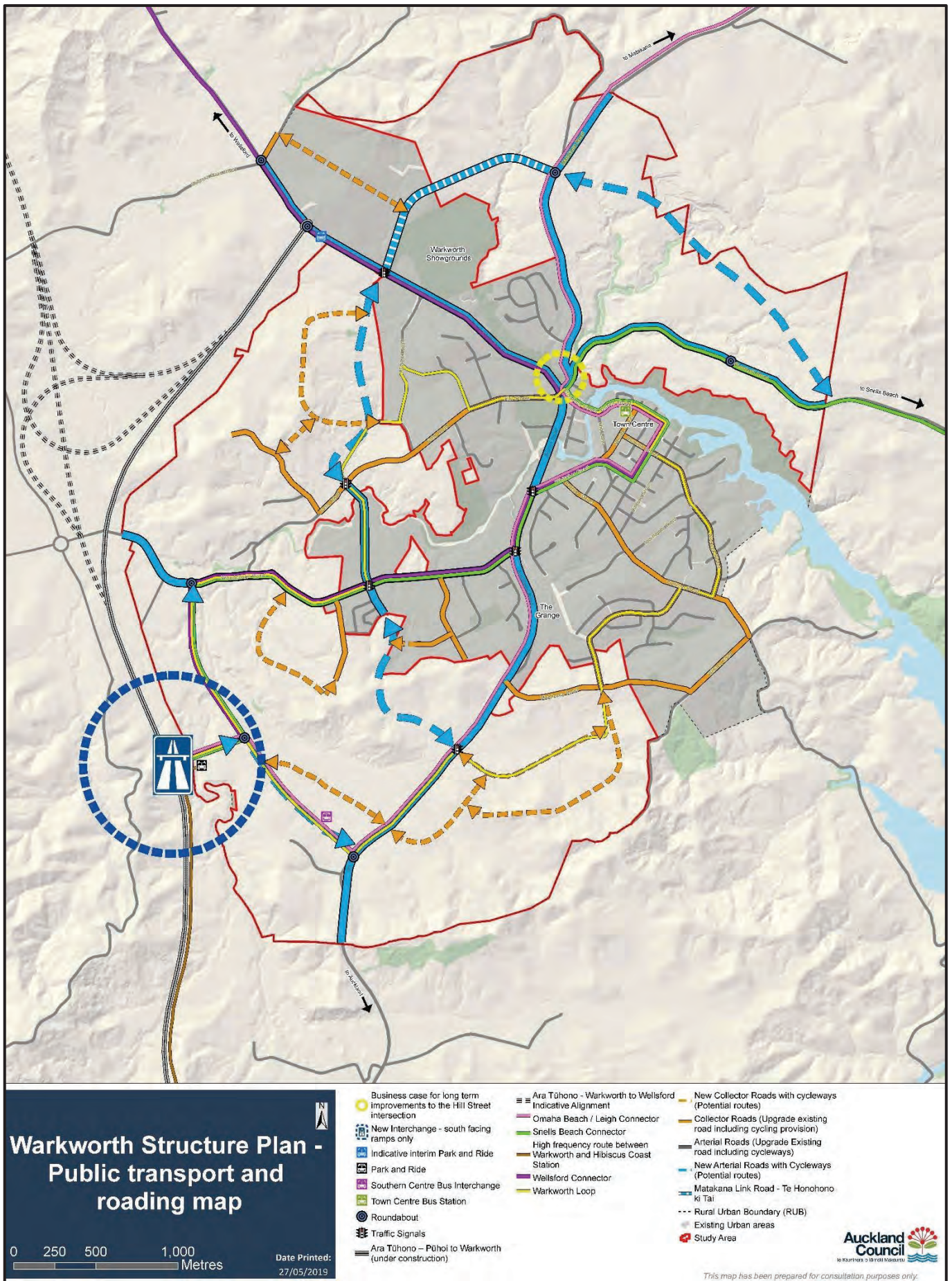


Figure 4: Warkworth Structure Plan – Public transport and roading plan

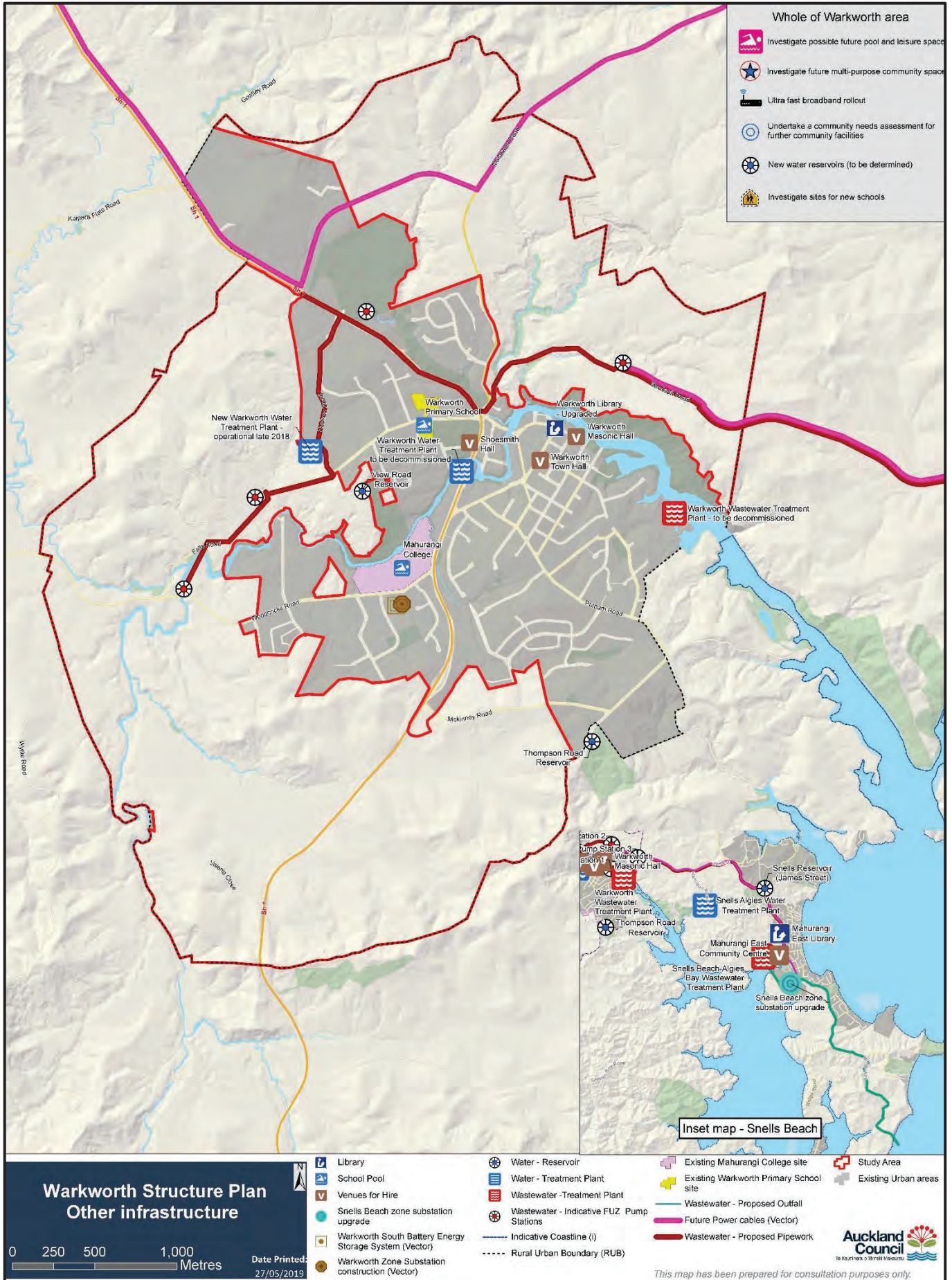


Figure 5: Warkworth Structure Plan – Other infrastructure plan

2 Introduction

2.1 What is the growth challenge?

Around 1.66 million people currently live in Auckland. Over the next 30 years this number is forecast to grow by another 720,000 people to reach 2.4 million.²

The rate and speed of Auckland's population growth puts pressure on our communities, our environment, our housing and our roads. It means increasing demand for space, infrastructure and services. The challenge for Auckland is where people will live and how they will move around.

Auckland will follow a quality compact urban form approach to growth to realise the environmental, social and economic benefits and opportunities this approach brings. That is, Auckland will largely grow 'up' through intensification of identified areas within the existing urban footprint while also growing 'out' through some earmarked greenfield development. The Warkworth Structure Plan fits into the growth picture as part of this greenfield development.

Auckland will look very different in 30 years. Its urban footprint will include significant redevelopment and intensification of parts of the existing urban area as well as newly established communities in the future urban areas. There will also be a small amount of additional growth in rural areas outside of the urban footprint.

Approximately 313,000 new dwellings and 263,000 additional jobs will be needed to accommodate the growing Auckland population over the next 30 years. The Auckland Plan 2050 anticipates that around 32 per cent of growth will occur in future urban areas³. This means that within the future urban areas approximately 99,000 dwellings are anticipated and around 1,400 hectares of business land is needed.

Warkworth has been identified as a Satellite Town in the Auckland Plan to act as a rural node. It will service the surrounding rural communities within a large rural catchment, is connected to urban Auckland through State Highway 1, and will support significant business and residential growth.

The Auckland Unitary Plan Operative in Part 2016 (**'Auckland Unitary Plan'**) has zoned around 1,000ha of currently rural land around Warkworth as Future Urban. This land will cater for greenfield growth around the town over the next 30 years. The Auckland Plan anticipates that the Future Urban zoned areas surrounding Warkworth town could accommodate approximately 7,500 additional dwellings, or an additional 20,000 people.

² This is based on Auckland Council's Land Use Scenario i11 which is a numerical representation of the future distribution of Auckland's population and households. It has taken into account Statistics NZ's regional population projections released in March 2017, as well as data from the 2013 Census on average household sizes, and information from Auckland Council's Future Urban Land Supply Strategy.

³ The balance of development is anticipated in rural areas (6%) and within the existing urban area (62%).

Significant future employment growth is anticipated alongside residential growth. Before any urban development of the Future Urban zone can occur, the Auckland Unitary Plan requires that the land must be structure planned.

2.2 What is a structure plan?

A structure plan guides future urban development of an area. It is a non-statutory high-level plan that shows how an area of land can be urbanised taking into account constraints and opportunities. It shows the arrangement of various land uses and infrastructure. It also shows how the area connects to adjacent urban areas and wider infrastructure networks.

The Warkworth Structure Plan sets out a pattern of land use and a network of transport and other infrastructure for the future urban zoned land. This structure plan will be the foundation to inform future plan changes to rezone the land.

2.3 What is the structure plan study area?

The structure plan study area is the land zoned Future Urban under the Auckland Unitary Plan. It comprises around 1,000ha of land and is shown outlined in purple on Figure 6 below.

The outer edge of the study area follows the Rural Urban Boundary ('RUB'). The RUB is a planning tool which provides long term (30 year) certainty to landowners on either side of the boundary about the development potential of their land (i.e. clearly signalling to landowners, developers, and the wider community the areas where growth is expected to occur so people can make investment or lifestyle decisions, giving confidence to farmers outside the RUB to invest in rural production improvements to their land, and also assisting infrastructure providers to plan and invest in large bulk infrastructure projects.

The inner edge of the study area is made up of the existing 'live' urban zones in the Auckland Unitary Plan – a mixture of residential, business and open space zones.

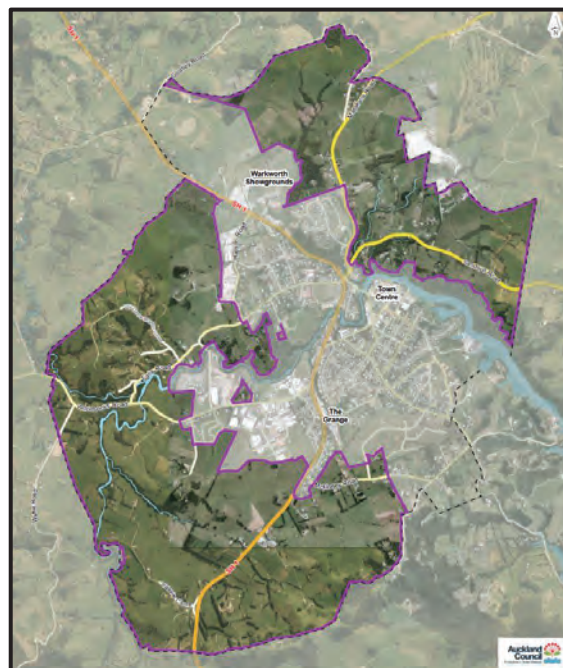


Figure 6: Warkworth Structure Plan study area – the Future Urban zone (outlined in purple)

2.4 How does the plan relate to the existing urban area of Warkworth?

Warkworth is currently a small rural town of around 5,000 residents⁴ located approximately 60km from central Auckland.

Much of Warkworth's existing urban footprint is concentrated around the town centre and the Mahurangi River. Residential uses surround the town centre and there are small pockets of light industrial land in the outskirts of the existing urban footprint. The large Future Urban zone surrounds the existing town of Warkworth to the north, west and south.

While the existing area of Warkworth has an urban built form, the Future Urban zone around the town is currently of a rural nature, being mostly a mix of lifestyle blocks and larger blocks for rural production activities.

While the structure plan project focusses specifically on the Future Urban zone, it has not been prepared in a vacuum. The land uses in the Warkworth Structure Plan have been prepared recognising and acknowledging the existing town of Warkworth. The infrastructure networks required to service the growth have been planned to accommodate not just the Future Urban zone, but also the existing town. The new residents and businesses that settle in the Future Urban zone will be a part of Warkworth. The Future Urban zone builds on Warkworth, expanding the town rather than creating a separate and distinct area. This is particularly the case with the Warkworth town centre which will remain the primary centre for the town even with the growth in the Future Urban zone.

The plan seeks to weave the new urban areas back into the fabric of the existing urban area. Special attention has been paid to the land uses at the interface of existing urban area and the Future Urban zone as outlined in section 3.3.10.9 of this document.

2.5 What is the structure plan process?

The structure planning process began in December 2017. In the first phase, a series of technical 'topic reports' were prepared to understand the existing environment within the study area and the opportunities and constraints for development. A summary of the opportunities and constraints identified by these technical reports is provided in **Appendix 4** (section 4.3). A list of all the supporting documents to the Warkworth Structure Plan is included in **Appendix 1**.

During April 2018, the initial phase of public consultation for the project was undertaken. The purpose of this was to:

- promote awareness of the Warkworth Structure Plan project;
- receive comments on the topic reports prepared by specialists within council; and

⁴ Within the Warkworth Census Area Unit, which does not include the future urban zoned land

- gain a local perspective on what is valued in Warkworth and potential opportunities and constraints associated with its growth.

A summary of this consultation is provided in **Appendix 4** (section 4.4.1).

The third phase of the structure plan was running community structure plan workshops in June 2018. The purpose of the workshops was to involve the public in 'hands-on' sessions to generate ideas on how the Warkworth Structure Plan could look in terms of a land use layout and supporting infrastructure. A summary of the community workshops is provided in **Appendix 4** (section 4.4.2).

The council then reported back to the community in August 2018 through two open days to summarise the outcomes of the workshops. This was the fourth phase of the project and a summary of this consultation is provided in **Appendix 4** (section 4.4.3).

The fifth phase of the project was developing the draft plan for consultation. The draft plan was shaped using inputs from the topic reports (opportunities and constraints), consultation feedback (April 2018), the community workshops ideas, and internal workshops. Further detail on how the draft plan was developed is provided in **Appendix 4** (section 4.5).

The sixth phase of the project was to get feedback from the community on the draft Warkworth Structure Plan. Further detail on the consultation on the draft plan is provided in **Appendix 4** (section 4.4.4).

The seventh and final phase of the Warkworth Structure Plan project was to review the feedback on the draft plan and make any required amendments to the structure plan. Further detail on this process is covered in **Appendix 4** (section 4.5).

The Warkworth Structure Plan was adopted by the council's Planning Committee on 4 June 2019.

The implementation of the structure plan starts with the preparation of a plan change to the Auckland Unitary Plan to change the current Future Urban zone to the appropriate urban zones. This will be done in stages as guided by the structure plan and the council's Future Urban Land Supply Strategy (2017). The Warkworth North area will be the subject of the first plan change. This work could commence when it is clear that the appropriate funding for infrastructure is confirmed.

The plan changes will be prepared in accordance with the first schedule of the Resource Management Act 1991 ('**RMA**'). During the plan change process more detailed matters will be determined and there will be opportunity for residents and other stakeholders to again have their say. Further information on the potential content of the Warkworth North plan change is provided in Section 3.5.3.1 of this document.

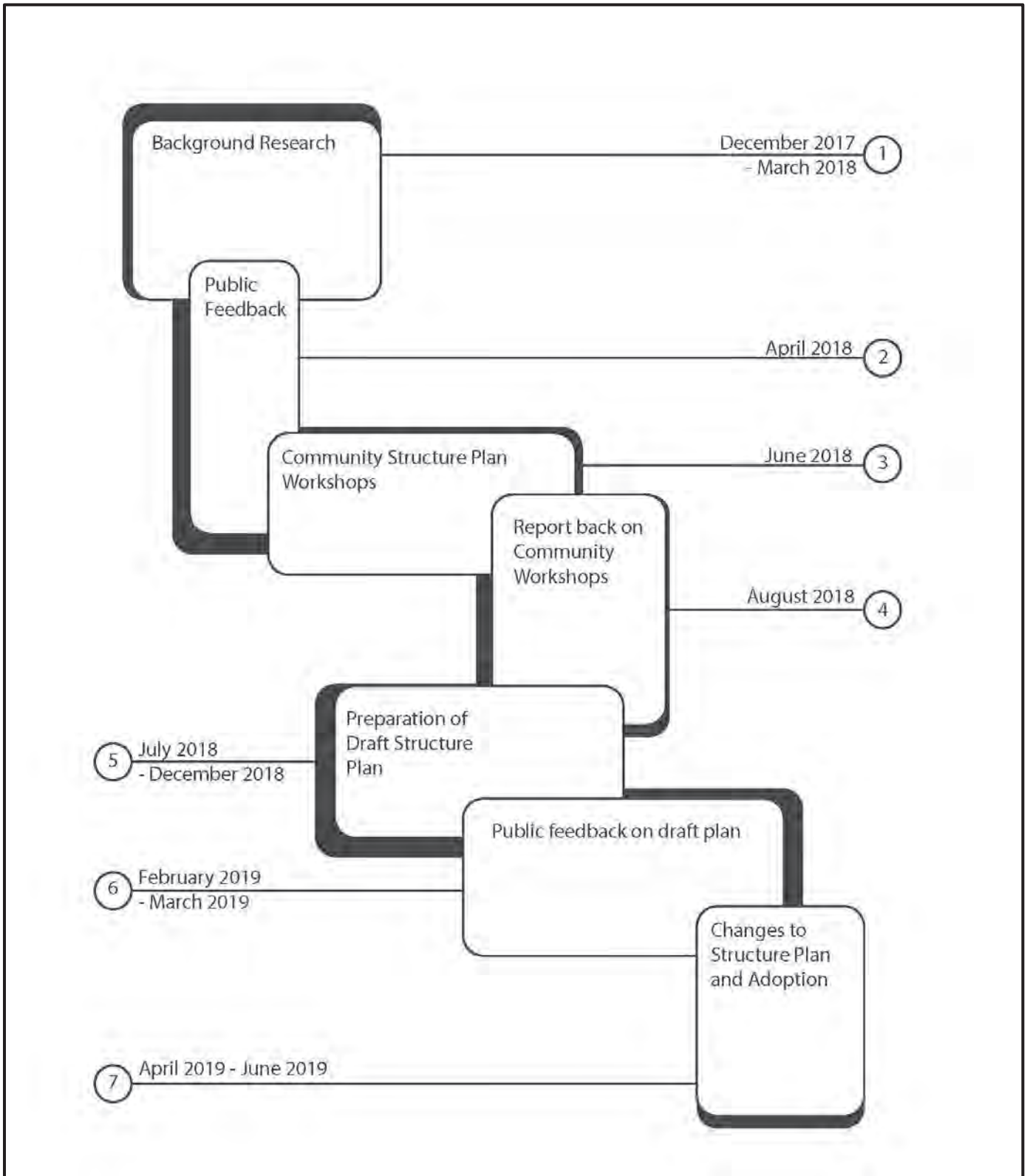


Figure 7: Warkworth Structure Plan process diagram

3 The Warkworth Structure Plan

3.1 Vision

A proposed vision for Warkworth has been developed for the Warkworth Structure Plan project as outlined below:

Warkworth is a Satellite Town that retains its rural, natural, and cultural character. It is centred around the Mahurangi River and has easy walking and cycling access around the town. There are a variety of high-quality residential neighbourhoods. Warkworth is largely self-sufficient with plenty of employment, education, shopping and recreation opportunities. Transport and other infrastructure are sequenced to support Warkworth's planned growth.

3.2 Planning principles

A number of planning principles have been developed for the Warkworth Structure Plan as outlined below. These planning principles are Warkworth specific and are intended to be considered in addition to (not replacing) existing objectives and policies guiding Warkworth's growth.

A number of information sources were used to develop the principles including public feedback on the structure plan project (April 2018), the Warkworth Community Aspirations document (2017), the Warkworth Spatial Plan consultation (2017), and feedback from iwi.

The planning principles have been used to help guide and assess the development of the Warkworth Structure Plan.

The Warkworth Structure Plan planning principles are grouped under seven headings:

- The Mahurangi River is Warkworth's taonga
- Character and identity
- A place to live and work
- Sustainability and natural heritage
- A well-connected town
- Quality built urban environment
- Infrastructure

The planning principles behind these headings are outlined below.

The Mahurangi River is Warkworth's taonga

- Protect the Mahurangi River from the effects of urbanisation as a matter of paramount importance in the development of the Future Urban zone
- Use the development of the Future Urban zone to improve the health and quality of the Mahurangi River wherever possible
- Treat all the tributaries in the Future Urban zone as being vital to the health of the Mahurangi River

Character and identity

- Celebrate and protect Warkworth's heritage, both Maori and European, and its relationship with mana whenua
- Retain the current town centre as the focal point and 'beating heart' of Warkworth
- Protect the views from the current town centre to the bush clad northern escarpment of the Mahurangi River and the rural views out from the Future Urban zone that contribute to Warkworth's rural character
- Apply lower density residential zones to areas valued for their landscape, character, or heritage significance
- Use the Future Urban zone efficiently to protect against the need for further urban expansion into Warkworth's valued rural hinterland

A place to live and work

- Provide a range of housing options in Warkworth so that it is a place for people to live at all stages of life
- Provide new local employment areas (e.g. small centres, industrial areas) so people can work locally in Warkworth

Sustainability and natural heritage

- Plan to enable development of the Future Urban zone to be sustainable, including having a compact urban form, providing local employment options, enabling extensive active and public transport routes, and minimising discharges to air and water bodies
- Design the Future Urban zone to be able to adapt to the effects of climate change
- Protect and enhance existing bush/natural areas and create ecological corridors linking the Future Urban zone to other ecological areas

A well-connected town

- Use the development of Warkworth's growth areas to help address Warkworth's existing road congestion through integrated land use and transport planning and new infrastructure

- Prioritise convenient, segregated, and safe walking and cycling routes through the Future Urban zone connecting residential areas with key locations (e.g. schools, parks, centres), and the existing town, and to regional walking/cycling routes
- Provide convenient, high quality public transport routes through the Future Urban zone (connecting to the rest of Warkworth, the surrounding rural settlements, and Auckland)

Quality built urban environment

- Design the Future Urban zone to enable high-quality and integrated urban development that reinforces the town's identity
- Locate higher density residential areas around appropriate amenities
- Provide well located and accessible areas of open space linked by a green network of walking and cycling trails along the streams
- Outside open space areas, use urban trees (e.g. street trees) and vegetation to enhance the amenity of the built environment

Infrastructure

- Plan for infrastructure (transport, water, etc) to be sequenced to enable new houses and businesses are built in the Future Urban zone
- Provide for social and cultural infrastructure (i.e. libraries, halls, schools, community meeting places) to support the needs of the community as it grows

An assessment of how the planning principles have been given effect through the Warkworth Structure Plan is outlined in section 3.4 of this document.

3.3 Overview of plan

The Warkworth Structure Plan land use plan is shown in Figure 1. The plan proposes a mix of new urban land uses within the Future Urban zone as well as supporting transport infrastructure. Further maps showing more detail on the transport and other infrastructure elements are shown in Figures 2, 3, 4 and 5.

The key high-level features of the Warkworth Structure Plan include the following:

- Important areas for ecology, stormwater, heritage, or cultural values are set aside from any built urban development. This will help to improve water quality for the Mahurangi River, recover ecological linkages, create visual amenity, and enable possible public access for a network of walking/cycling trails.
- New residential areas enable around 7,500 dwellings⁵. The new residential areas do not simply extend Warkworth's predominantly Single House zone within the existing developed area of the town. Rather, new areas for more intensive residential (e.g.

⁵ Refer to the yield calculations in **Appendix 3**

terraced houses, low-rise apartments) are located adjacent to the new small centres and public transport routes. The most significant area of residential density is located in the south. This is due to a combination of features in the south including flat land, the adjacent proposed Local Centre, public transport interchange, an indicative sports park, a possible new school site, a new arterial route, and a potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only). Lower density residential areas are located mostly towards the fringes and where local features or conditions justify it.

- The existing Warkworth town centre by the Mahurangi River will remain as the focal point for retail, office, community and civic space for the town. In light of the existing (and planned) supply of retail areas already in Warkworth, the Future Urban zoned areas around Warkworth require only small centres for the local convenience needs of surrounding residential areas.
- Substantial areas for future employment (industry and small areas for offices, retail etc) are identified. This is to enable Warkworth to have the potential to be self-sufficient for local jobs and reduce the need for residents to commute to Auckland for work.
- Prioritising active transport in Warkworth through a separated walking and cycling network that utilises the arterial road network, collector road network, riparian margins, and other off-road trails to provide connectivity throughout Warkworth. The network provides connectivity to centres, employment areas, schools, parks, and public transport stations. Through this network there is the opportunity to significantly increase walking and cycling mode share in Warkworth with the connection distances between most destinations generally less than 5km (in combination with improving e-bike and e-scooter technologies giving the opportunity to travel greater distances by personal transport modes).
- A roading network including Ara Tūhono – Pūhoi to Warkworth, Matakana Link Road (Te Honohono ki Tai), Western Link Road, Sandspit Link Road, Wider Western Link Road, and a potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only). Indicative collector roads are also shown but there is flexibility to potentially change these routes through further analysis. Due to topographical and watercourse constraints, there is limited opportunity to establish a grid network ideally sought for greenfields development.
- A public transport network built upon the recently introduced 'New Network for Warkworth'. Initially, a main station/bus interchange is proposed in the town centre supplemented by an interim northern station adjacent to SH1 north of Warkworth (with a Park and Ride). In the long term, the preference is to retain a Town Centre station but also have a larger bus station/interchange in Warkworth South in the southern Local Centre and a Park and Ride near the Ara Tūhono – Pūhoi to

Warkworth southern interchange (south facing ramps only). With a proposed southern station, it is not considered necessary to retain the interim northern station.

- Morrison's Heritage Orchard, located in the southern part of the study area, is retained as a feature of the town. Specific future provisions could be developed around enabling the orcharding to continue with additional complementary activities, managing potential reverse sensitivity issues, and securing public access through walking and cycling paths through the land (linking into the walking/cycling network).
- Two large suburb parks are indicatively identified in the north east and south east to provide for informal recreation needs, in addition to a network of smaller neighbourhood parks. An indicative large sports park is identified in Warkworth south to cater for organised sports (in addition to the existing Warkworth Showgrounds). Future esplanade reserves are shown to indicate the potential future linkages between the open space areas.
- Other infrastructure including wastewater, water, power supply, telephone, broadband, community facilities, schools, and healthcare are being actively investigated or constructed by the infrastructure providers to service the planned growth of Warkworth.
- Warkworth's local and rural character are protected through the application of lower density residential areas around the edge of the Warkworth 'basin' and through anticipated specific provisions to protect the integrity of the bush-clad northern slopes of the Mahurangi River (the town centre backdrop). Warkworth's size, natural environment and views, rural uses in the surrounding area, separation from Auckland's urban area, and local and rural activities within the town are able to help to retain the local and rural character of the town.
- A staging plan that sequences the development of Warkworth's Future Urban zone over the next 20 years. This ensures development occurs when there is bulk infrastructure capacity to cater for the growth. It is important to make it clear that the development of the Future Urban zone around Warkworth will occur over a long period of time (i.e. all the development will not occur in the next 5-10 years).

These key features and others are described in more detail in the following sections.

3.3.1 Green Network

3.3.1.1 Protection areas

The Warkworth Structure Plan is built on the foundation of setting aside areas that are important for ecology, stormwater, heritage, and cultural values from any built urban development. These areas have been excluded from the development yield (they are assumed to have no dwellings or businesses on them). A map of the Green Network is shown in Figure 2.

Auckland's natural environment is our primary infrastructure. The ability for it to function well and be of high quality is important in supporting biodiversity, improving water quality, reducing air pollution and protecting against severe weather and flooding. A healthy natural environment plays an important role in creating quality built environments and in creating communities that are resilient to anticipated impacts of climate change. The notion of protecting Warkworth's environment (particularly the Mahurangi River) as the town grows was a clear theme from public consultation on the structure plan project in April 2018.

The green areas allow the creation of continuous 'green corridors' across the growth area which can be restored with riparian planting. This will create ecological corridors that connect small, fragmented patches of native vegetation within Warkworth and its immediate surrounds. At the larger scale, restoring these corridors provides a key linkage between the Dome Valley Forest in the north, the Mahurangi River, and out into the Mahurangi Harbour and the pest-free islands of the Hauraki Gulf.

The Green Network will help improve the health and quality of the Mahurangi river, which is consistent with the Warkworth Structure Plan planning principles and the messages from the public. The Green Network also creates visual amenity and enables the possibility of providing public access links across the network.

The benefits of healthy rivers and streams and green infrastructure in urban environments include increased resilience to climate change impacts, reduced impacts of stormwater runoff from urban areas (e.g., sediment and contaminants) on streams, and increased quality of the living environment.

Feedback from mana whenua has highlighted that the Green Network areas also have cultural value.

The 'protection areas' include the following elements:

- Flood plains
- Streams⁶ with a 10m buffer
- Wetlands
- Significant Ecological Areas
- Covenanted bush
- Historic heritage extent of place area

There is around 218ha of land identified as one or another of these 'protection areas'. As can be seen from the table below, there is a large amount of overlap between these areas (i.e. a flood plain and a stream buffer often cover the same land).

'Protection area' element	Percentage of total 'protection area' (note many areas overlap)
Flood plains	51%
Streams with a 10m buffer	48%

⁶ Those classified as permanent/intermittent/transitional in 'Watercourse Assessment Report - Warkworth Future Urban Zone', Prepared for Auckland Council by Morphum Environmental Ltd, June 2018.

Wetlands	3%
Significant Ecological Areas	18%
Covenanted bush	25%
Historic heritage extent of place area	<1%

Figure 8: Table of 'protection area' elements

While the term 'protection areas' may convey a certain message, it is important to note the following matters:

- There are differing levels of protection for the different elements. Some have high levels of protection (e.g. covenanted bush areas) while others rely more on the objectives and policies of the Auckland Unitary Plan for protection. The plan change to implement the first stage of the structure plan will need to include specific provisions (not currently in the Auckland Unitary Plan) to ensure that all these areas are set aside from development.
- There are currently limited mechanisms to require the active restoration of these areas (i.e. riparian planting etc). Again, the plan change to implement the first stage of the structure plan will need to include specific provisions to require active restoration measures in these areas.
- These areas are not automatically public open space. Some of this land may remain in private ownership as it is developed. This is not considered to be an issue in terms of ecological and stormwater outcomes, but it would impact on the potential for public access tracks/walkways.

Protection and enhancement of these areas through a future plan change is essential as the protection of these areas is the foundation on which the Warkworth Structure Plan is built.

3.3.1.2 Existing open space and future open space

In addition to the 'protection areas', there are some small areas of existing open space within the study area. These are largely sections of esplanade reserve along the Mahurangi River or along tributaries of the river and they largely overlap with the 'protection areas' outlined above.

Recent stream surveys have also identified indicative locations where there is likelihood for future esplanade reserves to be vested in council under section 230 of the RMA⁷. Under the RMA, a 20m wide esplanade reserve can be vested as public land along the banks of any river on subdivision.

The purpose of esplanade reserves under the RMA is to contribute to the protection of conservation values including maintaining or enhancing water quality, aquatic habitats, protecting natural values, and to enable public access or recreational use.

⁷ 'Warkworth Stream Classification and Esplanade Assessment', Prepared for Auckland Council by Morphum Environmental Ltd, April 2018.

The esplanade reserve system in the structure plan offers the potential for walking and cycling networks to be developed to encourage people out of cars (reducing carbon emissions and benefitting public health).

Again, the future esplanade areas identified overlap considerably with the ‘protection areas’ outlined above.

During the development of the Warkworth Structure Plan, an indicative network of public parks has been developed (see Section 3.3.3). These indicative park locations make up the rest of the Green Network.

3.3.2 Residential areas

The Warkworth Structure Plan provides for 7,500 dwellings⁸ across a range of housing types as it utilises the full palette of Auckland Unitary Plan residential zones – from expansive sections to smaller apartments. This caters to the full lifecycle and is consistent with the structure plan Planning Principle of providing “a range of housing options in Warkworth so that it is a place for people to live at all stages of life.”

In locating the different residential areas of Warkworth, the general approach has been to provide for higher residential intensity in areas closest to centres, the public transport network, large social facilities, education facilities, and open space. Medium intensity areas have been provided within a moderate walking distance to these amenities.

Lower intensity residential areas are located in places that are not close to centres and public transport, are subject to high environmental constraints or natural and physical constraints, or where there is an existing suburban area with an existing neighbourhood character (recently consented and/or built developments). In the steeper areas around Warkworth, a lower density residential zone is used to minimise the scale of earthworks required (and therefore associated sediment generation).

In light of these principles, the Warkworth Structure Plan shows the residential zonings as explained below.

NOTE: The structure plan shows the zone boundaries in a general way. The structure plan zonings are indicative only and will be refined through a later (more detailed) plan change process.

3.3.2.1 Large Lot zone

The Large Lot zone in the Auckland Unitary Plan provides for large lot residential development on the periphery of urban areas. The zone is generally characterised by one to two storey high buildings on spacious lots with large open space areas between dwellings. The zone can be used where there are landscape qualities limiting the suitability of more intensive development. The minimum site size in the zone is 4,000m².

⁸ Refer to the yield calculations in **Appendix 3**

The Large Lot zone is used across three separate areas in the study area; the northern and eastern edge (Figure 9), the southern edge (Figure 10), and the knoll in the south (Figure 11).

The Large Lot zoning at the northern edge of Warkworth (west of Matakana Road) rises to a ridgeline on which the RUB is located. To retain the rural and natural character of Warkworth it is important to retain the more natural and spacious elements around the edge of the basin that Warkworth sits within and to retain views from the urban area to areas of landscape value on the edge. This Large Lot zone area is anticipated to contain large sections for residential development with potential additional controls around building design (size, height, colour etc) and a requirement to revegetate a significant amount of the land within each section. Some of this northern edge is zoned Single House, but with further landscape protection controls (see section 3.3.2.2) to ensure a natural/landscaped boundary is retained.

The Large Lot zoning at the northern edge of Warkworth (east of Matakana Road) also adjoins the RUB. However, in this case the RUB does not rise to a ridge but rather largely abuts an operational Limestone Quarry. To reduce any future reverse sensitivity impacts on the quarry, the Large Lot zone is used around this edge, closely tied to the Quarry Buffer Area overlay (which may also need to be extended to run fully around the quarry). The Large Lot zone continues further south along the stream network to retain the natural landform around the steep stream areas (avoiding major earthworks around the stream system and the incised valleys).

There is one other area of Large Lot zoning in the north along the north eastern boundary where the urban area immediately adjoins a large working farm (currently a deer farm). To avoid future reverse sensitivity impacts on the farm a 20-30m landscape screening area is proposed in tandem with the Large Lot zone to separate the urban uses from the productive rural uses and limit the number of residents neighbouring the farmland.

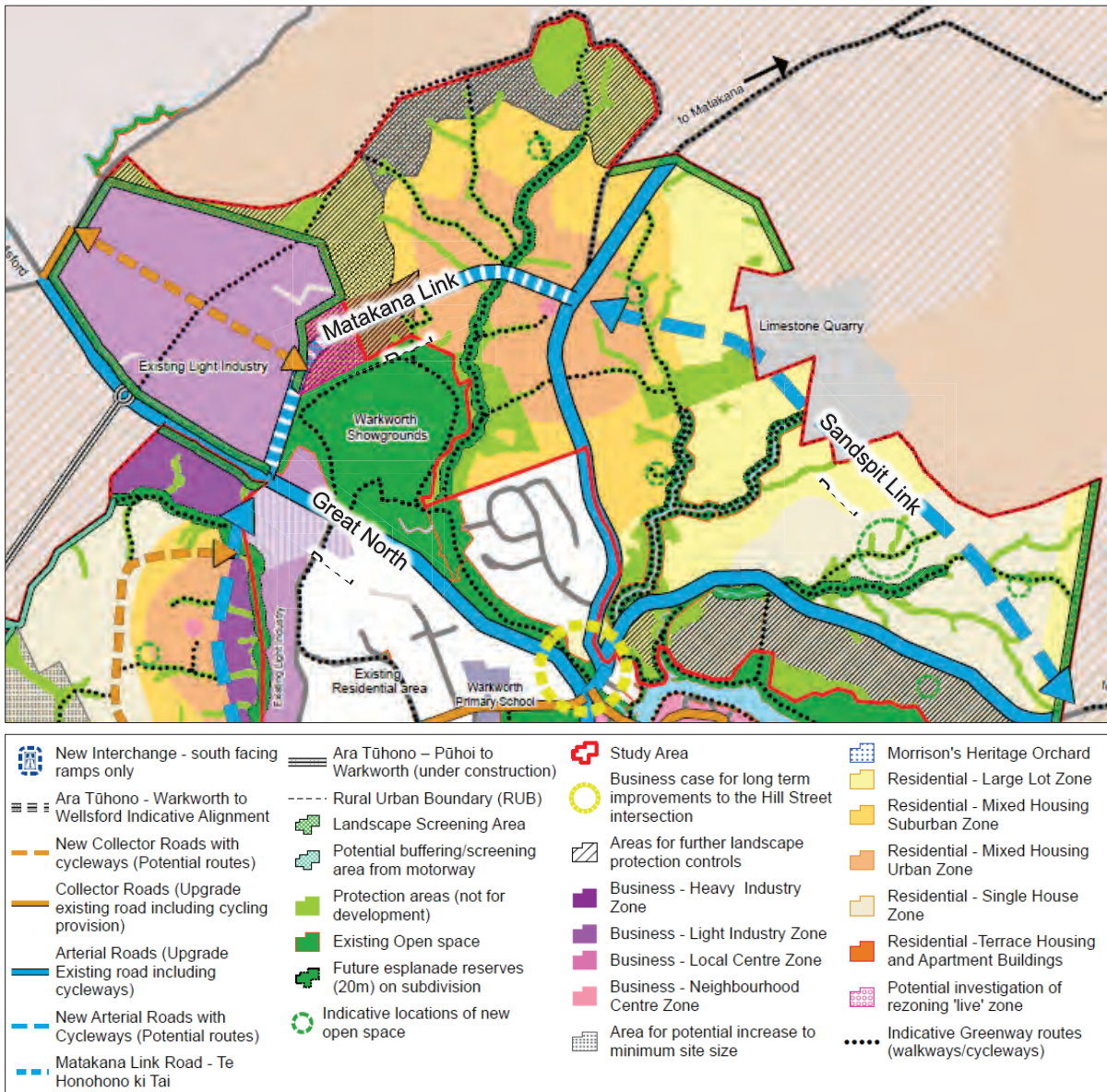


Figure 9: Large Lot zones in the north of Warkworth

The Large Lot zoning at the southern edge of Warkworth rises to a prominent ridgeline on which the RUB is located. The valley to the south of the RUB is an open pastoral landscape in which the satellite station is located. To retain the rural and natural character of Warkworth it is important to retain the more natural and spacious elements around the edge of the basin within which Warkworth sits. This Large Lot zone area is anticipated to contain large sections for residential development with potential additional controls around building design (size, height, colour etc) and a requirement to revegetate a significant amount of the land within each section. It is important that any future development remains below the ridge crest when viewed from the south. It is also noted that the Spark New Zealand designation for a land use and building restriction surrounding the Satellite earth station (7501) overlaps some small areas north of the ridgeline (within the study area). The use of larger section sizes in this area will enable the flexibility to avoid buildings being located within the restricted area.

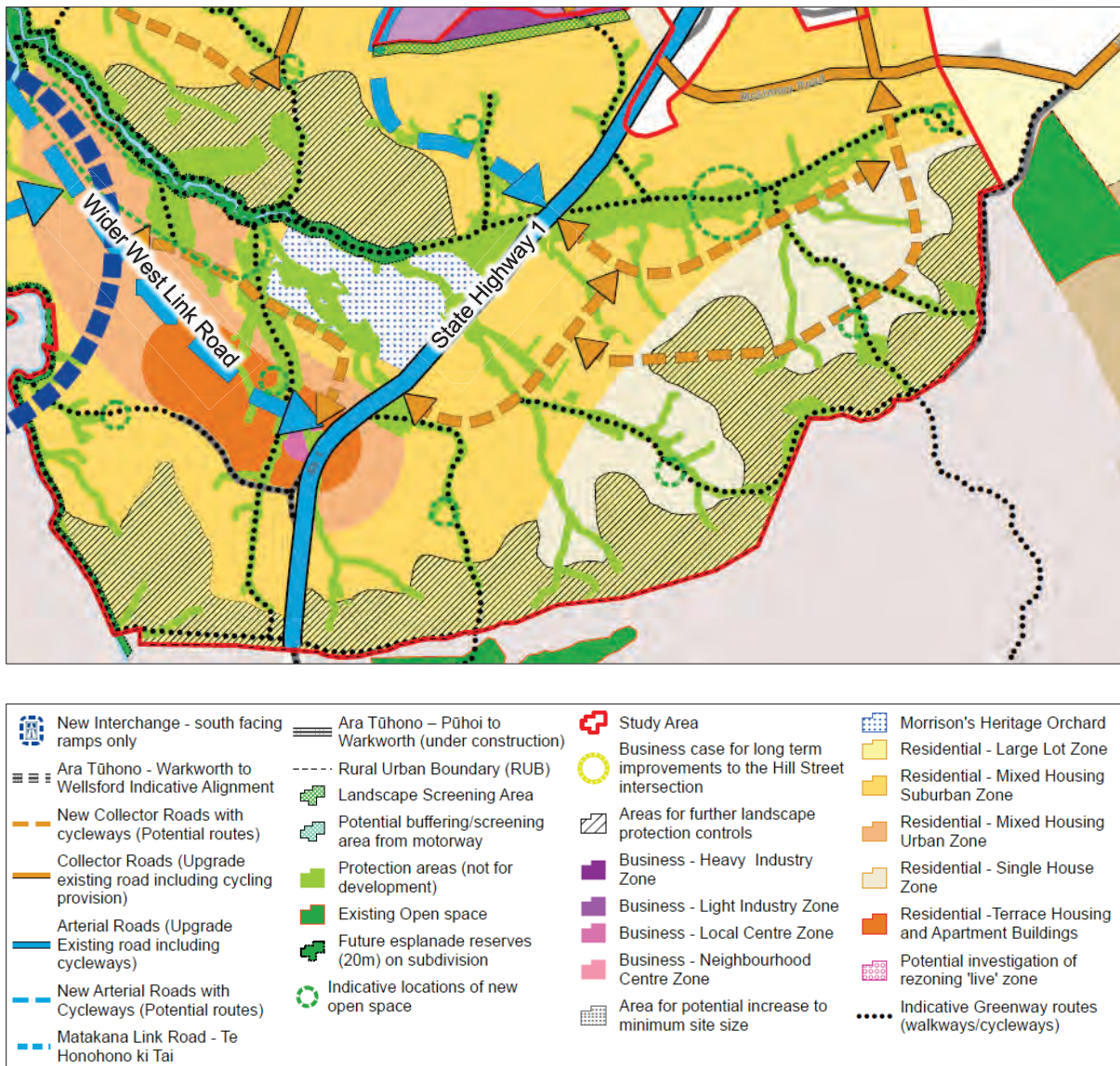


Figure 10: Large Lot zone around Warkworth's southern edge

The use of the Large Lot zone around the edge of Warkworth is consistent with the structure plan Planning Principle to “Apply lower density residential zones to areas valued for their landscape, character, or heritage significance.”

The Large Lot zone also covers the large knoll, partly covered in native bush, within the southern half of the study area. The knoll is a local topographic high point and is a visual barrier separating the flatter southern area from the existing town. Again, this Large Lot zone area is anticipated to contain large sections for residential development with potential additional controls around building design (size, height, colour etc) and a requirement to revegetate a significant amount of the land within each section.

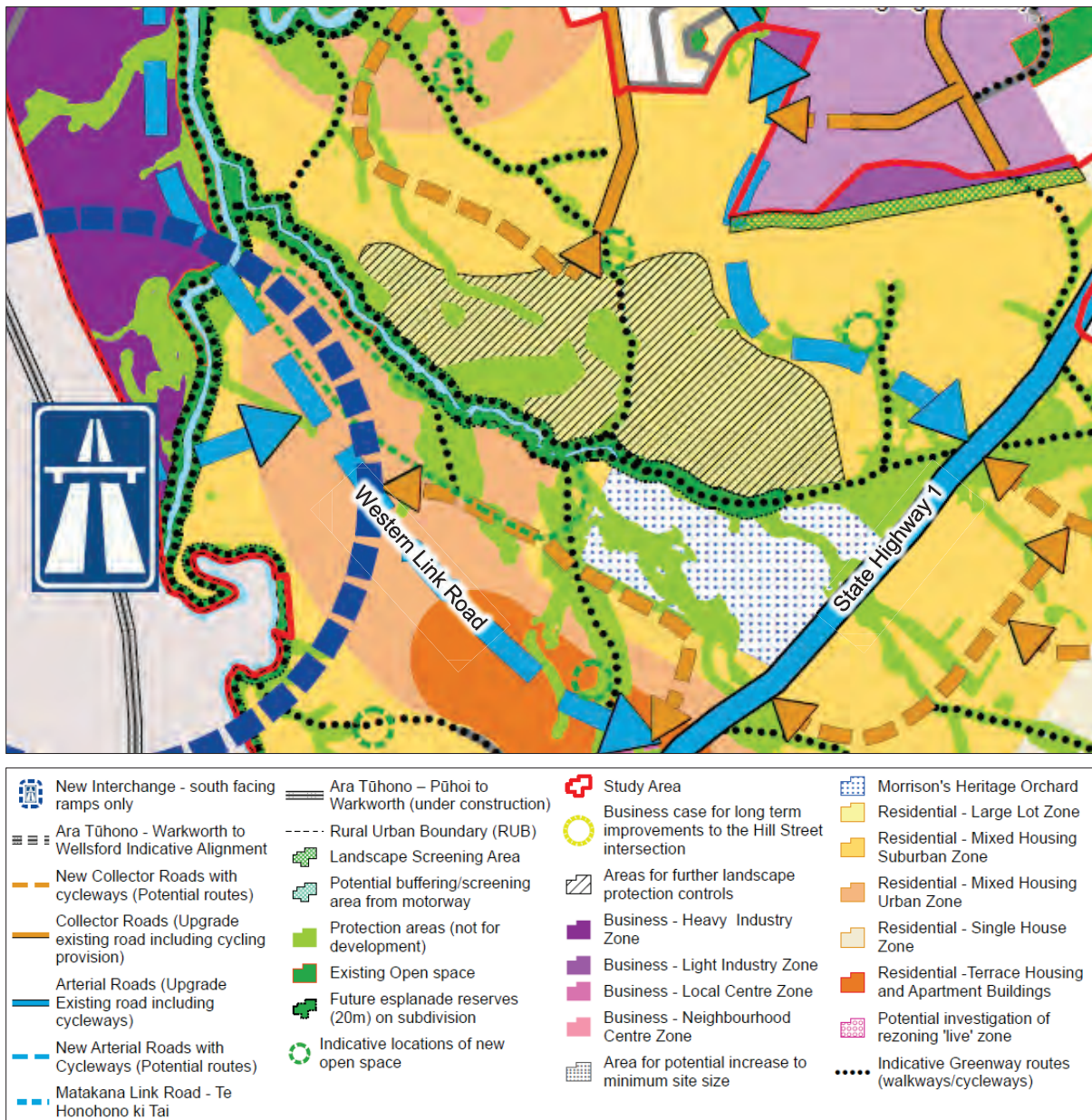


Figure 11: Large Lot zone on the southern knoll

Overall, the Large Lot zone comprises 192ha of the study area and the basic yield calculations show the zone will enable around 200 dwellings. However, due to the lower infrastructure needs of the zone (i.e. less roading) and the flexibility of the Large Lot zone to accommodate protected bush and streams within the sites, the number of lots that may be created within the zone could more likely be around 200-350.

3.3.2.2 Single House zone

The Single House zone in the Auckland Unitary Plan is applied in greenfield areas to provide housing choice for future residents. The zone is generally characterised by one to two storey high buildings consistent with a suburban built character. The minimum average site size in the zone is 600m². The Warkworth Structure Plan applies the Single House zone in areas

that are not close to public transport routes or centres and in areas with natural and physical constraints.

The Single House zone is used across five main areas in the study area; south east Warkworth (Figure 12), Viv Davie-Martin Drive area including land to the north east of Viv Davie-Martin Drive (Figure 13), north east Warkworth (Figure 14), the northern edge of Warkworth (Figure 15), and on already consented developments (Figure 16).

In south east Warkworth, the Single House zone is used as it is near the long-term eastern edge of Warkworth and some distance from a centre and planned public transport routes.

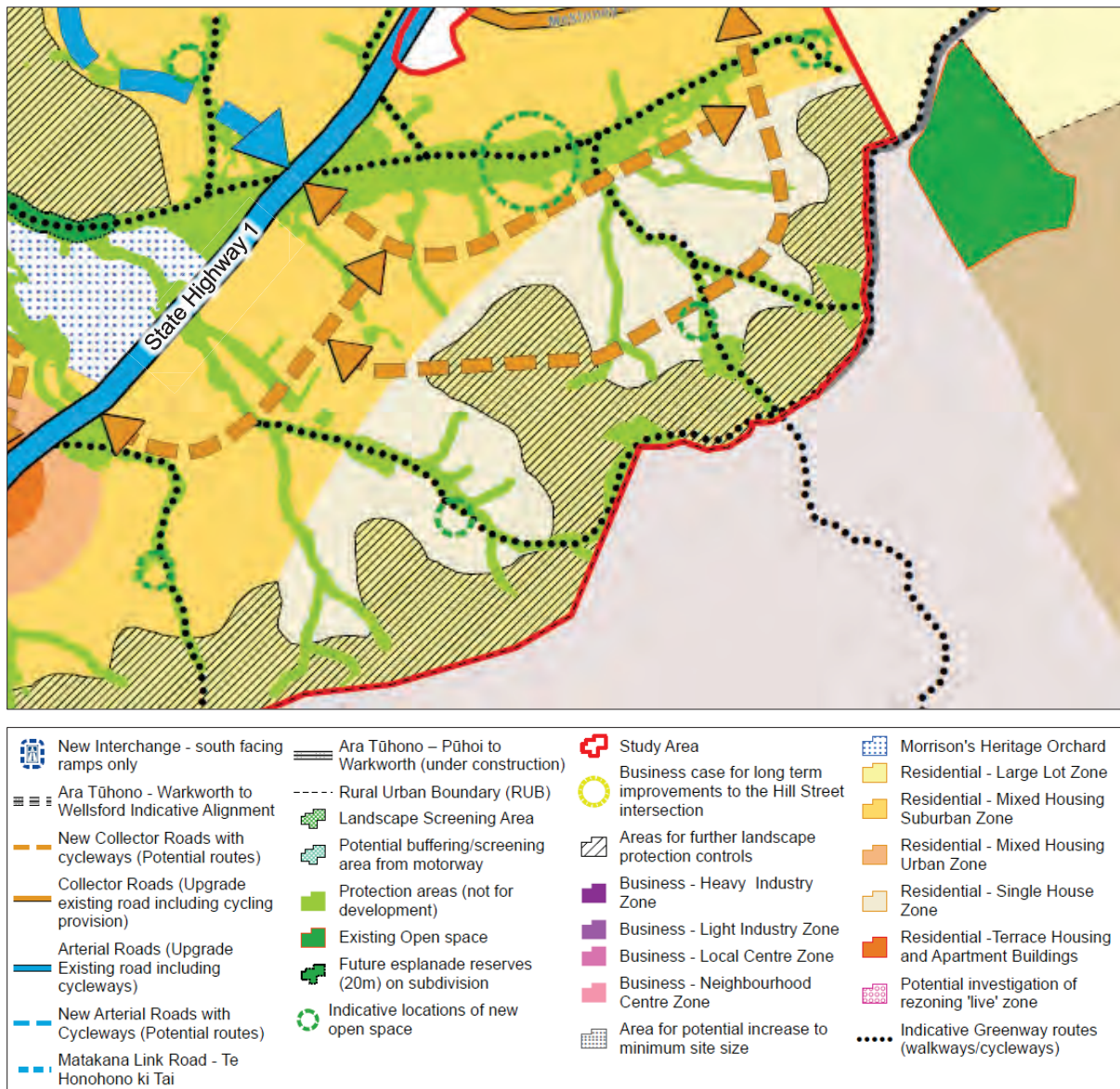


Figure 12: Single House zone in the south east of Warkworth

The Viv Davie-Martin Drive area is currently a rural-residential 'lifestyle' area surrounded by two or three larger blocks. The land is at the long-term western edge of Warkworth. The land

is constrained for higher density development by slopes, geotechnical issues, poor connectivity, highly fragmented land parcels, and protected bush areas.

To reflect the compromised nature of this area to achieve standard urban development and also acknowledge the current spacious residential amenity of the area, the structure plan adds an “Area for potential increase to minimum site size” overlay to the Viv Davie-Martin Drive area. This could increase the minimum lot size from the standard 600m² to somewhere between 1,500m² – 2,500m² (exact size to be determined at the plan change stage).

The Single House land to the north east of Viv Davie-Martin Drive is not suitable for higher density residential development due to its location on the long-term north western edge of Warkworth, its slopes, and geotechnical issues. A potential buffer/screening area is shown along the Ara Tūhono – Pūhoi to Warkworth motorway edge where set-backs, planting, or controls may be required to prevent any reverse sensitivity issues in this area⁹. This will depend on the final constructed motorway alignment and the subdivision layout. If the structure plan study area land is outside both the ‘buffer’ or ‘effects’ area of the motorway then the buffering/screening area may not be required on the Single House zone edge in some places. This is a matter that can be further reviewed at the plan change stage and the development consenting stage.

⁹ Refer to New Zealand Transport Agency, Guide to the management of effects on noise sensitive land use near to the state highway network, 2015.

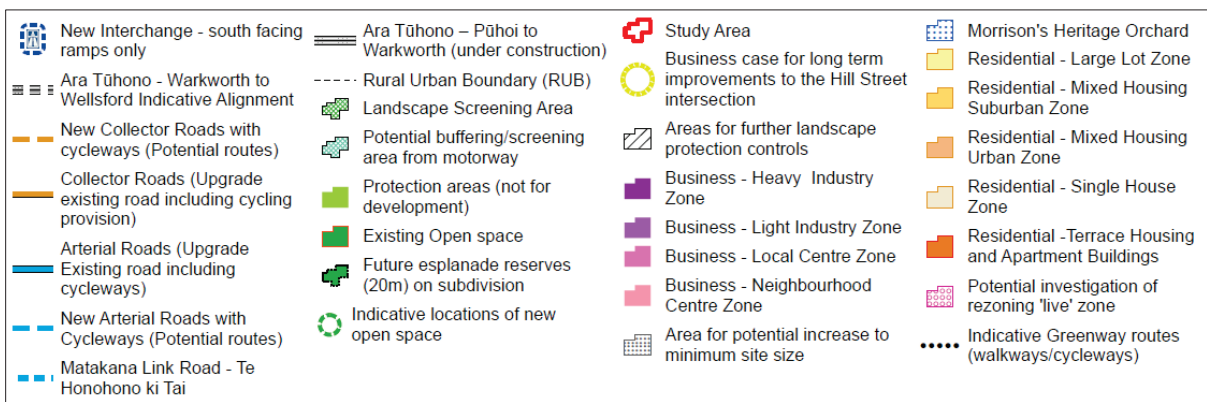
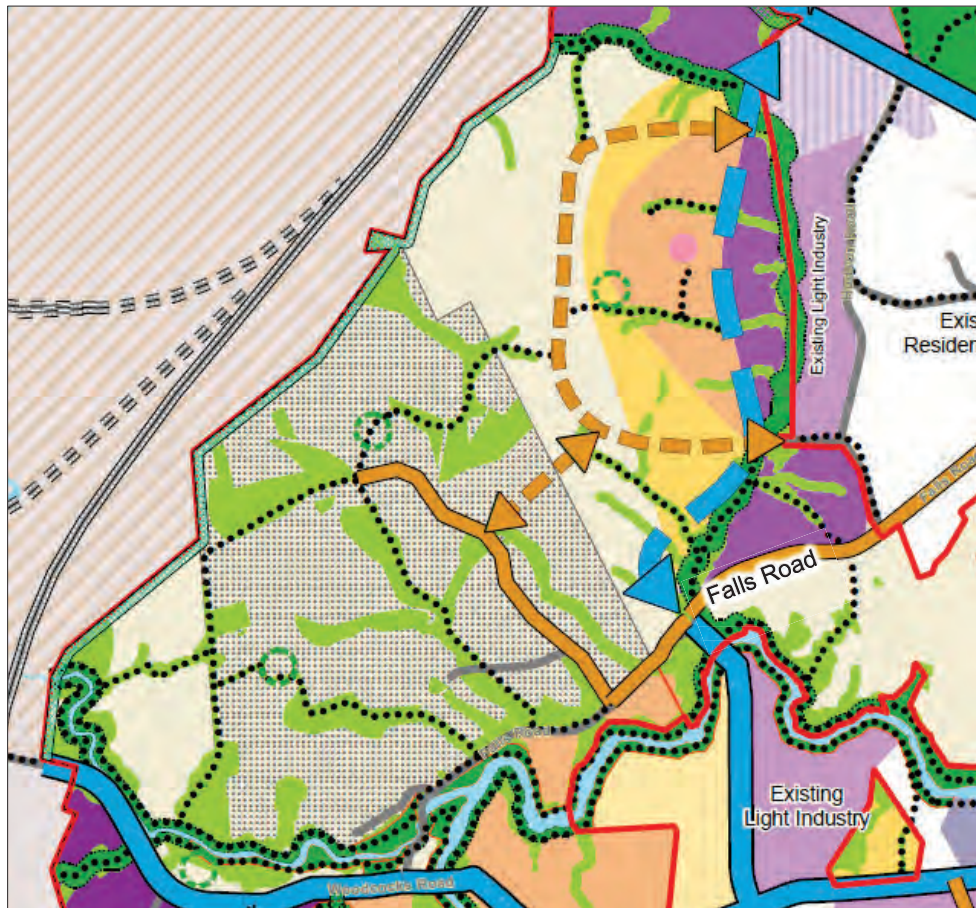


Figure 13: Single House zone around Viv Davie-Martin Drive area of Warkworth

In the north east, the Single House zone is applied as this area is at the north eastern edge of Warkworth and some distance from any centre. Due to the high-level of importance of views from the town centre to the bush clad escarpment across the river, a further control on this land will be likely (e.g. precinct) to prevent new buildings from being visible from the town centre (and thereby undermining the natural, bush covered outlook).

It is noted that a future suburb park is indicated as being located in the north east of Warkworth. There is an opportunity for additional density to be located around this park (e.g. sleeving the park with Mixed Housing Suburban/Urban). However, as the location of the park is not yet known, this potential additional density is not shown on the structure plan map.

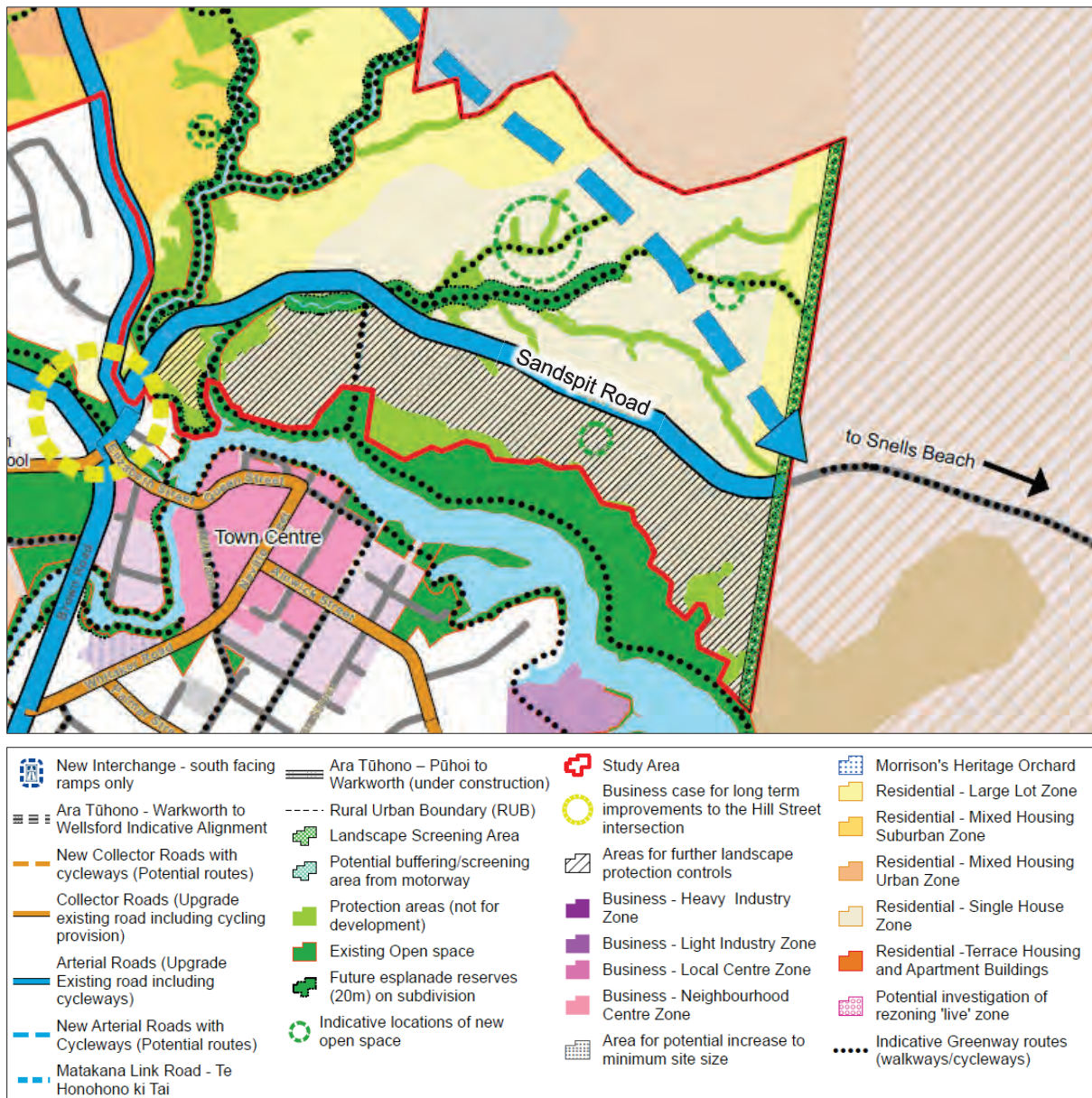


Figure 14: Single House zone in the north east of Warkworth

The northern edge of Warkworth rises to a ridgeline on which the RUB is located. To retain the rural and natural character of Warkworth it is important to retain the more natural and spacious elements around the edge of the basin that Warkworth sits within and to retain views from within the urban area to areas of landscape value on the edge. This Single House zone area is anticipated to contain larger sections for residential development (i.e. 1,000m²) with potential additional controls around building design (size, height, colour etc) and a requirement to revegetate a significant amount of the land along the urban edge. Note that some of this northern edge is also zoned Large Lot, but with further landscape protection controls (see section 3.3.2.1) to ensure a natural/landscaped boundary is retained.

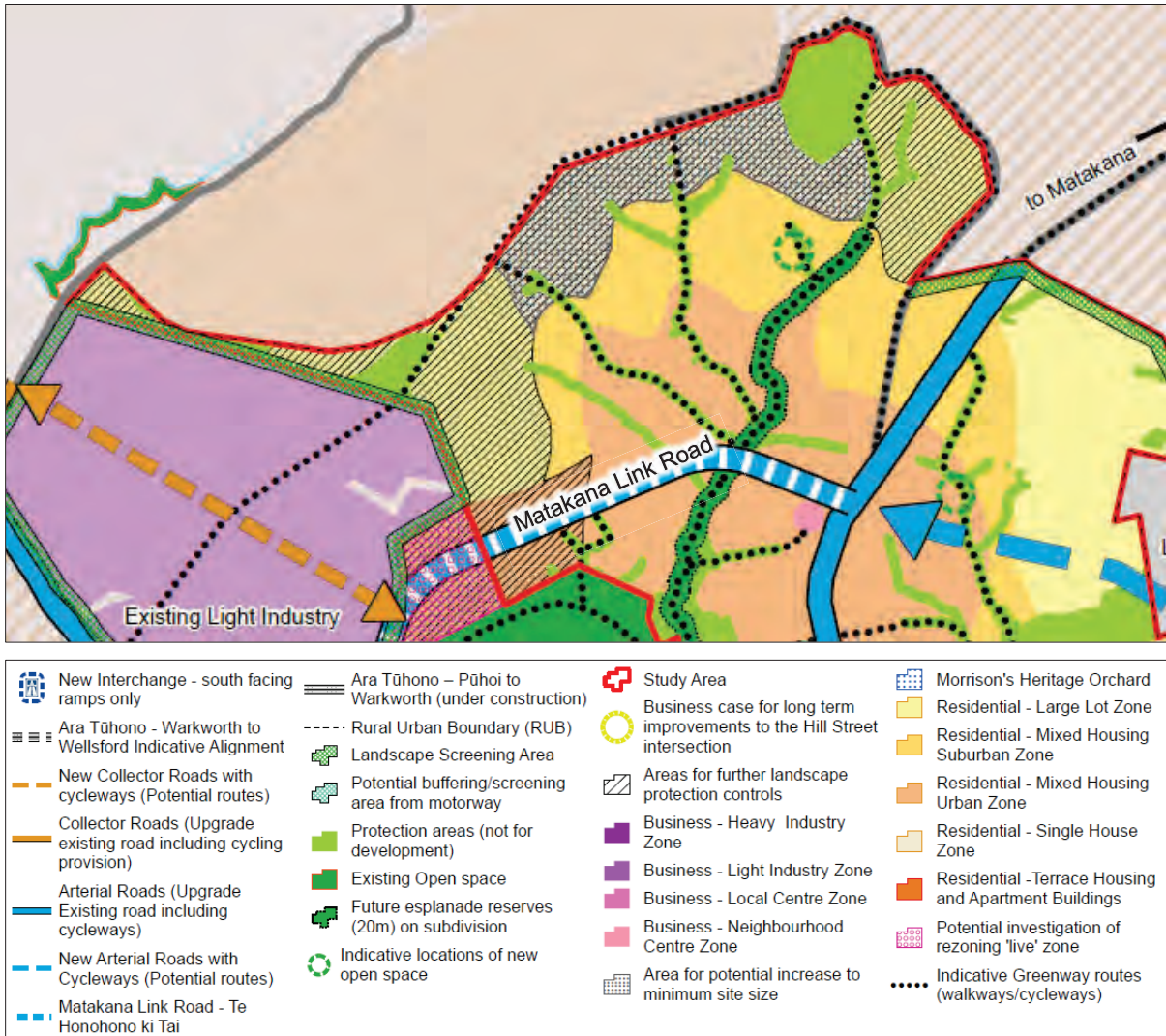


Figure 15: Single House zone in the northern edge of Warkworth

There is one area around Campbell Drive where residential subdivision consents have been granted within the study area. The structure plan applies the Single House zone to this site to be consistent with the granted development.

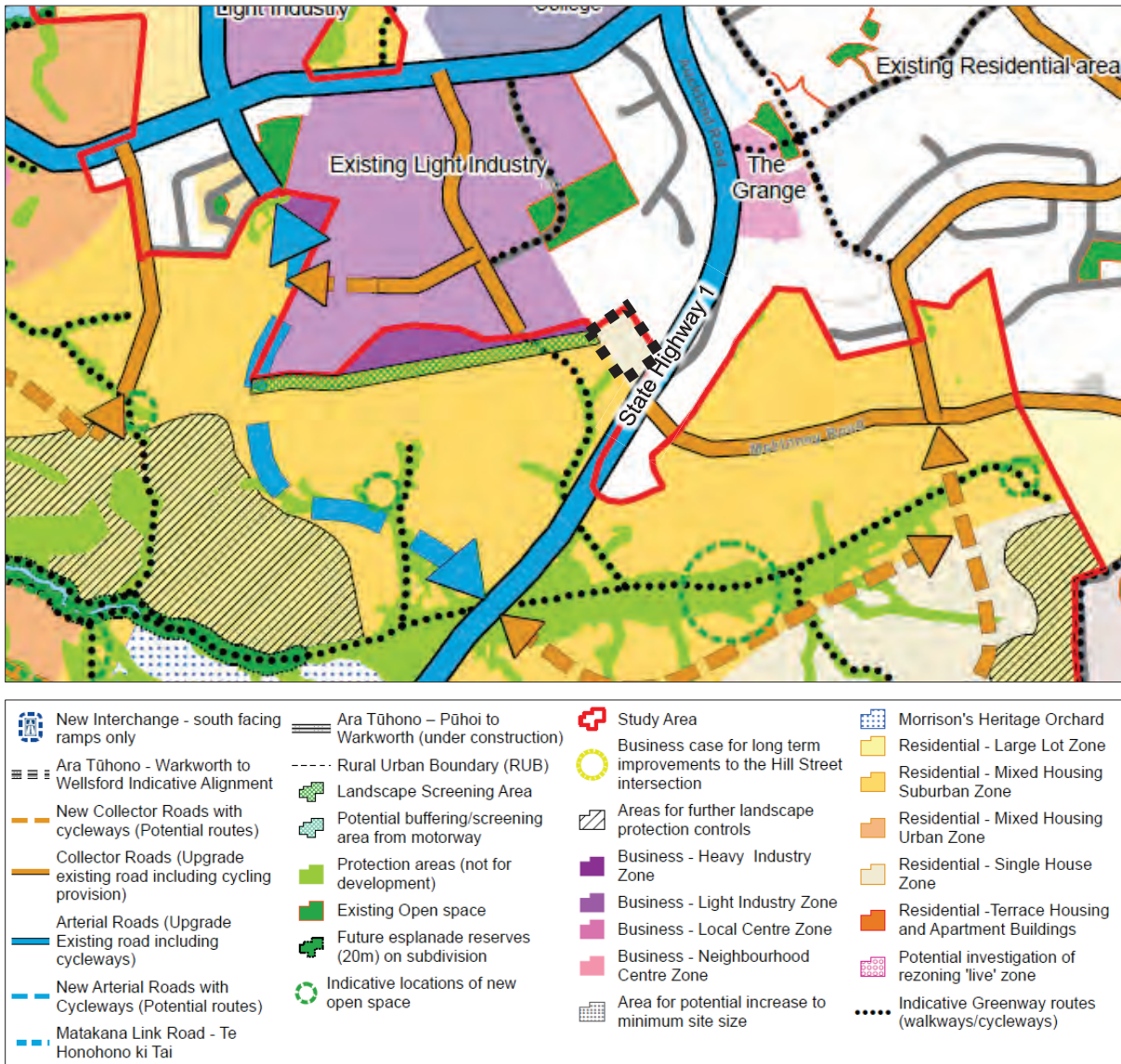


Figure 16: Single House zone on an already consented area on Campbell Drive (outlined in the square black dotted line)

Overall, the Single House zone comprises 296ha of the study area and will enable around 1,700 dwellings.

3.3.2.3 Mixed Housing Suburban zone

The Mixed Housing Suburban zone in the Auckland Unitary Plan enables intensive residential development while retaining a suburban built character. Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice. The Mixed Housing Suburban zone is applied in the Warkworth Structure Plan where it is relatively close to a centre or public transport route and there are no significant natural or physical constraints.

The Mixed Housing Suburban zone applies to the south to the areas in the wider catchment of the existing Grange retail development, the new Local Centre in the south, and the three

new Neighbourhood Centres in the north, north west, and west (as shown in Figure 17). The land that the Mixed Housing Suburban zone is applied to does not have any significant physical constraints to development.

It is noted that a future suburb park is indicated as being located in the south east of Warkworth. There is an opportunity for additional density to be located around this park (e.g. sleeving of the park with Mixed Housing Urban). However, as the location of the park is not yet known this potential additional density is not shown on the structure plan map.

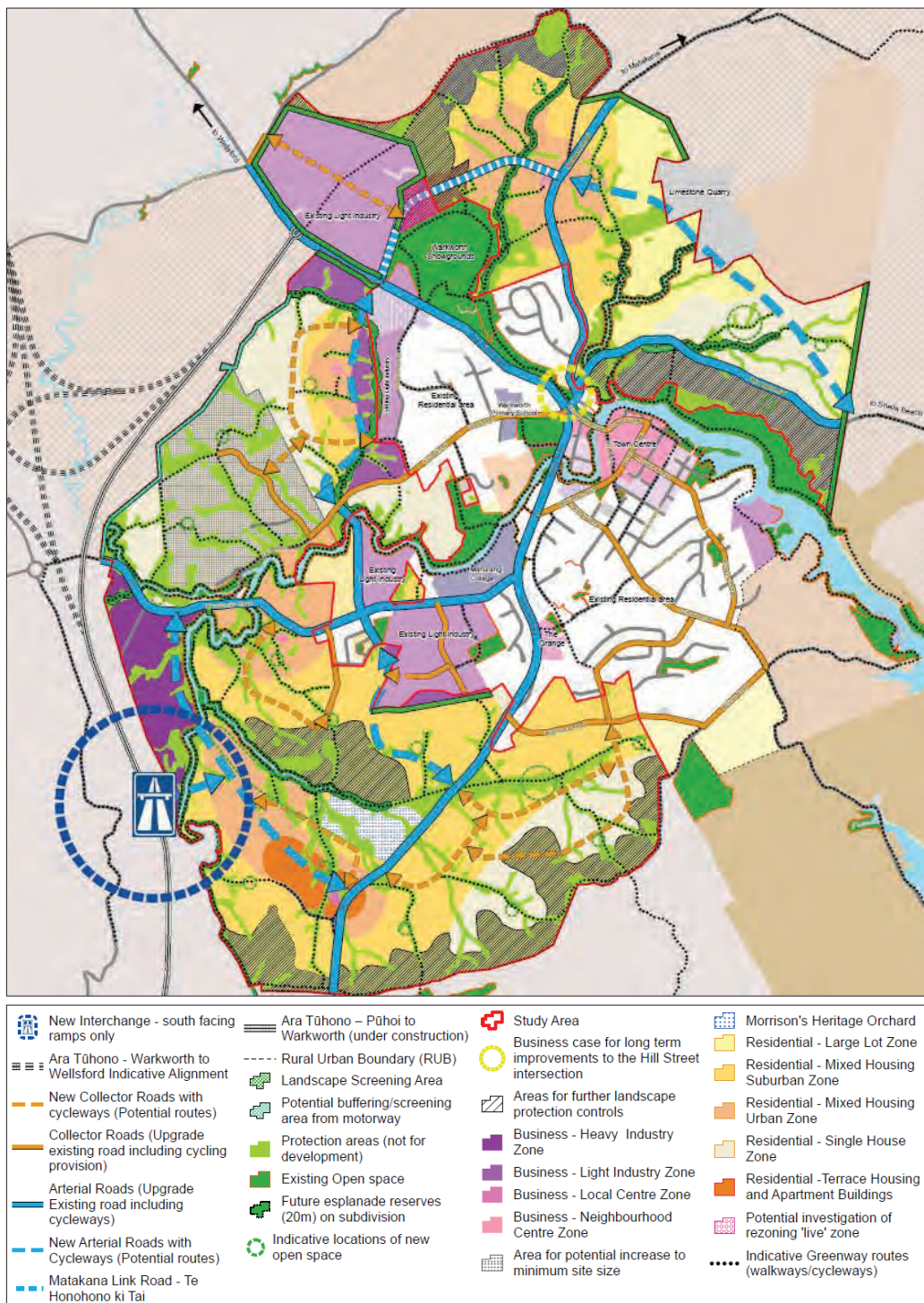


Figure 17: Mixed Housing Suburban zone in Warkworth

Overall, the Mixed Housing Suburban zone comprises 268ha of the study area and will enable around 3,200 dwellings.

3.3.2.4 Mixed Housing Urban zone

The Mixed Housing Urban Zone in the Auckland Unitary Plan enables intensive development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. The zone supports increasing the capacity and choice of housing within neighbourhoods as well as promoting walkable neighbourhoods, fostering a sense of community and increasing the vitality of centres.

The Mixed Housing Urban zone is applied in the Warkworth Structure Plan within close proximity to the new small centres in the north (Figure 18), west (Figure 19), north west (Figure 19), and south (Figure 20) and on planned public transport routes.

The largest area of Mixed Housing Urban zone applies in the south of Warkworth in the vicinity of the new Local Centre Tūh and indicative sports park. The land here is largely flat and lends itself to higher density residential development.

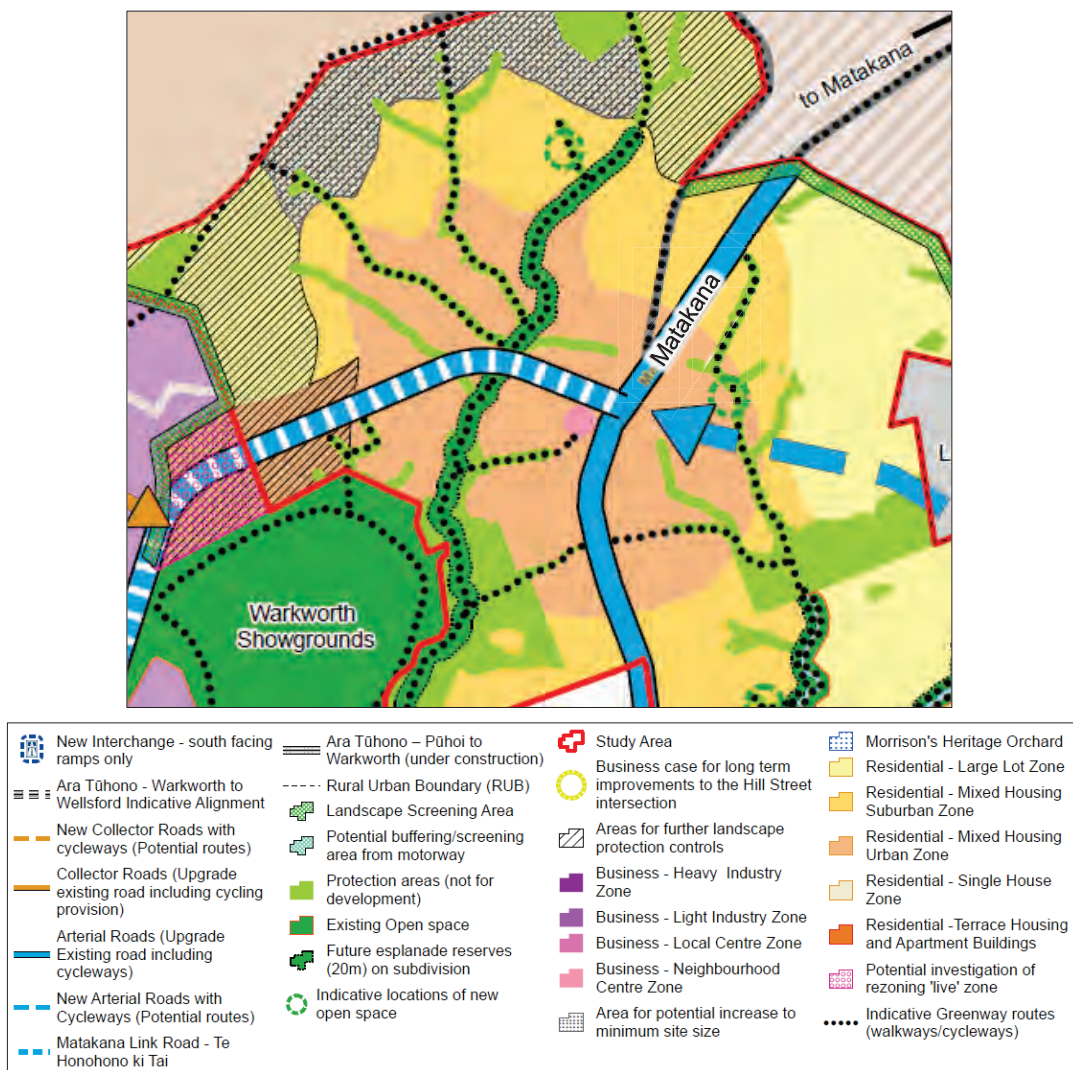


Figure 18: Mixed Housing Urban zone in the north of Warkworth

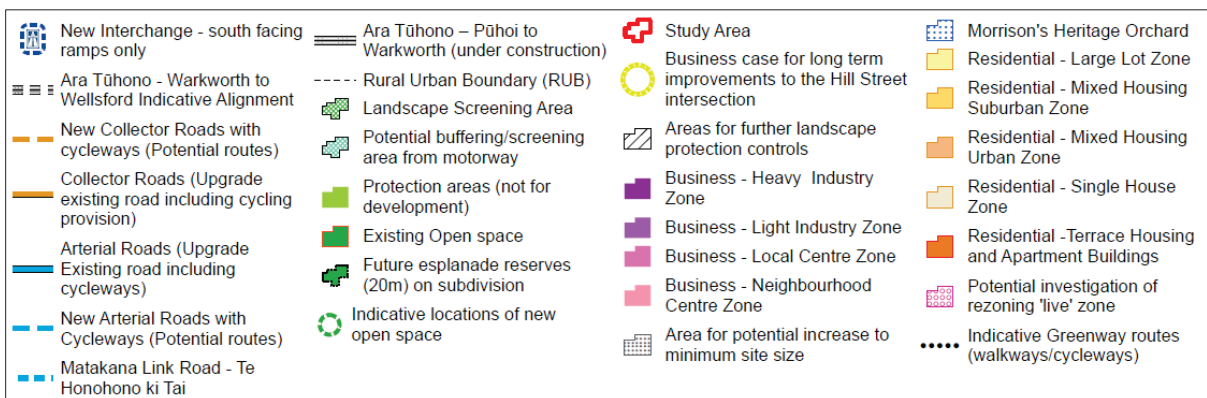


Figure 19: Mixed Housing Urban zone in the west and north west of Warkworth

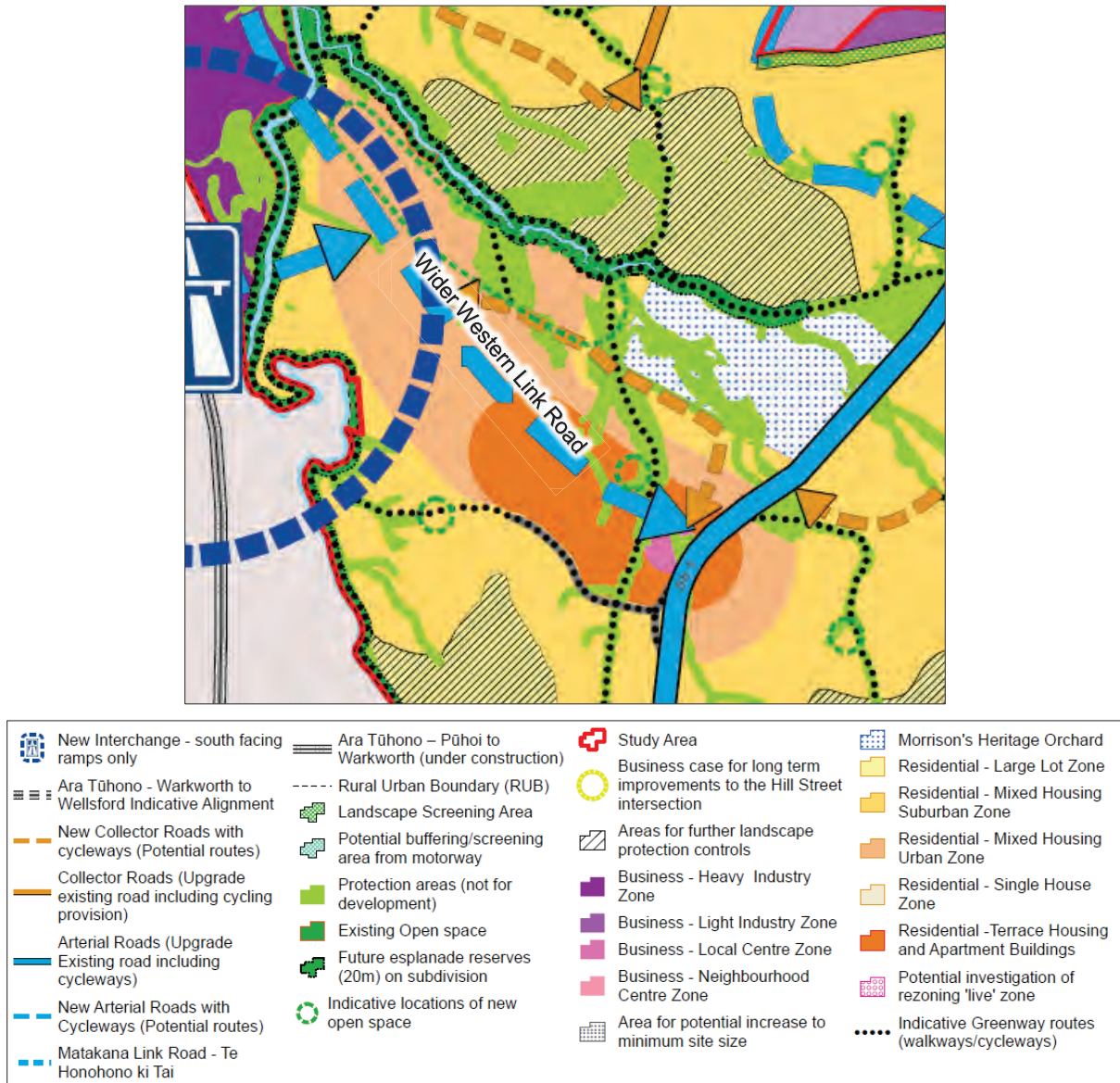


Figure 20: Mixed Housing Urban zone in the south of Warkworth

Overall, the Mixed Housing Urban zone comprises 144ha of the study area and will enable around 1,900 dwellings.

3.3.2.5 Terrace Housing and Apartment Buildings zone

The Terrace Housing and Apartment Buildings zone in the Auckland Unitary Plan is a high-intensity zone enabling urban residential living in the form of terrace housing and apartments. The purpose of the zone is to make efficient use of land and infrastructure, increase the capacity of housing and ensure that residents have convenient access to services, employment, education facilities, retail and entertainment opportunities, public open space and public transport. This will promote walkable neighbourhoods and increase the vitality of centres. The zone provides for the greatest density, height and scale of development of all the residential zones.

This zone also provides for a range of non-residential activities so that residents have convenient access to these activities – and services while maintaining the urban residential character of these areas.

The Terrace Housing and Apartment Buildings zone is applied in the Warkworth Structure Plan in the area immediately around the new Local Centre in the south of Warkworth, near a planned public transport interchange (Figure 21). The land here is largely flat as well as some gentle, north-facing slopes. This makes this area suitable for higher density housing.

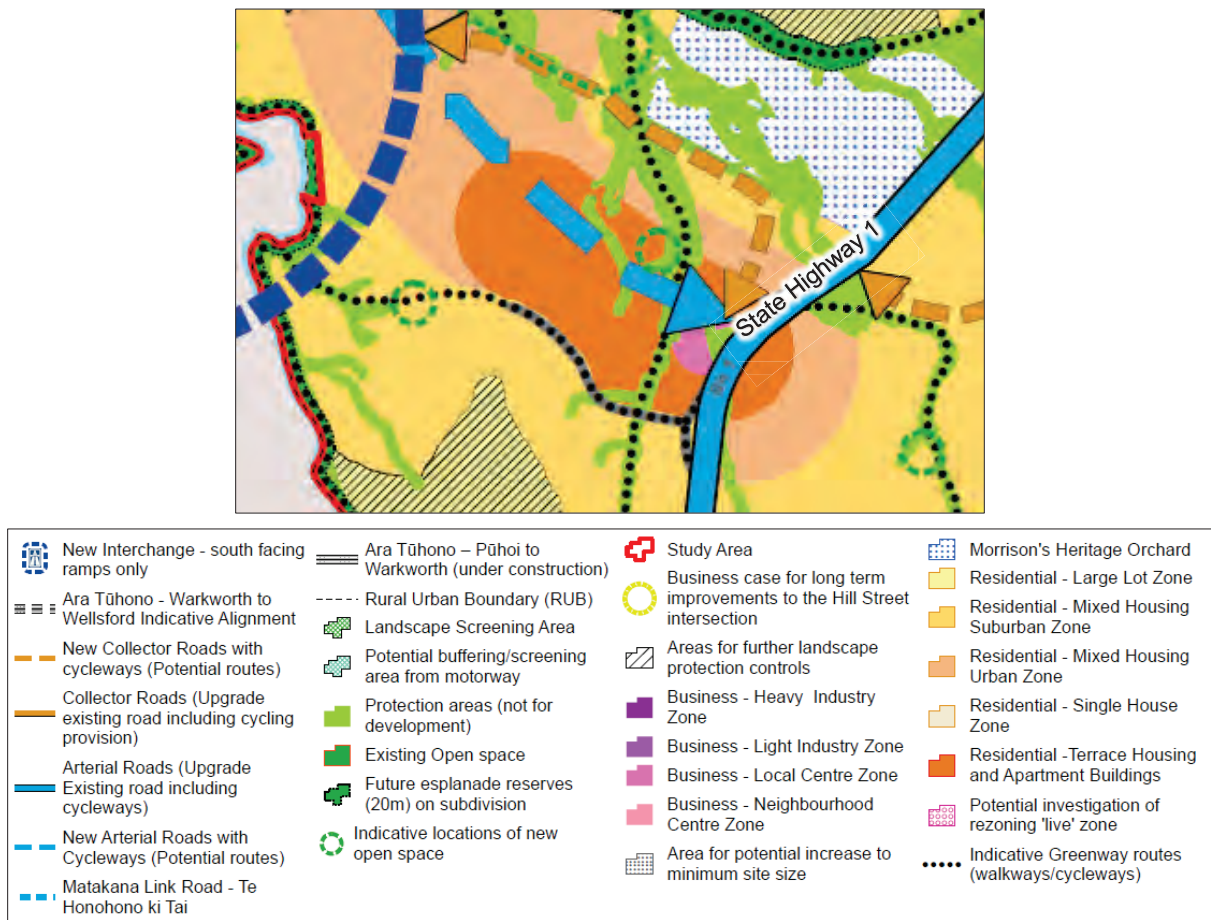


Figure 21: Terrace Housing and Apartment Buildings zone in the south of Warkworth

Overall, the Terrace Housing and Apartment Buildings zone comprises 15ha of the study area and will enable around 400 dwellings.

3.3.3 Parks

There are a number of existing esplanade and native bush reserves within the Warkworth Structure Plan area, but currently no parks or open spaces specifically for recreational purposes.

Given the significant population growth expected in the structure plan area, there is a need for the provision of parks and open space to provide adequate informal recreational opportunities and experiences for the anticipated residents.

Through the structure plan process an assessment of the Warkworth Structure Plan study area has been undertaken to develop an indicative parks and open space network. Potentially suitable land for suburb parks, a sports park and neighbourhood parks has been identified considering:

- existing parks and open space
- topography, coastline and waterways
- existing and future road corridors and potential cycling/walking routes
- future esplanade reserves
- potential future housing density and residential population and other land uses in the Warkworth Structure Plan
- the Rodney Greenways Paths and Trails Plan, Pūhoi to Pakiri
- any potential synergies with the possible locations of new schools
- the council's parks and open space policies and planning tools

The outcome of this assessment is an indicative parks and open space network with 18 small neighbourhood parks, two larger suburb parks, one large sports park, and off-road walkways/cycleways connecting these parks.

The neighbourhood parks may be around 0.3 - 0.5ha each and indicative features of these parks could include play space, flat kick-around space for informal games, areas for socialising and respite, landscaping, greenery and specimen trees. Ideally these parks are located by walkways and cycleways, esplanade reserves, riparian corridors or roads and one of these parks would be accessible by most residents within 400m walk.

The neighbourhood park locations are shown indicatively in the Warkworth Structure Plan and on Figure 3. They are spread throughout the structure plan area with higher concentrations in areas of increased residential intensity. It is important to note that the structure plan shows indicative locations of potentially suitable land for neighbourhood parks. The exact location of each neighbourhood park will be determined as detailed subdivision applications are lodged to develop these areas.

The two suburb parks will be around 3ha each and indicative features of these parks include walking circuits or trails, greenery and trees, multiple kick-around spaces, socialising spaces (including picnic and BBQ facilities), larger and more specialised informal recreation attractions (such as large playgrounds, skate parks, hard courts), organised sport facilities, and community event space.

The suburb park locations are shown indicatively in the Warkworth Structure Plan and on Figure 3. One suburb park is indicatively identified in the north east and the other in the south east. Both are on the Green Network with the potential for off-road walking and cycling access.

The sports park may be around 10ha and have many of the same features as the suburb parks, with a focus on organised sport fields and facilities. The sports park location is shown indicatively in the Warkworth Structure Plan on Figure 1. The sports park is indicatively identified on the flat land in the southern part of the study area.

The council will purchase the land for the sports park and two suburb parks prior to the area being developed. However, it is important to note that the Warkworth Structure Plan shows indicative locations of potentially suitable land for a sports park and two suburb parks. No land has yet been purchased or designated for these parks and the indicative locations shown are subject to change with further, more detailed information.

The acquisition of additional land will be required to facilitate the development of connections and linkages. Esplanade reserve and riparian margins present an opportunity to create off-road recreational walkways and cycleways where appropriate. The Warkworth Structure Plan shows the anticipated future esplanade reserves that will be vested to council on subdivision of the land (as it is developed).

3.3.4 Centres

The existing Warkworth town centre by the Mahurangi River will remain as the focal point for retail, office, community and civic space for Warkworth, even with the development of the Future Urban zone. There is capacity for the existing town centre to expand significantly in the future. This capacity is largely through the 9ha of Mixed Use zoning around the town centre. This area is predominantly occupied by older housing stock that could be redeveloped into higher density residential and office/retail space. There is also some undeveloped capacity within the area zoned Town Centre.

Retaining the existing town centre as the main focus of Warkworth is consistent with the structure plan Planning Principle to “Retain the current town centre as the focal point and ‘beating heart’ of Warkworth”.

The recently established Grange retail area (SH1) is another significant centre area that will service the existing and planned residential areas in the south east. There are also planned large format retail developments (either consented or zoned) at Woodcocks Road and Hudson Road¹⁰.

Considering the existing and planned supply, the Future Urban zone areas around Warkworth require only small centres for the local convenience needs of surrounding residential areas.

As there is limited future demand for additional centre land¹¹, it is important to distribute this sustainably throughout the growth areas so that all areas have access to a nearby centre and that each centre runs efficiently.

The Warkworth Structure Plan anticipates that the centres hierarchy for Warkworth would eventually include a total of seven centres in Warkworth. At the top of the hierarchy is the

¹⁰ Stockyard Falls has a resource consent for 15,715m² GFA of mostly large format retail. It is noted that if this development does not proceed (by 2021) then the consent will lapse, and the underlying Light Industry zoning will prevail – making it very difficult to establish the centre on this land. If retail space does not materialise at Stockyard Falls, there would need to be provision for the consented amount of space to be made up elsewhere in Warkworth, in order to adequately meet future demand.

General Business land on the corner of Hudson Road/SH1 is owned by Foodstuffs and could potentially accommodate a large supermarket and 1-2 other large format retail stores (around 6,000m² GFA).

¹¹ Refer to Business land demand reports in **Appendix 1**.

Warkworth town centre. This centre provides for a wide range of activities including commercial, leisure, residential, tourist, cultural, community and civic services. It provides a focus for commercial activities and growth. The Warkworth town centre has the largest concentration of retail, professional services, and food and liquor (including two supermarkets) in the town. As noted above, the town centre has the potential through current zonings for significant expansion (both 'out' and 'up').

The next step down in the hierarchy are the Local Centres. They primarily provide for the local convenience needs of surrounding residential areas, including local retail, commercial services, offices, food and beverage, and appropriately scaled supermarkets. Buildings can be up to four storeys high, enabling residential or office use at upper floors. The Grange is a recently built retail development including a petrol station, a number of food outlets, a childcare centre, gym, and offices. While not initially planned as such, due to its emergence and its size the Grange has been zoned a Local Centre in the Auckland Unitary Plan. Another new, likely smaller, Local Centre is shown in the southern growth area.

Finally, the smallest centres in the hierarchy are three new Neighbourhood Centres identified in the structure plan in the north, west, and north west. A Neighbourhood Centre provides residents and passers-by with frequent retail and commercial service needs and will usually consist of activities such as a dairy, chemist, bakery, takeaways, small offices etc.

Outside the centres hierarchy, there is also a large amount of retail in the large format retail areas. While large format retail is generally preferred in centres, it is recognised that this is not always possible, or practical. This is especially so for Warkworth where the 'Warkworth 3' precinct in the Auckland Unitary Plan only enables a very limited amount of large format retail in the Town Centre zone. The Large format retail areas are not envisaged as the locations for civic or community facilities/spaces or where small retail activities or residential activities can establish. This is to prevent unplanned centres from progressively occurring.

Warkworth's large format retail areas will be located on Woodcocks Road and Hudson Road. Both these large format retail areas have yet to be fully constructed. The Woodcocks Road site currently has a large building supplies store, a car yard, and a light industrial warehouse located on it. There is a large vacant area where a resource consent enables further large format retail development of the site. The Hudson Rd site (owned by Foodstuffs) is zoned General Business which anticipates large format retail. A resource consent has been lodged to develop a Pak n Save supermarket and another large format retail store on the site (this consent was still being processed at the time of the structure plan adoption).

The Warkworth centres hierarchy and large format retail locations are outlined and illustrated through Figures 22 and 23 below.

Centre type	Centre name (and location)
Town Centre	Warkworth town centre (by the Mahurangi River)
Local Centres	The Grange (SH1) New southern centre (near Valerie Close)
Neighbourhood Centres	New western centre (Woodcocks Rd) New northern centre (near Matakana Link Rd - Te Honohono ki Tai) New north western centre (near the future Western Link Road route)
Large Format Retail	<i>Stockyard Falls (Woodcocks Rd)</i> <i>Foodstuffs site (Hudson Rd/SH1)</i>

Figure 22: Hierarchy of Warkworth’s centres and large format retail areas

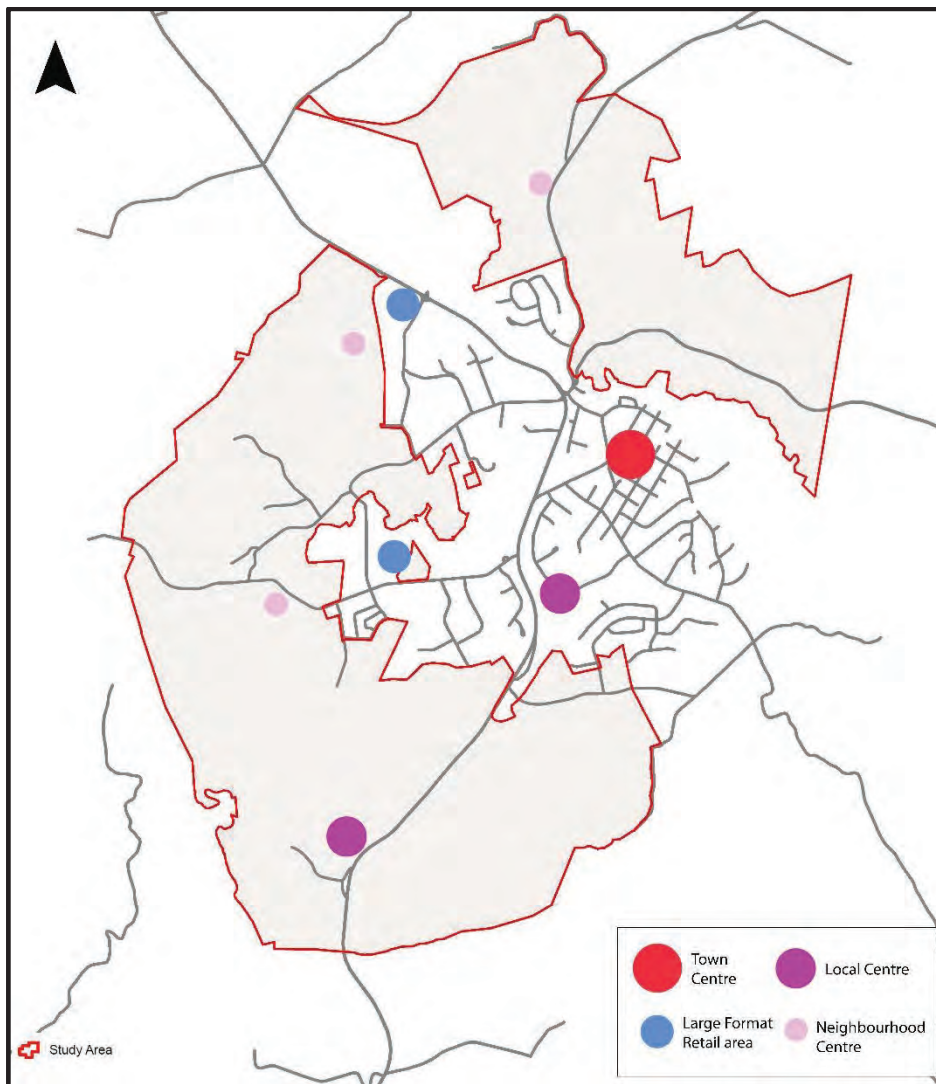


Figure 23: Map of centres hierarchy for Warkworth

In locating the new small centres across the Future Urban zone, attention has been paid to the locations of existing centres to attempt to bring as many dwellings within walking distance of a centre as possible. While the new centres are small, they have been used in the structure plan to leverage some residential density off (rather than simply continue Warkworth’s predominantly Single House zone across the Future Urban zone). Therefore, the centres are located in areas where there is sufficient space and suitable land around the centre to be surrounded by new higher density residential areas.

The new small centres are also all located on/near main transport routes (road, public transport, cycling/walking) to generate ‘energy’ in the centres so that they are viable.

3.3.4.1 New northern centre

A new Neighbourhood Centre in the north (Figure 24) is located to leverage off the activity around the intersection of Matakana Road with the future Matakana Link Road (Te Honohono ki Tai) and the Sandspit Link Road. The land around the centre is largely free from significant development constraints for higher density housing.

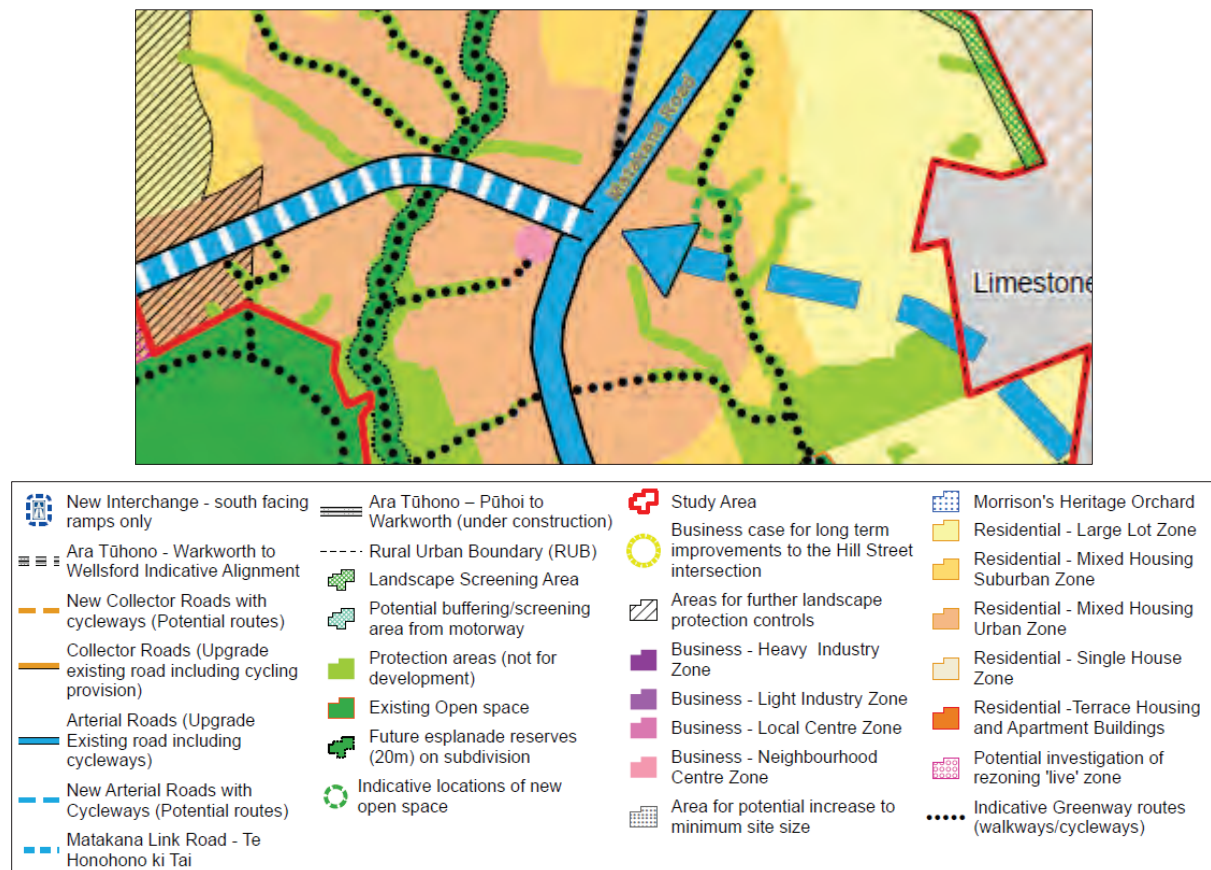


Figure 24: Neighbourhood Centre in the north of Warkworth

3.3.4.2 New western centre

The new Neighbourhood Centre in the west (Figure 25) is located on Woodcocks Road (future upgraded arterial). This location is along a future walking and cycling network based on the river and stream corridors.

The immediately adjacent land and the land to the north and south is largely free from significant development constraints for higher density housing. However, it is noted that most land north of the Mahurangi River is not suitable for higher density residential development.

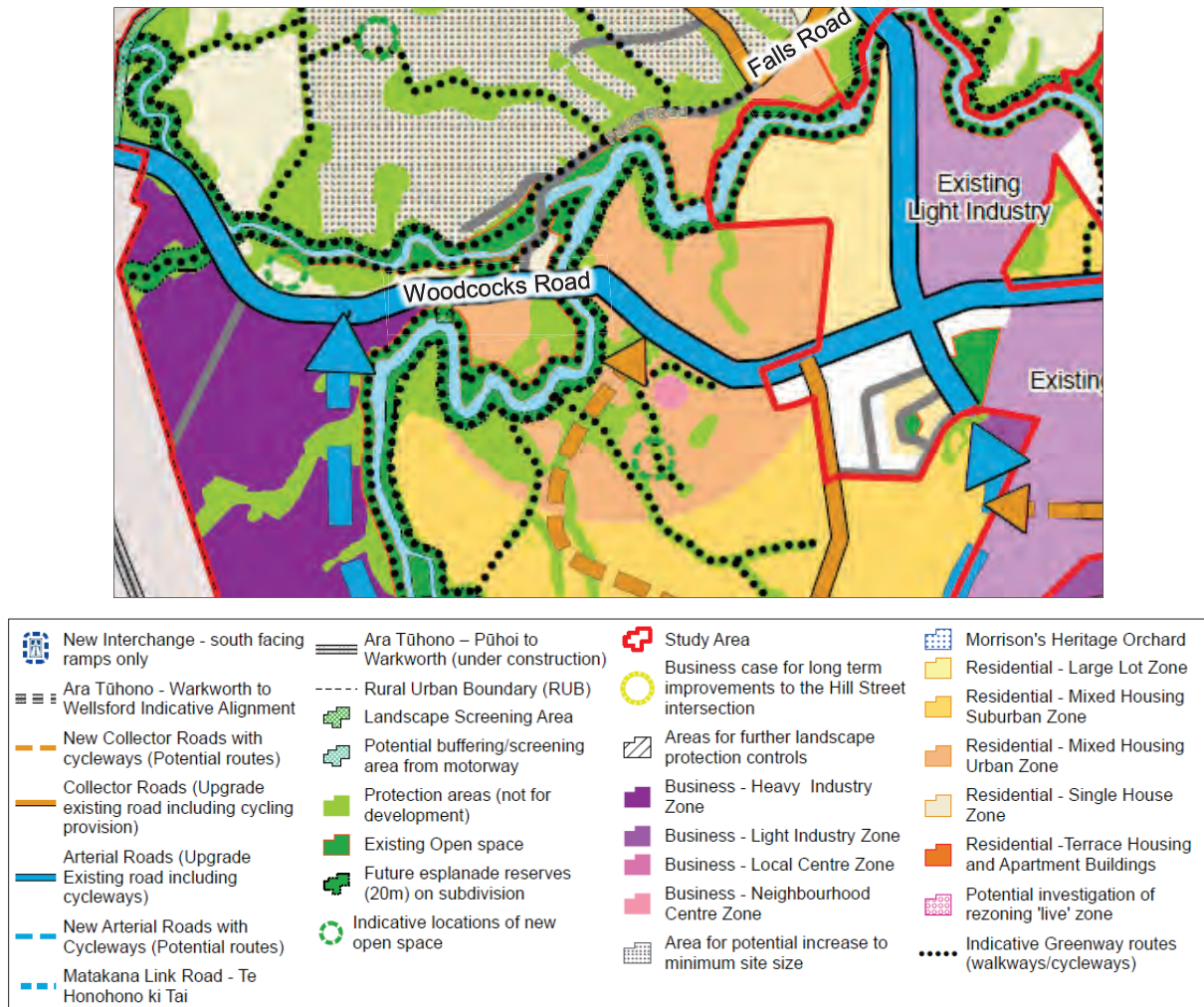


Figure 25: Neighbourhood Centre in the west of Warkworth

3.3.4.3 New north western centre

The new Neighbourhood Centre in the north west (Figure 26) is located on the route of the future Western Link Road. This centre would service the needs of a relatively constrained catchment, being the northern part of the residential area to the west, and the industrial zones to the east.

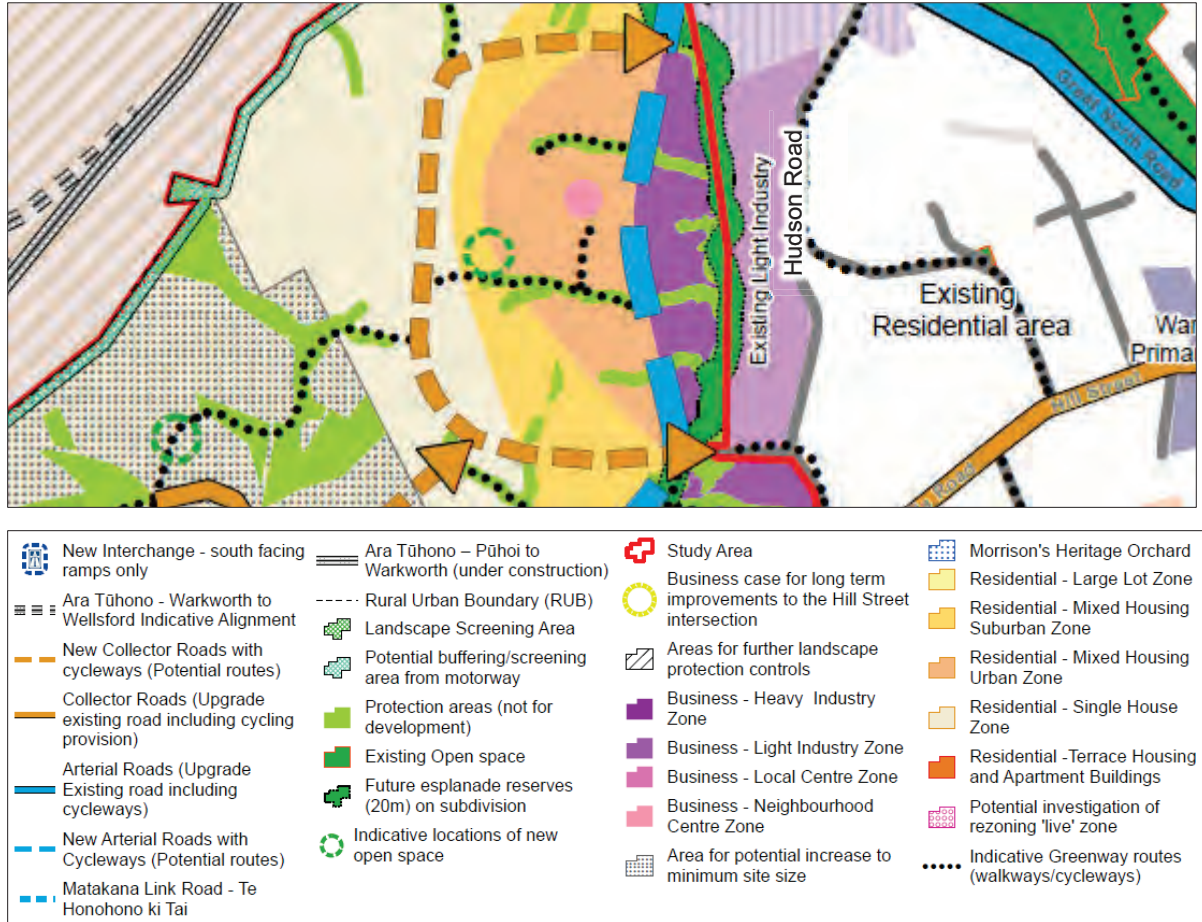


Figure 26: Neighbourhood Centre in the north west of Warkworth

3.3.4.4 New southern centre

The new Local Centre in the south (Figure 27) is located around the intersection of the indicative Wider Western Link arterial road with the existing SH1. The land around the centre is largely flat (unlike most of the Future Urban zone in Warkworth) as well as some gentle, north-facing slopes. This makes this area suitable for higher density housing.

The southern centre will incorporate a new southern bus station to allow for pulsed/layover bus arrivals (between local and Auckland services), making it a public transport hub. This centre will be on the main cycling network and in the vicinity of a potential new school.

In light of the above factors and being the furthest away from the town centre, this southern centre is proposed to be a Local Centre.



Figure 27: Local Centre in the south of Warkworth

3.3.5 Industrial areas

As a Satellite Town Warkworth is anticipated to have significant future employment growth alongside the residential growth. The planning principles for the Warkworth Structure Plan refer to providing new local employment areas so people can work locally in Warkworth. Local employment and areas for new businesses to locate also came through as a main

theme during consultation with the community on the structure plan project (April 2018). This was around the need for Warkworth to be largely self-sustaining for employment and to avoid the need for long commutes to jobs.

The Business Land Topic Report identified that to retain the local employment ratio of more than 1 job to 1 dwelling (as identified in the previous Auckland Plan), further business land is needed in Warkworth including small centres and up to 95ha (gross)¹² of industrial land. The expected dwelling yield from the Future Urban zone is around 7,500 dwellings¹³, while the employment (jobs) growth in the Future Urban zone is around 5,000 jobs¹⁴.

This is only around 0.66 jobs per dwelling and is below the current employment ratio in Warkworth of around 1.39 jobs per dwelling. However, it is important to note, that these yield figures only relate to the Future Urban zoned part of Warkworth, and do not include the existing developed parts of Warkworth¹⁵. There is obviously no requirement for everyone living in the Future Urban zoned area to have to also work in the Future Urban zoned area. Many people could live in the Future Urban zoned area and work in the 'live' zoned areas of Warkworth. Some areas in Warkworth within the existing 'live' zoned areas have significant employment growth anticipated such as the town centre and the expansion area around it, and the as yet undeveloped Light Industry zone by the Showgrounds.

Including the existing town area, over the 30 year planning period, Warkworth is anticipated to have a total of around 1,600 dwellings and around 12,600 jobs (a ratio of 1.2 jobs per dwelling). This level of employment is consistent with the Auckland Plan's desire for significant future employment growth and would result in Warkworth continuing to play a very similar role as a sub-regional (northern Rodney) economic and employment hub.

New industrial areas are generally required to be located on relatively flat land, have efficient access to freight routes, and be efficiently served by infrastructure. Their location needs to also consider reverse sensitivity effects by not locating close to sensitive activities (e.g. high density residential, schools)¹⁶ and not enabling sensitive activities to establish adjacent to industrial areas.

To enable Warkworth to have more local employment options, the structure plan identifies three new areas for industrial land. Two of these areas are in fact additions to existing industrial areas rather than completely new industrial areas.

Overall, the additional industrial areas are all located on arterial roads and mostly adjacent to motorway interchanges for good freight transport access, are on the public transport network and the cycleway network for employee access, are on mostly flat land (but also include some areas of sloping land) and have relatively little Green Network areas on them. The additional industrial areas are separated from potentially sensitive uses (e.g. residential) by arterial road corridors or esplanade reserve areas (both sides of the stream).

¹² 57ha net meaning around 95ha gross (15% removed for 'protection areas' and 30% for roads)

¹³ Refer to the yield calculations in **Appendix 3**

¹⁴ Refer to the yield calculations in **Appendix 3**

¹⁵ For example, the Light Industry zoned land near the Showgrounds is 69ha of land zoned Light Industry that has not yet been developed.

¹⁶ RPS B2.5.2 (7) – (10)

These additional industrial areas generally align with the areas mostly identified for industrial land during the community structure plan workshops (refer to the Community workshop Summary Report (August 2018) listed in **Appendix 1**).

3.3.5.1 Additional northern industrial land

In the north, the additional industrial land (Figure 28) occupies the flat land that fronts the existing State Highway 1 ('**SH1**'), opposite existing Light Industry zoned land. The southern boundary of this land adjoins a stream that is anticipated to trigger an esplanade reserve to be vested on subdivision. This esplanade reserve (20m either side of the stream bank) will provide a physical separation between the industrial zone and residential uses.

The structure plan recommends a landscape screening area along land fronting onto SH1 to create a pleasant entrance to the northern end of the town (to avoid a low amenity, industrial appearance). A landscape screening area is also shown on the northern side of SH1 on the existing (but as yet undeveloped) Light Industry zone.

The additional northern industrial land then adjoins the established Light Industry zoned land along Hudson Road. It continues south until it meets Falls Road. Adjoining new industrial land with established industrial areas limits the interface of the new industrial land with potentially sensitive uses and allows industrial activities to co-locate. In the Future Urban zone between Falls Road and Sanderson Rd there are already industrial type activities occurring (a consented and established industrial activity and the Warkworth Water Treatment Plant).

The additional industrial land is separated from other land uses through the proposed Western Link Road. This road corridor could be around 30m wide with the potential for up to 4 lanes of traffic as well as planting, footpaths, and separated cycle lanes. The road will act as a buffer, providing physical separation between the industrial land and the residential land uses on the other side of the road to prevent conflicts between these uses. Careful urban design solutions will be needed to ensure that permeability through this new urban area is maintained for pedestrian and cyclists and that the road frontage is activated and attractive on both sides of the road.

Any refinement/shift in the alignment of the Western Link Road through the detailed investigation for the designation will have flow on effects on the zoning as the road is used as the method to separate the industrial land from the residential land.

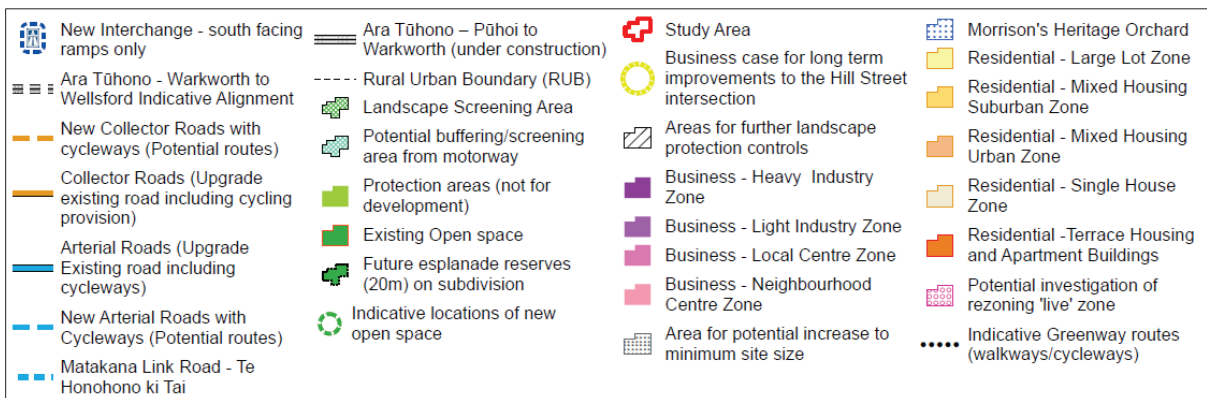
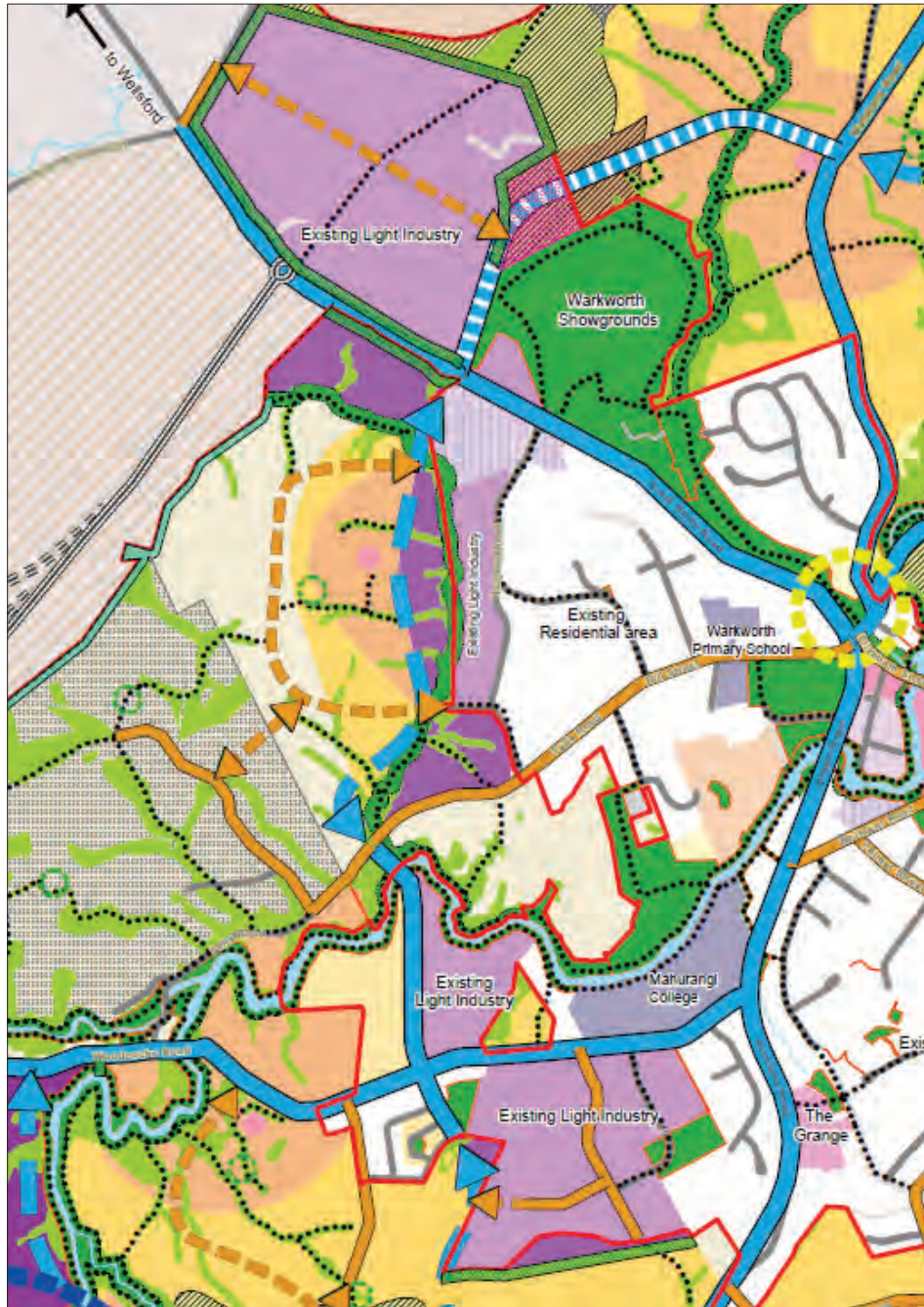


Figure 28: Additional industrial land in the north of Warkworth

3.3.5.2 Additional southern industrial land

In the south there is a small extension of the established Morrison Drive/Glenmore Drive light industrial area (Figure 29). The extension is consistent with a recent resource consent for industrial development on the land at the end of Morrison Drive and keeps the industrial land on the northern side of the slopes. There is also a small area added near Evelyn Street. Adjoining new industrial land with established industrial areas limits the interface of the new industrial land with potentially sensitive uses. While this additional industrial land is not flat, the slope is generally consistent with the established Morrison Drive industrial area that it adjoins.

As in the north, arterial roads are used as a buffer to separate the industrial land from other sensitive uses. A landscape screening area is identified along the ridgeline to contain the visual impacts from spilling over into the southern catchment.

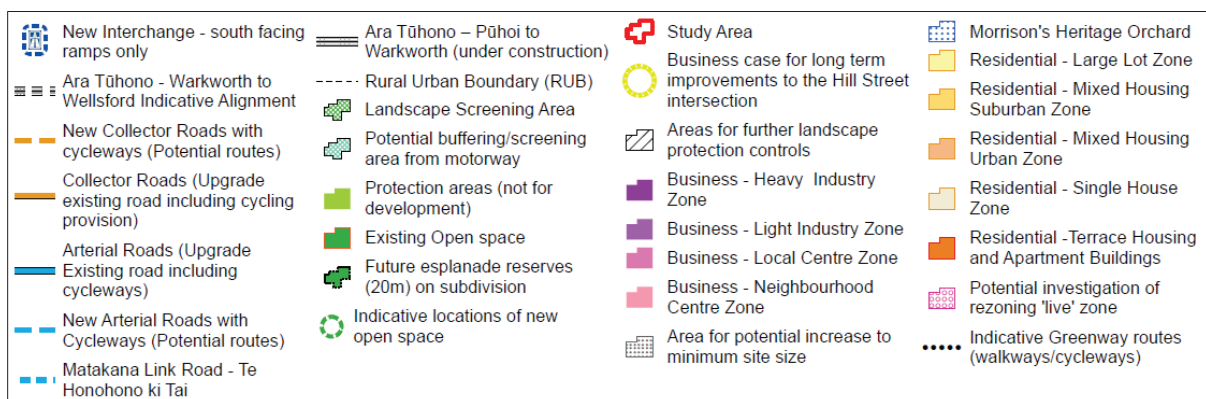
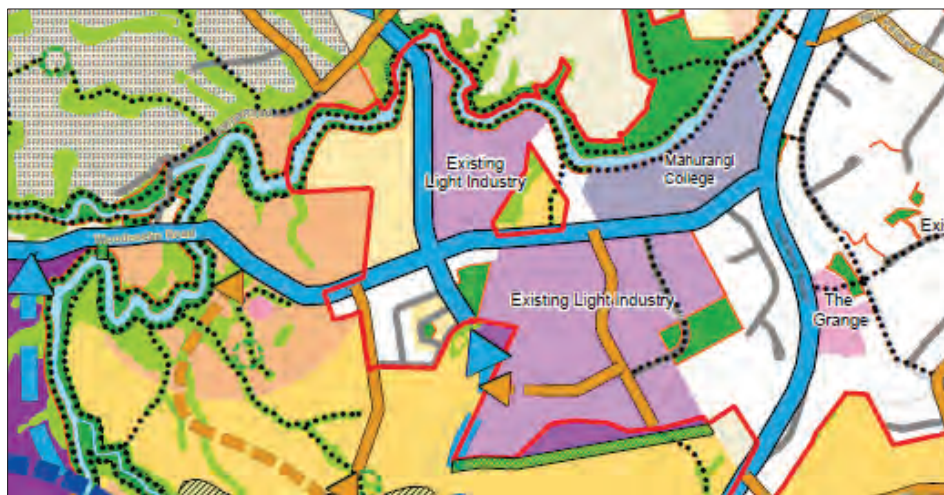


Figure 29: Additional industrial land in the south of Warkworth

3.3.5.3 New south-western industrial land

A new industrial area is shown in the south western edge of the Future Urban zone (Figure 30). The new industrial area is near to the potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only) in the south. This provides the land with

excellent access to the regional/national freight network and avoids the need for industrial traffic heading through residential areas. The indicative Wider Western Link Road traverses through the site and provides a route for heavy traffic.

The new industrial area is bordered to the west by the RUB and the Ara Tūhono – Pūhoi to Warkworth alignment, to the north by Woodcocks Road (future upgraded arterial), and to the east by the right branch of the Mahurangi River. There is already mature native vegetation along much of this stream corridor. In the future this area will have an esplanade reserve on both sides of the river creating a 40m separation between the industrial land and neighbouring uses. The new industrial land is essentially an 'island'.

The industrial land in this location reduces the need for multiple road connections to surrounding areas (as there would be for residential land) and therefore reduces the need for additional stream crossings. If it was used for residential it would likely require more crossings for connectivity/legibility of the neighbourhood to surrounding areas.

The new industrial land is exposed to the motorway alignment due to the flat topography of both the motorway alignment and the industrial land and the short distance between them. Locating industrial land in this area limits the potential for reverse sensitivity issues for the motorway operation as industrial activities are generally not as sensitive to noise, light spill, etc. This section of the motorway adjacent to the proposed industrial land is different to most other areas along the western edge of Warkworth which have greater separation distances, riparian areas, and/or an elevation difference between the motorway and the Future Urban zoned land.

Unlike most land in Warkworth, most of the land within this new industrial area is flat and therefore lends itself to enabling larger building platforms for Heavy Industry¹⁷. Feedback from industry groups during the structure plan process has indicated that areas for business with large building platforms (i.e. 1ha) are required. In light of this, the Warkworth Structure Plan shows this south-western industrial land zoned Heavy Industry.

¹⁷ Note that the differences between the Heavy Industry zone and the Light Industry zone are relatively small with a key difference being around subdivision site size.

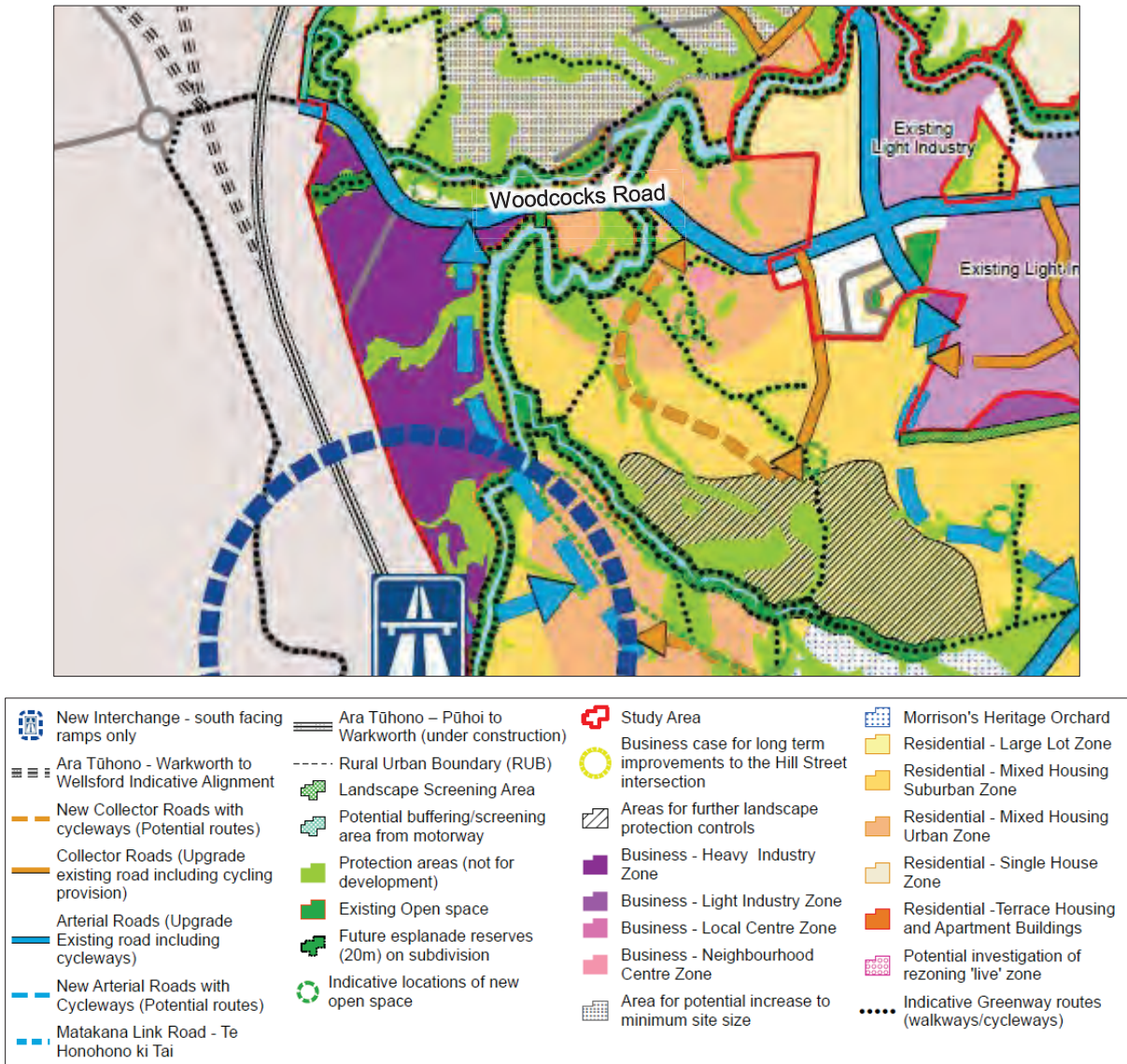


Figure 30: Additional industrial land in the south west of Warkworth

3.3.6 Morrison's Heritage Orchard

Public feedback during the Warkworth Structure Plan project has shown that the Warkworth community currently sees itself as a rural town and there was a strong desire to retain the local and rural character as it grows. While this is challenging as the town grows from a population of around 5,000 to around 25,000-30,000 there are a number of methods in the Warkworth Structure Plan to achieve this (see section 3.3.10.8). One of these methods is to enable a working rural activity (fruit orchard) to continue within the town. This will provide a direct connection to Warkworth's rural production and its history. It also provides a significant area of greenery and trees within the urban area. The presence of Morrison's Heritage Orchard within the urban area will strengthen the rural character and local community identity of the expanded town. It could also be a unique attraction bringing in tourists and spin-off business for the rest of Warkworth.

The Morrison's orcharding legacy has heritage value for the Warkworth area. In the early days of European settlement, boat access put the Mahurangi within easy reach of the growing Auckland market for fruit. Edward Morrison pioneered commercial orcharding in the Mahurangi district, developing the Red Bluff Orchards and Nurseries near Hepburn Creek during the 1870s. By 1914 this was the largest orchard and nursery in NZ, covering 57 hectares and containing 250,000 trees. Morrison grew and developed new varieties of plums, pears and apples, offering both fruit and trees for sale. The nursery shipped out 40,000 young apple trees a year.

A tramway ran along Hepburn Creek Road to the packing sheds. It continued along the foreshore to the deep-water wharf built in 1894, which was also used by other orchards nearby. Red Bluff was a regular stop for coastal steamers serving Warkworth. The ships Kotoite and Kapanui had specially-ventilated holds for carrying fruit, and at the height of the fruit season special trips were made to pick up fruit. When the fungal disease fireblight appeared in 1914, the great pear orchard at Red Bluff had to be cut down. When it reappeared, this time in the nursery, all susceptible stock had to be destroyed. By this time dairy farming was providing better returns for landowners, and the enterprise closed in 1919.

Edward's son, John, continued the family tradition of experimental development at the Glen Kowhai orchard property across the river, until that property was sold in 1969. The current Morrison family orchard (Kenilworth orchard) on State Highway 1 was planted in 1935 as a continuation of the Morrison legacy. It specializes in growing a range of early 'heirloom' varieties of plums, apples and other fruit.



Figure 31: Royal Gala apples at Morrison's Heritage Orchard

It is important to note that the retention of the Morrison's Heritage Orchard within the future urban area of Warkworth has been requested by the landowners. The Morrisons have expressed a desire to continue orcharding on a portion of their Future Urban zone landholding in Warkworth instead of subdividing the land for some form of urban development.

Obviously, if every Future Urban zone landowner in Warkworth wished to continue rural activities into the long-term future then this would create issues around accommodating anticipated population growth within the town. However, due to the significant economic incentives to convert rural land to urban, in nearly all cases Future Urban zone landowners will urbanise the land to maximise their economic return. The Morrison's Heritage Orchard removes 16ha from urban development out of the 1,000ha of Future Urban zoned land around Warkworth and therefore does not undermine the overall ability to accommodate growth¹⁸.

The exact nature of the way the orchard would operate in the future is yet to be determined but there are two related issues that are important to consider; its economic viability and the potential for reverse sensitivity with surrounding residential areas.

In terms of economic viability, the Morrisons' wish to diversify the orchard operation with activities that complement its core focus on growing heritage varieties of fruit. The expanded offerings could potentially include activities such as a café, children's play area, public rest rooms, orchard museum, animal petting, educational classes/visits, orchard tours, event hosting (e.g. weddings), a farmer's market, and additional parking areas. The existing shop could also be shifted to a more convenient and safe location and the range of products offered in the shop expanded.

In terms of the potential for reverse sensitivity, the possible issues may be around noise, spray drift, vermin, and smells. The current practices used on the orchard already minimise these issues and further methods to avoid reverse sensitivity could form part of the future specific Auckland Unitary Plan provisions for this property. It is also noted that there is potential to internalise most effects due to the hill to the north, significant screening and shelterbelts to the south and west, and the current SH1 corridor to the east. The Morrison's large land holding means that they control the northern boundary and have proposed hedging/shelter belts along this edge.

¹⁸ Even taking the Morrison's Heritage Orchard land out, the anticipated dwelling yield from the Warkworth Structure Plan is equal to that anticipated in the Auckland Plan (7,500 dwellings).

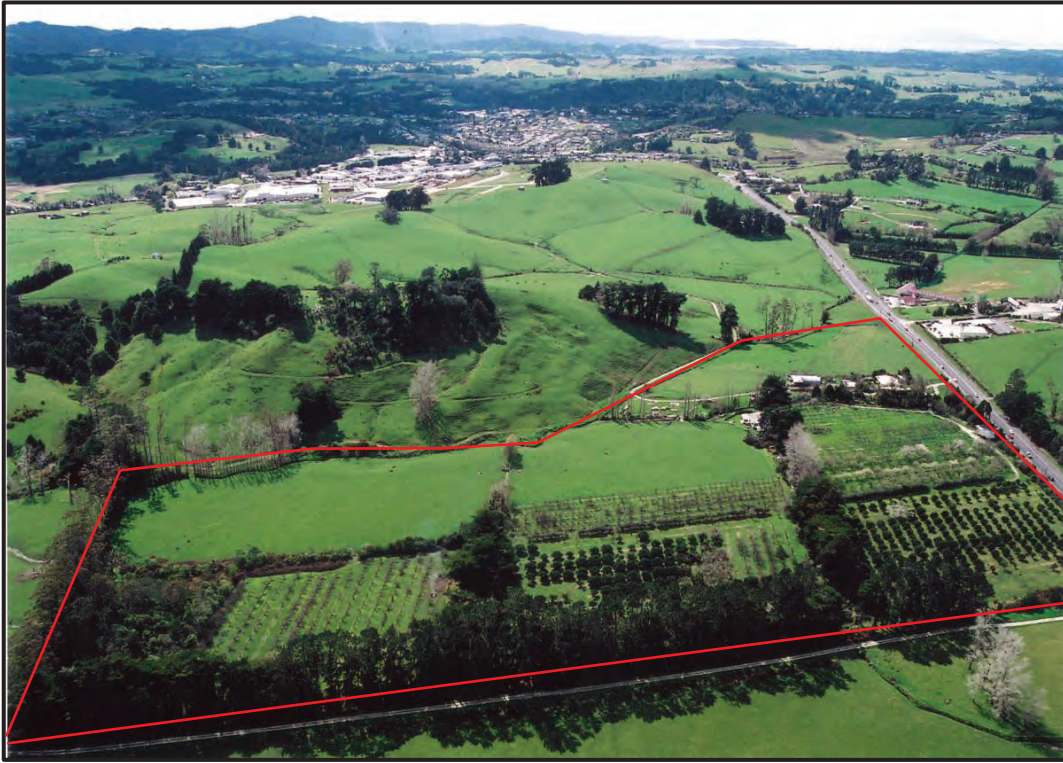


Figure 32: Morrison's Heritage Orchard (with approximate property boundary shown in red)

The Warkworth Structure Plan shows residential uses around the site. However, much of the land to the west and north is zoned Large Lot which minimises the number of potentially impacted neighbours. The rest of the land around the orchard is zoned Mixed Housing Suburban which allows residential density but limits the height to two storeys, which enables the shelterbelt screening to be effective. The structure plan also indicatively shows a sports park near the orchard which again (depending on design) could further mitigate any reverse sensitivity issues. An indicative collector road is also shown along the southern boundary of the orchard, providing some separation distance from adjoining land uses.

To enable the orchard to continue as described above, a likely mechanism is a precinct (site specific rules) in the Auckland Unitary Plan. The precinct could include provisions around enabling the orcharding and complementary activities, managing potential reverse sensitivity issues, and securing public access through walking and cycling paths through the land (linking to the walking/cycling network).

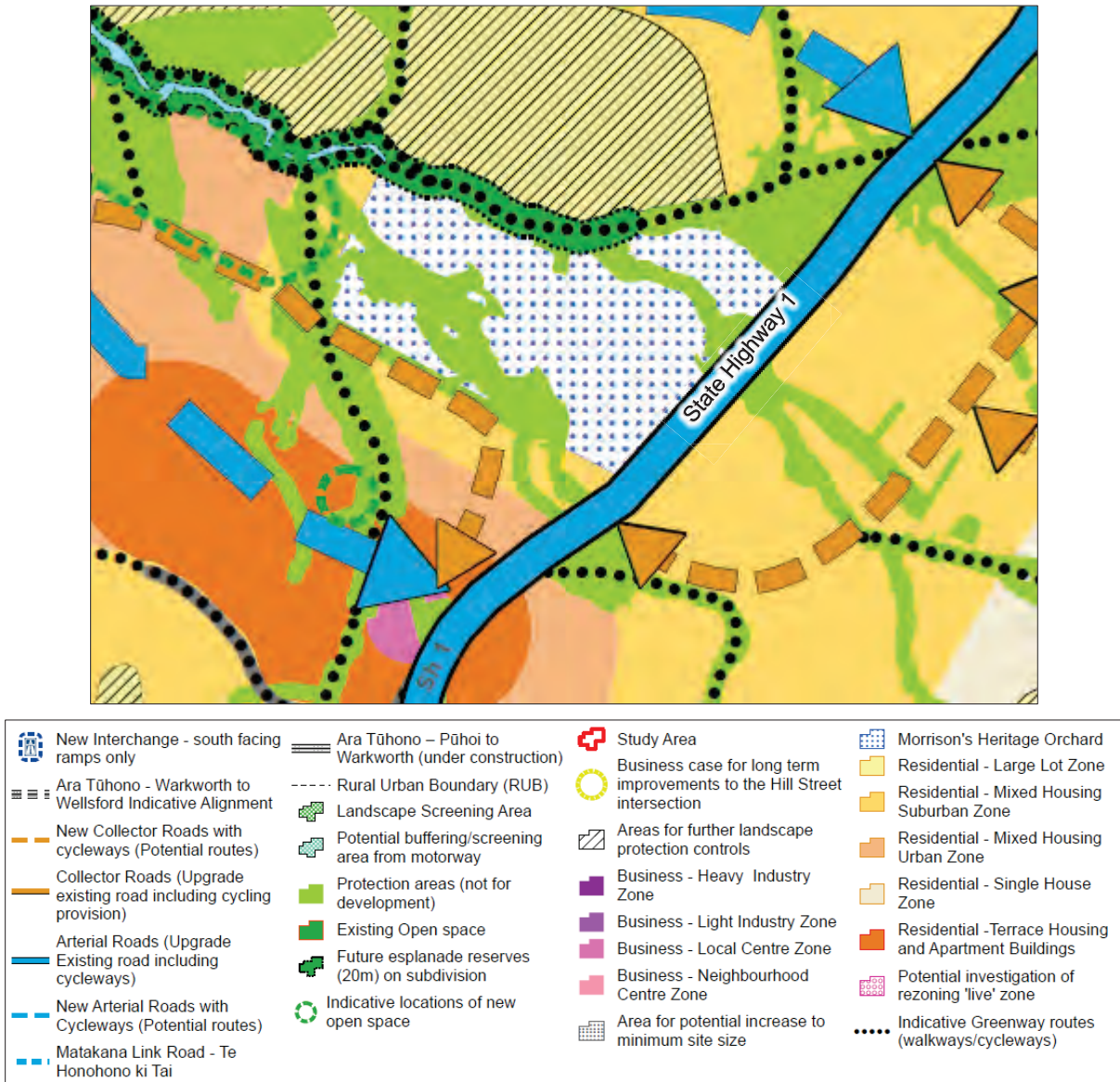


Figure 33: Morrison's Heritage Orchard

3.3.7 Transport infrastructure networks

Te Tupu Ngātahi, the Supporting Growth Alliance is currently undertaking an Indicative Business Case for the transport network in Warkworth. In parallel to this, the alliance has prepared the Warkworth Integrated Transport Assessment in support of the Warkworth Structure Plan (see **Appendix 1**).

The purpose of the Integrated Transport Assessment is to identify at a high-level, the following:

- Active mode network;
- Roding network; and
- Public transport network.

3.3.7.1 Walking/ Cycling Network

The structure plan seeks to prioritise active transport in Warkworth through a separated walking and cycling network shown on Figures 1 and 3. The proposed walking and cycling network utilises the arterial road network and greenway routes along the Mahurangi River/riparian margins of streams to provide connectivity throughout Warkworth. In addition, a collector road network with separated cycle lanes is proposed to provide further permeability through the study area.

Currently Warkworth has a large number of walking trips. However, cycling trips are very low. In order to increase cycling mode share, significant improvements to the cycle network are proposed.

In order for walking and cycling to be encouraged, walking and cycling routes must be direct, safe and connected to key destinations. Safety is an important consideration in whether people choose to cycle, and therefore on arterial roads and key collector roads, walking and cycling movements are proposed to be separated from higher speed vehicle movements. Where separated facilities cannot be provided, it is recommended to reduce vehicle speeds so that deaths and serious injuries are avoided. Encouraging walking and cycling also requires a connected network of major routes enabling access to major destinations.

The proposed active mode network provides connectivity to centres, employment areas, schools and public transport stations. With an appropriate road network catering for walking and cycling modes, in conjunction with off-road facilities, there is the opportunity to significantly increase walking and cycling mode share. In combination with improving e-bike and e-scooter technologies, there is the opportunity to travel greater distances by personal transport modes other than the private car/truck. It should be noted that in Warkworth the connection distances between residential areas, centres and key attractors, such as employment areas and schools, are generally less than 5km, meaning walking and cycling trips within the urban area are a feasible transport option for many people.

The Network Principles for the primary walking and cycling routes in Warkworth are:

- Connecting people to key destinations (hub and spoke network concept):
 - Between Warkworth's centres;
 - Between centres and public transport stations;
 - Between public transport stations and medium to high density residential areas;
 - Between centres and employment areas;
 - Between medium to high density residential areas and educational facilities.
- Utilising riparian stream corridors to provide connections to key destinations and residential areas.
- Utilising the arterial road network to provide connections to key destinations and residential areas.

All roads within the Warkworth Structure plan area are proposed to have safe walking and cycling facilities. In general:

- All new and existing arterial roads are proposed to have footpaths on both sides of the road and separated cycle facilities;
- All new collector roads identified on the active mode transport network are proposed to have footpaths on both sides of the road and separated cycle facilities. New residential and business development will be encouraged to be 'rear-loaded', where access occurs from rear lanes or consolidated accessways, on these new collector roads to enable separated facilities to be provided with minimal vehicle crossings;
- All existing collector roads identified on the active mode transport network are proposed to have footpaths on both sides of the road. While separated cycle facilities are desirable and can be achieved for localised areas (Hill Street in front of Warkworth Primary School for example), improvement to some other roads may be limited by their existing situation. Where separated cycle facilities are not possible local area traffic management ('**LATM**') can be used to control vehicle speeds (traffic calming with cycle bypasses for example) and/or shared paths;
- All other collector road and local roads not on the active mode network map are anticipated to have traffic volumes less than 2,000 vehicles per day and therefore can operate in a mixed traffic environment. There is strong need however to ensure vehicle speeds are 30 km/hr or less and therefore all new local and collector roads should have some form of LATM included. Existing roads, particularly those around the existing Warkworth town centre and identified on the greenways network, will need to be monitored to assess whether LATM is required; and
- Walking and cycling facilities are proposed to be provided 'off-road' along the Mahurangi River and other riparian margins to avoid the need to encounter vehicle traffic at all. These routes will serve both a commuter and recreational function.

3.3.7.2 Rooding network

Based on the potential growth indicated in the Warkworth Structure Plan, the proposed rooding network is shown on Figure 4 and includes:

- Ara Tūhono – Pūhoi to Warkworth
- Matakana Link Road (Te Honohono ki Tai)
- Western Link Road between SH1 (north) and SH1 (south) including Mansel Drive
- Sandspit Link Road
- Wider Western Link Road
- Potential Ara Tūhono – Pūhoi to Warkworth southern interchange (with south facing ramps only).

In addition to these, indicative collector roads are also shown but there is flexibility to potentially change these routes through further analysis.

The proposed road network provides both north-south and east-west arterial roads to carry the majority of traffic movements generated by the proposed land use activities within the structure plan area. Due to topographical and watercourse constraints, there is limited opportunity to establish a grid network ideally sought for greenfields development. As a result, the collector road network typically comprises crescent roads that direct traffic back to

the arterial road network. It is likely that in some locations, local roads will also access directly off arterial roads.

The potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only) enables a large proportion of Warkworth, in particular Warkworth south, to travel to and from the south without utilising the existing SH1 route or the utilisation of the internal Warkworth road network to access the Ara Tūhono – Pūhoi to Warkworth roundabout to the north. As part of connecting to the southern interchange, a new Wider Western Link Road is proposed to connect the southern interchange to both the existing SH1 route and Woodcocks Road. This will allow the southern interchange to be accessed by the wider Warkworth area. The interchange is also proposed to be located nearby to proposed industrial land which will shorten travel distances to strategic routes for heavy vehicles and lessen the amount of heavy vehicle traffic on roads within Warkworth.

The proposed Sandspit Link Road will enable better vehicle accessibility for vehicles travelling between Sandspit, Snells Beach and Algies Bay, and Ara Tūhono – Pūhoi to Warkworth, by avoiding the need to pass through the SH1/ Hill Street intersection. Essentially, these vehicles can bypass the intersection by following a route along the Sandspit Link Road, Matakana Link Road (Te Honohono ki Tai) and SH1 (north of Hudson Road). While the design of the SH1/ Hill Street intersection is yet to be determined, the Sandspit Link Road and Matakana Link Road (Te Honohono ki Tai) provide the opportunity for this intersection to focus on improving accessibility for public transport, and walking and cycling.

As part of the structure plan, Local and Neighbourhood Centres have been located near arterial roads where they can be accessed by private vehicles, public transport, walking, and cycling modes.

3.3.7.3 Public transport network

Based on the potential growth indicated in the Warkworth Structure Plan, the proposed public transport network is shown on Figure 4.

Currently, census data reveals public transport use in Warkworth is very low (although growing with the introduction of AT services). In the short term, it is proposed to build upon the recently introduced 'New Network for Warkworth' with four key routes:

- Snells Beach/ Algies Bay Connector (996)
- Omaha/ Leigh Connector (997)
- Wellsford Connector (998) implemented in 2019 and funded by the Rodney Local Board targeted transport rate
- a higher frequency bus service between Warkworth and Hibiscus Coast Station in Silverdale (995)

Initially, a main station/bus interchange is proposed in the Warkworth town centre supplemented by an interim 'northern station' adjacent to SH1 north of the town. The interim northern station will also provide a Park and Ride facility to enable convenient access to the 995 route.

In the long term, the preference is to retain a town centre station but also have a larger bus station/interchange in the southern Local Centre and a Park and Ride near the potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only). The reasons for favouring a southern station are:

- It simplifies the 995 route (the high frequency route between Warkworth and Hibiscus Coast Station). The Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only) enables buses to efficiently gain access to and from the motorway route.
- Due to land constraints, there is limited space within the Warkworth Town Centre to accommodate pulsed/layover arrivals (there would need to be greater than five bus stops including inter-regional buses). There could be space designed for a bus station/interchange in the greenfields development of the Local Centre in Warkworth south.
- Private land to the north will be further developed and the ability to accommodate an interim station facility without land purchase is limited.
- The existing 996 (Snells/Algies Bay), 997 (Omaha/Leigh), and 998 (Wellsford) routes can be extended south through the new Warkworth South residential catchment to the new southern station. This will enable the new residential catchment to be served by public transport without significant changes to the existing bus network.
- The higher density Terrace Housing and Apartment Buildings zone and the Local Centre zone are proposed to be designed in conjunction with the southern station. This will encourage walk-up public transport to both the 995 route to Auckland and the other local routes also passing through the station.

With a proposed southern station, it is not considered necessary to retain the northern station. The main reasons are that if a northern station with a Park and Ride is retained, there would need to be a bus connection between the northern station and the southern station. As no north-facing ramps are proposed at the Ara Tūhono – Pūhoi to Warkworth southern interchange, this would require the 995 route to follow the Western Link Road and extend the running time of the service. In addition, outside of peak times, there would likely be a significant number of 'empty-running' buses between the northern and southern stations.

3.3.8 Other infrastructure

3.3.8.1 Wastewater

The Warkworth wastewater network is a combination of gravity and low pressure systems and has limited capacity for population growth. The Warkworth Wastewater Treatment Plant ('WWTP') is located on the southern bank of the Mahurangi River on Alnwick St, near to the township. The Warkworth WWTP discharges the treated wastewater into the Mahurangi River adjacent to the plant.

The Warkworth WWTP will continue to service the existing township until the end of 2021, at which time the wastewater will be redirected to a new conveyance system for treatment at

an upgraded Snells Beach WWTP, which will discharge the treated wastewater to the Hauraki Gulf, south of Martins Bay. This new conveyance, treatment plant and discharge system has headroom for population growth. The scheme, called the 'North East Wastewater Servicing Scheme', provides a bulk wastewater connection point on Sandspit Road, called Pump Station No.2.

The structure plan area will largely be a new conveyance system functioning separately to the existing township and will connect to Pump Station No.2. Trunk and local network pipelines collecting and conveying wastewater from the structure plan area will be sized to meet the proposed development yield.

More detail on wastewater provision in Warkworth is provided in the Watercare reports listed in **Appendix 1**.

3.3.8.2 Water

Ground water is abstracted by two new bores on Hudson Road and is then treated at a new Water Treatment Plant facility on Sanderson Road. The plant is designed to treat the consented abstraction volume limit, which caters for approximately 16,000 people. The treated water is currently pumped to two reservoirs (View Road and Thompson Road) that service the existing township.

Trunk network pipelines providing water to the structure plan area will be sized to meet the proposed development yield. Additional reservoir storage may be required to enable the water treatment plant to operate at a consistent throughput and to provide security of supply to customers. The location of additional reservoir storage is yet to be determined.

A future water source will need to be found to provide water beyond the current abstraction consent limit. However, Watercare is confident that such a source will be found prior to this population trigger being reached (2028 onwards).

More detail on water provision in Warkworth is provided in the Watercare reports listed in **Appendix 1**.

3.3.8.3 Power supply

Warkworth's power supply comes through from Transpower's Wellsford Grid Exit Point to Warkworth via Vector's substations. No additional Transpower infrastructure is required in order to service Warkworth's planned growth.

Vector own the network lines that deliver power to Warkworth. The network consists of both overhead lines and underground cables. Vector have been involved in the structure plan process and are aware of the Warkworth's anticipated growth. To cater for growth the network is being future-proofed by upgrading assets, technology and information systems.

Currently, power is delivered to Warkworth via overhead 33kV subtransmission lines down SH1 to the Warkworth zone substation in Matakana Road. Another 33kV line continues to the Snells Beach zone substation. From the zone substations, 11kV feeders radiate into the surrounding areas. The network is overhead (solid lines) except for parts of Warkworth that have underground cables.

All new or upgraded network in urban or semi-urban areas will be underground to ensure a high-quality environment for new dwellings (as required by the Auckland Unitary Plan).

The 33kV network and zone substations are approaching their capacity and Vector's Asset Management Plan outlines the development plans to address this. The main projects scheduled over the next few years in the Warkworth vicinity are:

- Network batteries at Snells Beach and Warkworth South (Woodcocks Road) to manage peak load on the network and strengthen the power supply
- New zone substation in Big Omaha
- New cables in Sandspit Road
- Capacity upgrade at Snells Beach zone substation
- New zone substation in Warkworth South
- New/upgraded subtransmission circuits from Wellsford

3.3.8.4 Telephone and broadband

Chorus will be installing Ultra-Fast Broadband ('UFB') fibre to the existing Warkworth urban area over the next few years. This will deliver the best broadband available to Warkworth. The UFB fibre build will consider the Warkworth Structure Plan's indicative roading network by installing additional duct capacity wherever new or additional ducting is laid.

The Warkworth Structure Plan study area (Future Urban zone) will be fully reticulated with fibre for telephone and UFB as each area is developed.

3.3.8.5 Community facilities

Existing council community facilities are mainly located within the existing built up Warkworth area. The council's Community Facilities Network Action plan identifies actions and priorities required to address gaps, growth or fit for purpose issues across the community facilities network. The action plan identifies that in the medium-term the following actions are required:

- investigate the feasibility and innovative opportunities to meet the need for a pool and leisure space in the Rodney area
- a needs assessment to assess whether the existing facilities are aligned to community needs in Rodney
- investigate the need for a multi-purpose community space in Warkworth
- Investigate the need for expansion and refurbishment of Warkworth Library.

Subject to the outcomes of the actions identified above, it is anticipated there will be adequate provision of library, arts and culture and community centre space to meet the forecast growth in Warkworth. Provision of additional aquatic space may be required in the medium-term to serve Warkworth (and the surrounding area). There may be options to provide this through partnerships, or other innovative methods.

More detail on community facilities provision in Warkworth is provided in the community facilities reports listed in **Appendix 1**.

3.3.8.6 Education

The Ministry of Education is responsible for managing the network of schools within New Zealand. Within the Auckland region, significant population growth is expected to occur as a result of natural increase and migration from overseas and other parts of the country.

Warkworth has been identified as an area of high priority, given the projected resident population growth and high-level of development planned for the area. If the structure plan study area is built out to its full capacity, the development could generate around an additional 1,750 primary age (Year 1 to 6) students and around an additional 2,080 secondary age (Year 7 to 13) students.

This forecast growth will require the expansion of both Warkworth Primary School and Mahurangi College. Over the medium to long term, two further primary schools and additional secondary provision (Junior College) are likely to be required. The establishment of new schools in Warkworth will also require the adjustment of enrolment scheme home zone boundaries to ensure growth can be balanced across the network of schools.

Any new school sites will need to be acquired and designated by the Ministry. School sites will ideally be located near planned centres and other social infrastructure. Key factors of interest when planning for new school facilities are accessibility (walking, cycling, public transport and road), availability and topography of land, distribution of schools, co-ordination of delivery with other agencies and the ability to co-locate social infrastructure.

The Ministry have been working closely with the council's structure plan team and the Supporting Growth Alliance as they look at where to locate these new schools. The Ministry have undertaken an exercise to look for preferred sites within the Future Urban zone. The Ministry are actively pursuing the purchase of sites in the Future Urban zone and until this process is complete the structure plan cannot show on a map where the new schools will be located. However, it is noted that the Warkworth Structure Plan has been prepared with an awareness of the general areas within which the Ministry wishes to locate the new schools.

The delivery of additional education facilities will be planned to align with the sequencing set out in the Future Urban Land Supply Strategy. The Ministry of Education will monitor the speed and uptake of development once land becomes development ready to ensure there is sufficient capacity in the local school network. Delivery timeframes will be adjusted if required. The tentative opening date for a new primary school in Warkworth is 2024 and a Junior College is tentatively scheduled for 2025. Opening of new schools is subject to funding availability, phasing and design and delivery.

Note that the Ministry does not provide Early Childhood Education facilities but rather regulates the facilities that are privately owned, or community based. These parties are expected to continue to supply Early Childhood Education services to cater for Warkworth's growth.

More detail on education facilities provision in Warkworth is provided in the Ministry of Education reports listed in **Appendix 1**.

3.3.8.7 Healthcare

Warkworth lies within the Waitemata Health Board ('WDHB') district. The WDHB serves Rodney, North Shore and the Waitakere areas, extending from Te Arai in the north to Devonport in the south and Piha in the west. The WDHB has two major hospitals (one in Waitakere and one in the North Shore) and it also has 30 community health centres throughout its district.

The current provision of healthcare services in Warkworth is through general practitioners, a surgical centre, a community health unit, and a birthing centre. There are two general practitioner services in Warkworth; the Kowhai Surgery and the Warkworth Medical Centre. The Rodney Surgical Centre provides privately funded specialists and surgical services.

There is no 24-hour emergency health facility in Warkworth. Waitakere hospital is approximately 64km and North Shore hospital is approximately 50km. The Westpac and New Zealand Air Ambulance serve this area.

The four District Health Boards¹⁹ in northern New Zealand have developed Northern Regional Long Term Investment Plan ('NRLTIP') to articulate the strategic direction for the Northern Region using a 25 year planning horizon. It identifies the investments necessary to ensure the ongoing delivery of high quality healthcare.

The NRLTIP indicates a potential new acute site will be required in the northern region. However, the precise location is unknown at this stage and it could be located anywhere within the Northland or Waitemata district health board areas.

To enable the provision of primary health care services the Warkworth Structure Plan has provision for the following zones that anticipate small healthcare facilities: Local Centre, Neighbourhood Centre, and Terrace Housing and Apartment Building zones. Larger healthcare facilities and hospitals are anticipated in Light Industry zones.

Aside from health facilities, the environment in which people live can impact on their health and well-being. Air and water pollution have obvious effects on our health, but other things such as the exercise we do, our social connectedness and commuting patterns can also affect our health.

As the structure plan sets out the land use and infrastructure provision for an area, it will have an impact on how close people live to key services, types of recreation options or public transport options available; which will inevitably affect the health of future inhabitants.

Key elements of the Warkworth Structure Plan that could have health and well-being impacts on future inhabitants include:

- The Green Network proposed in the structure plan can promote health and well-being by:
 - encouraging walking and cycling (where there are paths/connected Green Network areas).
 - improving the aesthetics of the urban environment through green planting.

¹⁹ Northland, Waitemata, Auckland, Counties-Manukau

- mitigating sediment in to Mahurangi River and therefore improving the aesthetics of the Mahurangi River which is a focal point for the community.
- potentially acting as a carbon sink that aids in alleviating the urban dome effect.
- The transport proposals in the structure plan promote health and well-being by:
 - prioritising cycling and walking to key service destinations (e.g. centres, public transport interchanges, parks, employment areas, schools etc).
 - identifying public transport options to Auckland (Hibiscus Coast station) and to surrounding rural settlements, which can reduce car reliance.
- The approach to locating residential zones and key service destinations in the Warkworth Structure Plan promotes health and well-being by:
 - ensuring key services (i.e. Local and Neighbourhood Centres) and parks are accessible to residential neighbourhoods by walking and cycling (close proximity to potential amenities is an important predictor of walking).
- The approach to provision of parks, recreation and green spaces promotes health and well-being by:
 - ensuring passive recreation opportunities are easily accessible in residential areas (preferably along the Green Network), which in turn increases the odds of informal physical activity.
 - locating parks along the Green Network that is potentially accessible by walkways and cycleways is a readily available recreation and transport opportunity.
- Potential contamination and boundary issues are mitigated which promotes health and well-being by:
 - ensuring a buffer (e.g. major road, esplanade reserve) between incompatible uses (e.g. between residential areas and industrial areas).
 - clustering land uses that are have the potential to create issues (e.g. the Heavy Industry zone is located adjacent to the motorway which protects residential areas from potential reserve sensitivity issues).
 - avoiding sensitive activities on land that may potentially contaminated.

3.3.9 Managing hazards

3.3.9.1 Stormwater

In terms of flood management the Warkworth Stormwater Management Plan proposes to:

- Use streams and their associated riparian margins to provide storage and conveyance to manage flood waters.
- Avoid locating buildings or infrastructure within the 100 year ARI modified floodplain unless it can be designed to be resilient to flood related damage.

- Ensure all development and changes within the 100 year floodplain do not increase adverse effects or increased flood depths or velocities to other properties upstream or downstream of the site.
- Identify overland flowpaths and ensure that they remain unobstructed and able to safely convey runoff.

Overall it is considered that the land uses identified in the structure plan for the Warkworth Future Urban Area generally respond well to the site specific constraints and opportunities identified in the Stage 1 - Preliminary Stormwater Management Plan dated February 2019. In particular it is notable that the structure plan seeks to avoid development in the floodplains and restore riparian areas.

Stormwater will be managed in the structure plan area using an integrated stormwater management approach involving water sensitive design. This will involve the following components:

- Minimise the generation of stormwater runoff and contaminants with measures such as clustering development, reducing impervious surfaces and using inert building materials.
- Manage runoff and contaminants as close to source as possible with measures such as capture and reuse, green roofs, permeable pavements and terrestrial revegetation.
- Use swales for stormwater conveyance where possible as an alternative to pipes and filter strips where practicable, as pretreatment to downstream treatment devices.
- Utilising downstream treatment devices which mimic natural physical, biological and physical treatment processes.
- Enhance the receiving environment by preserving and restoring riparian vegetation along banks, natural floodplains and wetland margins, including linking areas of riparian vegetation to create continuous green corridors.
- Utilise existing natural systems for stormwater management function including the restoration/enhancement of wetlands.

Methods to improve water quality as well as minimising and mitigating hydrological change are proposed.

Some further, specific consideration of stormwater requirements in relation to particular land uses and locations will be required in order to ensure that an integrated stormwater management approach is achieved throughout the structure plan area. This will occur at the plan change stage or development consenting stage.

More detail on stormwater management in Warkworth is provided in the stormwater reports listed in **Appendix 1**.

3.3.9.2 Geotechnical and coastal hazards

The Warkworth Future Urban Zone is located upstream of the Mahurangi River, approximately 14km from the open coast. The boundaries of the future urban zone are adjacent to the Mean High Water Springs boundary, extending further landward in northerly, southerly and westerly directions. As a result, the extent of tidal influence and coastal

processes on the future urban zone is limited and there are no identified coastal hazard constraints.

Most of the study area is underlain by rocks of the Waitemata Group, with smaller areas of the Northland Allochthon. The result is a complex combination of weak to moderately strong sandstones and mudstones (the Waitemata Group), with large lenses or disrupted slices of significantly weaker and highly sheared mudstones, siltstones, sandstones and limestones of the Northland Allochthon. These rock types are often associated with large landslides.

Although ancient landslides are observed in some slopes, no areas in the study area have been deemed unsuitable for development because of slope instability. Areas where stability is likely to be more challenging have been zoned for lower density development. This development style can be more flexible, with less need for significant earthworks which could compound existing instability.

Sea level rises since the last ice age have 'drowned' the Puhoi and Mahurangi valleys. These valleys are infilled with deep, soft estuarine and alluvial sediments. These sedimentary deposits are often very weak, resulting in the need for more ground preparation (such as pre-loading to reduce settlement) or for deep foundations. They may also include areas locally prone to liquefaction.

These soft areas have been mostly left as open space or zoned for industrial uses which tend to either be light weight structures (so settlement is a relatively minor issue) or very heavy, in which case the structures would be built on piled foundations.

Overall it is considered that the Warkworth Structure Plan is appropriate from a geotechnical and coastal hazards perspective. The hazards identified should be practical to address with engineering controls. Further investigation and assessment will be needed as the land is developed to manage the risk posed by these hazards.

More detail on geotechnical and coastal hazards in Warkworth is provided in the geotechnical and coastal hazard reports listed in **Appendix 1**.

3.3.9.3 Potentially contaminated land

Within the study area there are a number of potentially contaminating activities included on the Ministry for the Environment Hazardous Activities Industries List ('**HAIL**') that are either being undertaken or more likely than not to have been undertaken in this area. Those activities were commonly associated with pastoral farmland and rural-residential use (for example, livestock dips or spray race operations, importation of unverified fill, burying and burning of farm waste), horticultural activities (market gardening, orchards, green houses and viticulture), and commercial operations (such as a motor mechanic workshop and a spare car parts business).

The zonings identified in the Warkworth Structure Plan will be implemented in the Auckland Unitary Plan through future plan changes and the subsequent resource consent applications will trigger the planning requirements under Section 104(1) of the Resource Management Act 1991. These processes will facilitate the assessment and management of contaminated sites within the Future Urban zone (including remediation if required), prior to redevelopment. This approach will progressively reduce the existing potential contaminant

sources within the Future Urban zone that pose a risk of adverse effects on the receiving environment and/or human health.

In addition, the Warkworth Structure Plan provides for buffer zones (esplanade reserves/strips, wide riparian areas, arterial roads) between industrial land and sensitive receptors, which reduces the likelihood of potential contaminant discharges reaching these receptors.

Through these measures it is anticipated that adverse effects on the environment or human health associated with either historical or future contaminated land will be adequately mitigated, and the quality of the environment improved.

More detail on potentially contaminated land in Warkworth is provided in the potentially contaminated land reports listed in **Appendix 1**.

3.3.10 Protecting Warkworth's special characteristics

3.3.10.1 Environment

The Warkworth Structure Plan area is a highly modified landscape with predominantly arable livestock/pastoral and rural lifestyle activities surrounding the existing Warkworth urban area. Small patches of native vegetation remain across the landscape and freshwater habitats are of moderate condition. The Warkworth Structure Plan is an opportunity to improve ecological values in the area.

The Warkworth Structure Plan land use map aligns with environmental principles, policy, and strategic outcomes documented in the Environment Topic Report (see **Appendix 1**). The alignment of the Plan with environmental principles and outcomes is largely due to structuring the plan around the Green Network as outlined in section 3.3.1. In realising this, the plan proposes to create a continuous 'green corridor' across the study area that connects terrestrial and freshwater habitats with the Mahurangi River and Mahurangi Harbour.

The corridors will improve coverage of vegetation across the structure plan area and provide habitat for wildlife. This is important for improving the quality of existing terrestrial, freshwater and marine habitats and supporting their long-term resilience to change. The corridors will provide linkages between the Dome Valley Forest in the north, through to the Mahurangi River, and out into the Mahurangi Harbour and pest-free islands of the Hauraki Gulf in the east.

The Plan intends that the Green Network areas are not developed for urban purposes. This will provide some protection to the important existing natural and ecological values which those areas hold. To protect those values over the long-term, ecological corridors need to be established to connect those areas together, as well as to a range of other terrestrial, aquatic and/or marine habitats. Ecological corridors help improve the quality and resilience of habitats by facilitating movement of wildlife and providing opportunities to increase vegetation cover and biological diversity (especially native species). Creating these corridors will require revegetation of the intervening gaps between existing areas of native vegetation.

It is important from an environmental perspective that the Green Network in the structure plan is given suitable protection through some form of statutory method (i.e. covenants, Auckland Unitary Plan rules). If these areas are only followed through with weak provisions, then this would not lead to the environmental outcomes sought.

While there are advantages to the Green Network being publicly owned in the future, this is not necessary to achieve most of the environmental outcomes sought. The Green Network can remain on privately owned land into the future, as long as there are provisions in place to adequately protect them.

The Green Network should also be proactively restored (e.g. planting up floodplain areas and riparian margins with appropriate species) if the environmental outcomes sought are to be achieved.

Along with appropriate restoration (e.g. riparian planting), if given appropriate statutory protection the Green Network will afford protection of existing freshwater ecological values as well as improve the long-term life supporting capacity of the freshwater systems in the area, of which sections are currently degraded and lacking suitable riparian cover. Restoration also supports the delivery of objectives for the *National Policy Statement for Freshwater Management (NPS-FM) 2014*. The active restoration of the Green Network could be achieved through mitigation for urban development or through regulation/incentives.

The approach of connecting varying habitat types across the structure plan area is consistent with the visions and objectives sought in *Auckland Council's Indigenous Biodiversity Strategy (2012)*, *Auckland's Urban Ngahere (Forest) Strategy (2017)*, and the *New Zealand Biodiversity Strategy (2000-2020)*.

More detail on Warkworth's environment is provided in the environmental reports listed in **Appendix 1**.

3.3.10.2 Sustainability

Planning for sustainability outcomes is identified as a core consideration in the development of the Warkworth Structure Plan. It is important to note that although the intention to plan the Future Urban zone to be sustainable has been clearly laid out, to achieve this outcome, this principle needs to be considered and upheld during all subsequent planning and design decisions (i.e. during the plan change and resource consent processes).

The structure plan proposes a mix of land uses including a range of residential zones, four small centre zones and areas zoned for industry. In addition, indicative park locations have been identified and the need for additional school sites acknowledged. This mix of land uses suggests that the proposed zoning will to some extent promote a functioning, self-sustaining community as many of the everyday needs of residents could be met within the future urban area and the existing Warkworth urban area.

The plan proposes to incorporate green infrastructure and has identified green infrastructure opportunities at an early stage. The Green Network (Figure 2) is proposed to be land set aside from urban development and to be restored over time (e.g. revegetated). This is an important component of the structure plan and central to delivering a range of significant sustainability outcomes.

This Green Network provides a significant opportunity to deliver a number of functions in order to achieve multiple benefits. These include opportunities for biodiversity enhancement, creating ecological corridors and protecting and enhancing the urban forest. Integrating active travel routes within the Green Network presents an opportunity to promote low carbon and active transportation modes and enhance connectivity within the structure plan area and to the existing Warkworth urban area. In turn, this provides an opportunity to connect people with nature to improve physical and mental health and wellbeing.

The NIWA report on climate change projections and impacts for the Auckland region projects increased rainfall intensity and a greater risk of flooding. The Green Network outlined in the plan should provide enhanced resilience to flooding and support climate change adaptation. The floodplains within the structure plan area are associated with watercourses and so generally fall within Green Network or future esplanade area, where the 20m buffer should provide additional resilience to flooding.

More detail on sustainability is provided in the sustainability reports listed in **Appendix 1**.

3.3.10.3 Heritage and Archaeology

The retention of Warkworth's heritage was a common theme from consultation on the structure plan project and is reflected in the Planning Principle of "Celebrate and protect Warkworth's heritage, both Maori and European, and its relationship with mana whenua".

There is currently one scheduled historic heritage place in the structure plan study area. Several other places of interest or significance have been identified through research undertaken through the Warkworth Structure Plan project.

The key places of actual or potential historic heritage significance known to exist within the structure plan study area are:

- The site of Combes and Daldy's lime works and related features (ca 1862-1870s). The lime and cement industry contributed significantly to the development of Warkworth. This was the first lime works in the Warkworth area to successfully produce lime from limestone for construction purposes. It potentially contains the earliest surviving evidence of lime burning in the district. This site is included in the Schedule of Historic Heritage in the Auckland Unitary Plan but requires the extent of place to be added to the historic heritage overlay.
- An early (1913) reinforced concrete dam built for Wilson's Portland Cement Company. This dam should be evaluated for potential inclusion in the Schedule of Historic Heritage in the Auckland Unitary Plan.
- WWII US military camp sites. The US WWII camp sites and related places in the vicinity of Warkworth (including the headquarters at *Riverina* and *Little Riverina*) are collectively of historical significance to the district. However, it is very unlikely that individual camp sites would meet the criteria for scheduling or that the scheduling of the substantial areas that were occupied by the camps would provide reasonable use within the context of the proposed structure plan. Alternative mechanisms are proposed for recognising the significance of these places. These include installing markers adjacent to former camp locations and interpreting the history of the camps.

The site of one of the US military camps (Wyllie Road D2 at 346 Woodcocks Road) is contiguous with an Auckland Council reserve along the Mahurangi River. Although this camp is not, in itself, of identified individual significance, it was part of one of the biggest groupings of camps in the district. There is a potential opportunity to interpret the camps that once existed on this and the surrounding land from this vicinity, or the opposite side of the river. This opportunity could potentially be enhanced by the indicative neighbourhood park over the part of this property where the camp was located.

- *Riverina* is a large early 20th century villa which is outside the study area. It has significance in relation to the lime and cement industry in addition to its role during World War II. The property is currently not scheduled. It should be evaluated for potential inclusion in the Schedule of Historic Heritage in the Auckland Unitary Plan.
- The route of a Māori pathway, later used by European settlers and travellers, connecting the head of the Mahurangi River with the Kaipara/west coast is also of some historical /traditional significance. It is unlikely that any tangible evidence of this pathway has survived more recent development within the study area and we have not recommended scheduling of this route. We have proposed alternative mechanisms for recognizing and/or interpreting the past significance of the pathway. A suitable location may be in the vicinity of the Falls Road ford over the Mahurangi River.

The Combes and Daldy lime works site and Wilson's cement company dam appear to be substantially intact and have value as part of a grouping of buildings, structures and sites associated with the historic lime industry in the Warkworth-Mahurangi district. These include a distinctive assemblage of late 19th and early 20th century buildings (including *Riverina* and *Little Riverina*) that incorporated local cement and other products.

Other places of heritage interest or value identified within the study area include:

- The sites of early (1850s-70s) settler dwellings. Five of these have been identified and recorded as archaeological sites. Two of these sites, at 360 Sandspit Road and 190 Matakana Road, have early plantings (mature English oak trees) associated with them. These plantings should be considered for evaluation for potential inclusion in the Auckland Unitary Plan schedule of notable trees.
- One previously recorded possible Māori terrace site with taro surviving as a relic of cultivation. This record has been updated following a site visit. The possible terraces appear to be natural landforms. The taro is still present.
- The Falls Road ford, and Cherry's bridge, which are associated with early transport networks in the area. A standard sign identifying the name Cherry's Bridge and the name of the river (Mahurangi right branch) should be installed to remember the history of this place;
- Dwellings located at 66 McKinney Road, 317 Woodcocks Road, 190 Matakana Road, 25 Francis Place and 76 Matakana Road.

The potential exists for further archaeological sites or other historic heritage places to be identified through additional research or survey. However, it is considered unlikely that any additional places of significant historic heritage value will be present in the study area. Appendix A of the Historic Heritage Topic Report identifies sites within the study area, including those listed above, that have potential for further research. This does not necessarily indicate that they are places of significant heritage value, but rather that they contribute to the history of Warkworth. Consideration should be given to further documenting these places where warranted as part of that history.

There are possible adverse effects (actual or potential) on historic heritage arising from the Warkworth Structure Plan land use plan. The structure plan addresses these by avoiding potential adverse effects on the two identified places of historic heritage significance - the Coombs and Daldy lime works site and the Wilsons Cement Company dam. These places have been identified as 'protection areas'. Part of the lime works site has been identified as future esplanade reserve, while the dam is currently within an esplanade reserve. The balance of the property within which the lime works is located has been zoned Residential – Large Lot, which will assist in avoiding potential adverse effects associated with future development. This also gives effect to the structure plan planning principle to "Apply lower density residential zones to areas valued for their landscape, character or heritage significance".

Trees have been identified on two properties that may meet the criteria for inclusion in the AUP Schedule of notable trees and these are recommended for evaluation as a method of avoiding potential adverse effects arising from future residential development.

More detail on historic heritage in Warkworth is provided in the heritage reports listed in **Appendix 1**.

3.3.10.4 Landscape

Most of the proposed land use zonings in the Warkworth Structure Plan are closely aligned or consistent with the key recommendations of the Landscape Topic Report (April 2018). The areas of congruence are around protecting streams/river courses and significant vegetation and the matters below:

- Zoning of the elevated ridges, hills and knolls that define the outer edge of the catchment, together with those that (in the south) that are linked to Avicé Miller Reserve, and (in the north) to the Warkworth Showgrounds for larger lot types of development (Large Lot and Single House with an increased minimum site size);
- Zoning of the large knoll, partly covered in native bush, within the southern half of the structure plan area overlooking Morrison's Heritage Orchard and Ransom Vineyard for Large Lot development; and
- Identification of other natural 'focal points' and low points within individual catchments as possible large park locations – where they can be linked to stream corridors and existing vegetation.
- Protection of the Outstanding Natural Landscape and area of High Natural Character associated with the Mahurangi River near Warkworth's town centre, via the identified 'protection areas' described above and the potential use of a precinct to control the heights of buildings (e.g. restricting their height below the ridgeline);

- Concentration of development in general within the lower lying areas of the catchment, while utilising the more elevated landforms around the margins of the Structure Plan for low density zoning to help retain some of the open space, 'green' values that are fundamental to the town's character and identity; and
- Retention of a broad network of rivers, streams, stands of bush and significant landforms through the application of 'protection areas', Future Esplanade zoning and/or the Large Lot zoning so that these features continue permeate the entire catchment and remain a visual hallmark of Warkworth into the future.

The areas of concern are outlined below and an outline of how the structure plan has responded:

- There is a concern that the Large Lot and Single House zones (with increased site size) may not retain sufficient open space to protect the ridges, knolls and stands of bush mostly on the outer margins of the structure plan study area as coherent and sustainable, physical bodies. They may also fail to provide a true sense of true transition into surrounding rural areas, while also becoming relatively inefficient, 'low density suburban' environments. This is also potentially an issue in relation to a large knoll, partly covered in native bush, within the southern half of the structure plan area near Morrison's Heritage Orchard and Ransom Vineyard. This large knoll is a significant local feature.

This matter is addressed in the Warkworth Structure Plan by identifying areas of the Large Lot zone where further landscape protection controls may be necessary (e.g. building design (size, height, colour etc) and a requirement to revegetate a significant amount of the land within each section).

- Warkworth's identity and overall amenity currently benefits from the passage through quite verdant gateways to the town – on SH1 and Sandspit Matakana Roads. The structure plan proposes that the main SH1 'gateway' road entrance is through, or past, industrial areas, which would, inevitably, change public and local perceptions of the town.

The Warkworth Structure Plan addresses this matter by showing landscape screening areas along the edge of the industrial zones in some key locations. These are areas for planting that are large enough to effectively screen industrial development. These would need to be in the order of 20-30m deep to accommodate mature native trees in the long term.

More detail on Warkworth's landscape is provided in the landscape reports listed in **Appendix 1**.

3.3.10.5 Urban Design

Warkworth's future urban land comprises several areas with local distinctiveness. Each area is distinct from the next based on key attributes including contours, existing vegetation, streams and watercourses, proximity to existing development, and views and vistas afforded by the topography and orientation. These areas will help inform future neighbourhood development that supports place-based neighbourhood character and identity.

A Neighbourhood Design Statement has been prepared for the Warkworth Structure Plan. This identifies different future neighbourhoods in the study area. The neighbourhood boundaries are based on common elements/characteristics including natural features, contours and orientation.

The Neighbourhood Design Statement identifies various characteristics of the existing Warkworth settlement and of the Future Urban zoned land around it. To ensure new development is sympathetic to the character of the existing settlement and the landscape context, it is recommended to establish one or more precincts or sub-precincts to address specific matters not already covered in the zone provisions.

More detail on urban design in Warkworth is provided in the urban design reports listed in **Appendix 1**.

3.3.10.6 Cultural

Mana whenua have a special cultural and spiritual relationship with the environment which is a matter of national importance under the Resource Management Act 1991. In the structure planning context, council must consider iwi planning documents, Treaty settlement legislation and address any potential effects of urbanisation of mana whenua values.

The council has sought an ongoing dialogue with mana whenua as part of the development of the Warkworth Structure Plan. Key feedback raised in relation to the development of the Structure Plan has included:

- protecting the environmental integrity of air, land and in particular the rivers as Warkworth urbanises
- seeking proactive environmental monitoring and sedimentation control to restore and protect the Mahurangi River
- providing opportunities to revegetate the area with native vegetation
- protecting wāhi tapu and taonga with new development
- supporting buffer planting next to streams for protection and to encourage biodiversity
- reducing car dependence and supporting the provision of cycling and walking networks

There is a desire for ongoing involvement of mana whenua in the development of Warkworth, past this structure plan process.

Further details on iwi planning documents, Treaty settlement legislation, and the mana whenua consultation process are outlined in other sections of this document.

3.3.10.7 Affordability

Affordable, stable, healthy and appropriate housing is fundamental to individual, family/whānau, community and economic well-being. An adequate supply of housing located near jobs and transport links, is a core requirement for society and the economy to function and provides a good quality of life for everyone.

There is a lack of affordable housing in Auckland. The median house price in Auckland is \$1,001,000 and the median house price in Warkworth is \$811,000.²⁰

Auckland's changing demography means there is an urgent need for housing that meets the needs of an increasingly diverse range of people. The future of Auckland includes:

- More ethnic diversity, particularly people of Asian and Pasifika descent
- More lifelong renters, with up to 50 percent of children, and a higher percentage of Māori and Pasifika people living in rental properties
- An aging population
- A growing urban population

The Warkworth population currently includes a high proportion of people of New Zealand European ethnicity, couples without children, and an aging population,²¹ which is reflected in the current housing mix. As the population grows and becomes more diverse, housing will need to reflect changes, with viable options for all Aucklanders. Housing that does not meet people's needs may significantly undermine their housing outcomes.

Council has an obligation to meet the needs of mana whenua and maatawaka. Appropriate housing for Māori includes papakāinga and whanau-oriented homes that reflects Te Ao Māori and supports the ability to extend manaakitanga and strengthen whanaunatanga. Many Māori in Auckland are unable to afford homes that meet these aspirations.

There are multiple types of tenures on the housing continuum, which need to be established to ensure affordable housing in the community. These include:

- Social housing: subsidised rental accommodation provided by the government or community housing providers, with support services as needed
- Assisted rental housing: rental housing usually made available below market rent levels and usually part funded by the government through the accommodation supplement
- Assisted ownership: includes schemes which provide household income-related pathways to home ownership such as rent to buy, affordable equity and shared ownership
- Private ownership and private rental: tenures under the free market with affordability determined by market conditions, which can include Kiwibuild.

Funding models that could be considered include shared equity schemes, long-term pre-paid ground leases, assisted loans, co-housing, papakāinga, rent-to-buy, build-to-rent and tax breaks²².

²⁰ Median value as of 1 November 2018 (OneRoof Property Report published 3 December 2018)

²¹ Statistics New Zealand, (2013). Quick stats about Warkworth. Retrieved from: http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=13174&parent_id=13171&tabname=&sc_device=pdf

²² A snapshot of issues and opportunities to increase affordable housing for Aucklanders was presented to the Planning Committee on 27 November 2018: http://infocouncil.aucklandcouncil.govt.nz/Open/2018/11/PLA_20181127_AGN_6740_AT.PDF

Demand-side factors that can limit housing choices include:

- Employment options and income
- Access to savings and intergenerational equity
- Not being able to access services, support, and bank lending on an equitable basis

There is an immediate need for affordable housing, to rent and purchase, to meet the needs of Aucklanders. The following initiatives have been identified as potential opportunities that can be applied to the Auckland region, to help deliver more affordable housing choices:

- Encourage a range of dwelling types, at different price points to meet the housing needs of different household structures and income groups
- Prioritise the sale of affordable homes to first home buyers and key workers at prices they can afford
- Locate affordable dwellings close to transport hubs and corridors
- Ensure good quality dwellings which exceed environmental minimums and provide a more comfortable home for Aucklanders
- Apply universal design principles to make buildings usable for all, and to allow for ageing in place
- Prioritising houses for local workers through preferential purchasing opportunities

As Warkworth's population grows, a wider range of housing options than the current situation will be needed to ensure appropriate housing for all. If a range of affordable housing options is not provided, the community risks gentrification and negative social outcomes. The Warkworth Structure Plan has addressed some issues relating to affordable housing including:

- Providing the full range of residential zones in the Auckland Unitary Plan (Large Lot, Single House, Mixed Housing Suburban, Mixed Housing Urban, Terrace Housing and Apartment Buildings) as well as the ability for dwellings in the Neighbourhood Centre and Local Centre zones. This enables a mix of housing types, tenures and sizes.
- Providing for significant areas for local employment through the industrial and centre zones in the structure plan area. This is in addition to the significant anticipated job growth within the existing 'live' zoned areas of Warkworth. This will reduce the risk of Warkworth becoming a commuter suburb. Affordable housing is more than the price of a home and can include travel costs. Expensive and limited travel options have the potential to reduce the ability for lower-income residents to live in Warkworth.
- Providing for a range of higher density residential zones near the public transport routes (particularly around the bus station/interchange in the south). Locating a mix of housing types and tenures close to transport hubs that offer public transport will ensure that those who travel for work have easily accessible travel options.

Other matters that could be examined further (including through a future plan change to rezone the land) are:

- Requiring developers to provide a percentage (e.g. around 10 to 20 per cent) of their total development as affordable housing;

- Requiring housing that is suitable for older people to be included in developments;
- Mechanisms such as preferential purchasing to have the ability to retain local workers and residents in the area;
- Establishing relationships with Māori housing providers to increase options and opportunities for Māori; and
- An affordability assessment could be undertaken prior to a plan change to enable a sufficient supply and diverse range of dwelling types and sizes that meet the housing needs of people and communities, including households on low to moderate incomes and people with special housing requirements.

3.3.10.8 Local and rural character

An important theme to emerge from consultation during the Warkworth Structure Plan project was the desire for the town to retain its local and rural character as it grows. The structure plan includes a number of methods to help achieve this.

There are many facets that contribute to Warkworth's local and rural character including its size, natural environment and views, rural uses in the surrounding area, separation from Auckland's urban area, and local and rural activities within the town.

In terms of size, it is worth noting that with the full build-out of the greenfield areas and growth in the existing town area Warkworth is anticipated to reach a population of around 25,000. This is around the population of Pukekohe today²³. Pukekohe is generally considered to be a rural town so there is the opportunity for Warkworth to still be a 'rural' town, even with the planned growth. Warkworth's urban area is around 5kms or less end to end which enhances local character by being walkable for local trips.

The structure plan proposes to protect and enhance a Green Network area. These areas will provide direct connections with, and views to, the natural environment. The plan also protects some specific key views such as the bush-clad northern slopes of the Mahurangi River that form the natural backdrop to the town centre. Views beyond Warkworth to the bush covered slopes of the Dome and to pastoral farming areas in Warkworth's hinterland will generally not be directly impacted by the structure plan.

The rural uses in the surrounding area are not anticipated to change as a direct result of the Warkworth Structure Plan. The RUB is a planning tool which provides long term (30 year) certainty to landowners on either side of the boundary, indicating to them the development potential of their land. It gives confidence to farmers outside the RUB to invest in rural production improvements on their land as it will not be urbanised in the near future. The rural interface of the structure plan area has been managed to avoid reverse sensitivity issues arising for rural production activities as outlined in section 3.3.10.9 below.

²³ Pukekohe's population is 24,940 (from the Census Area Units of Bledisloe Park, Buckland, Eden Road-Hill Top, Paerata-Cape Hill, Pukekohe North, Pukekohe West), Statistics New Zealand population estimates as at June 30, 2018.

While there is around 2km of urban expansion proposed to the south of Warkworth, the distance between Warkworth and Hatfields Beach will still be around 15km²⁴ (and 30km to Albany), giving the town a clear sense of separation from Auckland.

While local activities within the town are obviously dependant on what locals wish to do, the structure plan does show the Morrison's Heritage Orchard as continuing on as a feature for the town. The Warkworth Showgrounds also can provide for rural entertainment into the future (A&P show, rodeo etc).

Local character is also developed around the transport network with walking/cycling creating more linkages with the open space network and stream areas.

3.3.10.9 Managing the edges of the Warkworth Structure Plan area

The rural and urban edges of the structure plan study area have the potential for reverse sensitivity effects. The edges also have the potential to be positively linked and integrated with the existing urban area of Warkworth as well as its rural surrounds. The council's Structure Planning Guidelines (Appendix 1 of the Auckland Unitary Plan) state the following issues need to be identified, investigated and addressed through structure planning:

- The location, type and form of the urban edge, its appropriateness to the structure plan area and the surrounding area and how transitions between the area to be urbanised and other areas with different activities, building types and densities or levels of intensity are to be managed (1.4.1(3)).
- Linkages and integration with existing urban-zoned and/or rural-zoned land adjoining the structure plan area through careful edge or boundary treatment (1.4.1(4)).
- Appropriate transitions within and at the edge of the structure plan area between different land use activities, intensities and densities; (1.4.5(d)).

Tools that have been used to mitigate any issues along the boundary of the structure plan study area include lower residential densities, open space buffers, roads, similar activities on both sides of the boundary, physical separation using ridgelines, and landscape screening areas. The potential external and internal boundary issues are identified further below.

The land uses on the *outer edge* of the study area (along the RUB) have the potential to create reverse sensitivity issues if not managed appropriately. The Land Use Topic Report identified a number of land uses on the outer edge of the study area along the RUB with potential reverse sensitivity issues. The preparation of the Warkworth Structure Plan considered these land uses and seeks to manage reverse sensitivity effects as follows:

Motorway: The Ara Tūhono – Pūhoi to Warkworth motorway construction is currently underway. The motorway is anticipated to be completed at the end of 2021. Around 4kms of the western and north western boundary of the study area adjoins the motorway designation (#6769). It is noted that along this boundary there are different types of interfaces with the motorway with different separation distances, riparian area buffers, and/or an elevation differences between the motorway and the Future Urban zoned land.

²⁴ As the crow flies between Warkworth and Hatfields Beach (the northern most urban area).

In the northern area a potential buffer/screening area has been identified on the plan along the boundary to prevent potential issues (e.g. visual amenity, noise)²⁵ occurring in the Single House zoned land shown in the Warkworth Structure Plan. This would act in combination with the edge management of the designation area by the requiring authority (outlined in the Urban Landscape and Design Sector Plan - Warkworth).

The area with the most exposure to the future motorway is the area south of Woodcocks Road. There is flat topography (both the motorway alignment and the land) and there is only a short distance between the motorway and the Future Urban zone. The Warkworth Structure Plan shows this area as Heavy Industry. Locating industrial land in this area limits the potential for reverse sensitivity issues for the motorway operation as industrial activities are generally not as sensitive to noise, visual amenity, light spill, air quality issues etc.

In the southern area the potential for reverse sensitivity is not significant due to the separation distance of the motorway and the RUB (around 200m). The urban area in this location is bordered by a branch of the Mahurangi River that will have a future esplanade reserve along it. This creates further separation and the existing mature riparian vegetation means that reverse sensitivity issues are unlikely to occur in this location.

Rural production land: The majority of the RUB adjoins land zoned Rural Production or Mixed Rural. There is potential for reverse sensitivity issues between some urban activities and rural land uses. The southern and northern area are unlikely to experience reverse sensitivity issues due to the presence of a strong ridgeline separating out the different land uses into different catchments. The Warkworth Structure Plan also uses the Large Lot zoning in these areas which introduces relatively few new neighbours to the rural zones. The western edge of Warkworth is bordered by the motorway which creates a large separation distance between the Future Urban zone and productive rural zones. The greatest potential for reverse sensitivity between urban land uses and rural farming activities is at the northern end of Matakana Road and the eastern end of Sandspit Road. These areas are zoned Large Lot which only enables a lower density and development. This lower density allows for less dramatic changes in the land uses and introduces fewer new residents along these boundaries. In addition to this, landscape screening areas are shown to create a visual buffer and spatial separation between farming areas and urban activities.

Satellite Station building restriction: To the south of Warkworth, the RUB adjoins designation 7501 (Satellite earth station - surrounding land use and building restriction). In some small areas the designation crosses over into the Future Urban zone. There is a significant ridgeline that separates the Future Urban zone from the valley that the satellite station is located in. The Warkworth Structure Plan shows the

²⁵ Refer to New Zealand Transport Agency, Guide to the management of effects on noise sensitive land use near to the state highway network, 2015.

Large Lot zone in along this boundary. The large site sizes in this zone enable the flexibility to locate new buildings within a site but outside the building restriction area.

Countryside Living land: There are two parts of the study area where the RUB adjoins Countryside Living zoned land. This is around the Clayden Road and Goatley Road area and land north of Sandspit Road. There is unlikely to be any significant boundary issues for the Countryside Living areas or the urban uses as the structure plan shows the urban side of these boundaries zoned as Large Lot and Single House. In the Clayden Road area it is also noted that the RUB largely follows a ridgeline that separates and clearly delineates the land uses into different catchment.

Limestone quarry: Adjacent to the north eastern Future Urban zone area is a limestone quarry owned and operated by the Rodney Lime Co Ltd. The structure plan shows the Large Lot zone adjoining the boundary of the quarry. This introduces fewer new urban neighbours for the quarry. It is noted that the Auckland Unitary Plan also includes a Quarry Buffer Area overlay around some (but not all) of the quarry. This overlay means that most activities within the buffer area will require resource consent. An application would need to demonstrate that any reverse sensitivity issues on the quarry can be dealt with appropriately. The extension of the Quarry Buffer Area around the full perimeter of the quarry may be a matter for a future plan change (implementing the structure plan).

The structure plan land uses along the *inner edge* of the study area (along the existing 'live' zoned areas of Warkworth) can be positively linked and integrated with the existing urban area of Warkworth. The Land Use Topic Report identified a number of land uses on the inner edge of the study area and the structure plan's response to them is explained below.

Industrial: There are several areas of established and planned light industry in Warkworth along the internal study area boundary. The structure plan proposes to match the land uses with further Light Industry land around the existing Hudson Road and Morrison Drive industrial areas. It is noted that the Hudson Road area also contains an area of General Business that could be developed for industrial uses or large format retail. In the Morrison Drive area an arterial road is also used on the western edge to provide separation between new proposed residential uses. The boundary around the as yet undeveloped Goatley Road industrial area is shown in the structure plan as having a landscape screening area around it. The 'live' zoned Light Industry land near the Warkworth Showgrounds contains an area that the structure plan indicates for a potential rezoning investigation. This is due to the as yet undeveloped and greenfield nature of this property and the impacts on this property from the Matakana Link Road (Te Honohono ki Tai).

Residential: A significant portion of the internal study area boundary borders Single House zoned land. The structure plan proposes mostly residential zonings of a similar type (Single House, Mixed Housing Suburban) along this edge to match this use. There is a small area that borders the Large Lot which the structure plan adjoins with the Single House and Mixed Housing Suburban zones. The only example of a higher density residential zoning proposed in the structure plan adjoining an existing residential area is around Woodcocks Road. This is where the existing Mixed

Housing Suburban land (Summerset retirement village) adjoins an area proposed as Mixed Housing Urban.

Open Space: Some of the structure plan study area internal boundary is next to Open Space zones. The structure plan has built on the existing open space network to create linkages between the live zoned land and future land use. The plan also seeks to leverage off existing open space to create residential amenity and enable residential density. The structure plan proposes higher density residential land uses around the edge of the Warkworth Showgrounds. To the north along Sandspit Road, a lower residential density (Single House) has been proposed along with further landscape protection controls adjacent to the open space along the Mahurangi River. This is to enhance the visual and ecological importance of the open space along the river (as it forms a natural backdrop to the town centre). Around the existing reserve bordering the Mahurangi River (north of Mahurangi College) the structure plan proposes a Single House residential use.

3.4 Assessment of the Warkworth Structure Plan against the vision and planning principles

The planning principles for the Warkworth Structure Plan are listed below along with an explanation on how they have been given effect through the Warkworth Structure Plan.

The Mahurangi River is Warkworth's taonga

- *Protect the Mahurangi River from the effects of urbanisation as a matter of paramount importance in the development of the Future Urban zone*

The structure plan includes a Green Network with areas of ecological and stormwater value set aside areas from development. The Green Network will protect existing freshwater ecological values as well as improve the long-term life supporting capacity of the freshwater systems in the area, of which sections are currently degraded and lacking suitable riparian cover.

- *Use the development of the Future Urban zone to improve the health and quality of the Mahurangi River wherever possible*

The structure plan anticipates that the Green Network will be restored through revegetation (e.g. riparian planting) to improve water quality.

- *Treat all the tributaries in the Future Urban zone as being vital to the health of the Mahurangi River*

The Green Network includes a 10m buffer around all streams in the study area, including permanent, intermittent, and transitional.

Character and identity

- *Celebrate and protect Warkworth's heritage, both Maori and European, and its relationship with mana whenua*

The plan has been developed in partnership with mana whenua. The plan includes a number of heritage sites to investigate for protection.

- *Retain the current town centre as the focal point and 'beating heart' of Warkworth*

The plan recognises the existing town centre as being the main centre with room for expansion. The plan only enables small local convenience centres in the Future Urban zone. The plan does not enable further retailing or office development outside the centres and therefore the General Business and Mixed Use zone (which are permissive for retail and retail/offices respectively) are not used.

- *Protect the views from the current town centre to the bush clad northern escarpment of the Mahurangi River and the rural views out from the Future Urban zone that contribute to Warkworth's rural character*

The plan zones the area of land on the northern side of the Mahurangi River (opposite the town centre) as Single House to avoid the potential landscape effects from higher density residential development. In addition, the land is identified as an area where further specific plan provisions will be needed to cover issues such as building height, colour etc to ensure that no buildings impact on this natural backdrop.

In terms of rural views, the Large Lot zone is mostly used around the periphery of the urban area to create a more natural appearance and enhance the views out to the rural area.

- *Apply lower density residential zones to areas valued for their landscape, character, or heritage significance*

The Large Lot zone has been used in areas of landscape character (northern and southern edges and southern knoll) and on the former Coombs and Daldy lime works site.

- *Use the Future Urban zone efficiently to protect against the need for further urban expansion into Warkworth's valued rural hinterland*

The structure plan proposes higher residential density zones than are presently used in Warkworth. Lower density areas have still been used where certain principles are met, but higher density residential areas have been applied to ensure the efficient use of the Future Urban zoned land. Even with relatively large areas identified for lower densities, the dwelling yield of the structure plan is still consistent with the anticipated yield in the Auckland Plan and the Future Urban Land Supply Strategy.

A place to live and work

- *Provide a range of housing options in Warkworth so that it is a place for people to live at all stages of life*

The Warkworth Structure Plan provides for a range of housing types as it utilises the full palette of Auckland Unitary Plan residential zones – from expansive sections to smaller apartments.

- *Provide new local employment areas (e.g. small centres, industrial areas) so people can work locally in Warkworth*

The structure plan provides areas for additional industrial land (65ha gross) and four new small centres. The jobs to dwelling ratio for the fully built out town (Future Urban zone and existing 'live' zones) will be around 1.2 to 1. This is slightly lower than the existing ratio of 1.39 to 1 but it is still acceptable from an employment self-sufficiency perspective.

Sustainability and natural heritage

- *Plan to enable development of the Future Urban zone to be sustainable, including having a compact urban form, providing local employment options, enabling extensive active and public transport routes, and minimising discharges to air and water bodies*

The structure plan aims to be sustainable with the use of higher density residential zones, areas set aside for local employment opportunities, a convenient public transport system, and an extensive walking and cycling network to connect key destinations in the town.

- *Design the Future Urban zone to be able to adapt to the effects of climate change*

The structure plan has taken into account any coastal hazards from climate change.

- *Protect and enhance existing bush/natural areas and create ecological corridors linking the Future Urban zone to other ecological areas*

The structure plan includes a Green Network with ecological areas for protection and restoration, creating corridors throughout the study area.

A well-connected town

- *Use the development of Warkworth's growth areas to help address Warkworth's existing road congestion through integrated land use and transport planning and new infrastructure*

The structure plan includes a comprehensive roading network including Ara Tūhono – Pūhoi to Warkworth, Matakana Link Road (Te Honohono ki Tai), Western Link Road between SH1 (north) and SH1 (south) including Mansel Drive, Sandspit Link Road, Wider Western Link Road, and a potential Ara Tūhono – Pūhoi to Warkworth southern interchange (with south facing ramps only). The Hill Street intersection is noted as requiring improvements in accordance with the business case

- *Prioritise convenient, segregated, and safe walking and cycling routes through the Future Urban zone connecting residential areas with key locations (e.g. schools, parks, centres), and the existing town, and to regional walking/cycling routes*

The structure plan includes an active transport network (Figure 3) that provides connectivity to centres, employment areas, schools and public transport stations. With an appropriate road network catering for walking and cycling modes, in conjunction with off-road facilities, there is the opportunity to significantly increase the mode share of walking and cycling.

- *Provide convenient, high quality public transport routes through the Future Urban zone (connecting to the rest of Warkworth, the surrounding rural settlements, and Auckland)*

The structure plan includes a public transport network built upon the recently introduced 'New Network for Warkworth'. This connects Warkworth to the Hibiscus Coast station (and the wider Auckland network) as well as direct connections to the surrounding settlements of Snells Beach, Matakana/Omaha, and Wellsford. Initially, a main station/bus interchange is proposed in the town centre supplemented by an interim northern station adjacent to SH1 north of Warkworth (with a Park and Ride). In the long term, the preference is to retain a town centre station but also have a larger bus station/interchange in Warkworth South in the southern Local Centre and a Park and Ride near the Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only). With a proposed southern station, it is not considered necessary to retain the interim northern station.

Quality built urban environment

- *Design the Future Urban zone to enable high-quality and integrated urban development that reinforces the town's identity*

The structure plan has been integrated with the existing urban area of Warkworth with careful analysis of the interface between the Future Urban zone and the existing town. Further detailed provisions will be explored at the plan change stage to ensure development is of a high quality and reinforces the town's identity.

- *Locate higher density residential areas around appropriate amenities*

The higher density zones (Terrace Housing and Apartments Buildings, Mixed Housing Urban, and Mixed Housing Suburban) are shown in the structure plan as being close to centres, parks, and/or on public transport routes.

- *Provide well located and accessible areas of open space linked by a green network of walking and cycling trails along the streams*

The structure plan shows indicative locations for new parks (neighbourhood, suburb, sports) that are linked by the Green Network to enable potential active transport connections between the parks.

- *Outside open space areas, use urban trees (e.g. street trees) and vegetation to enhance the amenity of the built environment*

The structure plan supports the greening of the new urban area through requiring revegetation of the Green Network land in private ownership and various landscape screening buffer areas which are generally to be 20-30m deep to enable mature vegetation to establish. The structure plan would also support generous native street tree planting but the detail of this will come through in further, more detailed work such as the plan change and development consenting stages.

Infrastructure

- *Plan for infrastructure (transport, water, etc) to be sequenced to enable new houses and businesses to be built in the Future Urban zone*

Plans for transport, water, wastewater, and other infrastructure are advanced to enable the development of the structure plan area in accordance with the Future Urban Land Supply Strategy.

- *Provide for social and cultural infrastructure (i.e. libraries, halls, schools, community meeting places) to support the needs of the community as it grows*

Social and cultural infrastructure providers have been involved in the development of the structure plan and have planning processes underway to provide the level of infrastructure required in the plan.

3.5 Implementation of the structure plan

The future land uses identified in the Warkworth Structure Plan will be implemented through plan changes to the Auckland Unitary Plan. These plan changes occur as the land is 'development ready'. That is, it has appropriate infrastructure in place to support residences and businesses. As such, plan changes to the Auckland Unitary Plan will be staged to align with the Future Urban Land Supply Strategy.

Supporting infrastructure identified in the Warkworth Structure Plan will be implemented through the inclusion of the relevant projects in the forward budgets and plans of the various agencies.

3.5.1 Staging

The Auckland Council Future Urban Land Supply Strategy sequences development readiness of the future urban areas across Auckland. This sequencing ensures the provision of bulk infrastructure (such as water, transport and wastewater) is in place so that homes and business can be built.

The Future Urban Land Supply Strategy has sequenced the development of Warkworth as follows:

- Warkworth North ('live' zoned Light Industry and General Business land) (2017)
- Warkworth North (from 2022)
- Warkworth South (2028-2032)
- Warkworth North East (2033-2037)

Figure 34 below (from the Future Urban Land Supply Strategy) summarises the anticipated capacity of the future urban zones in Warkworth:

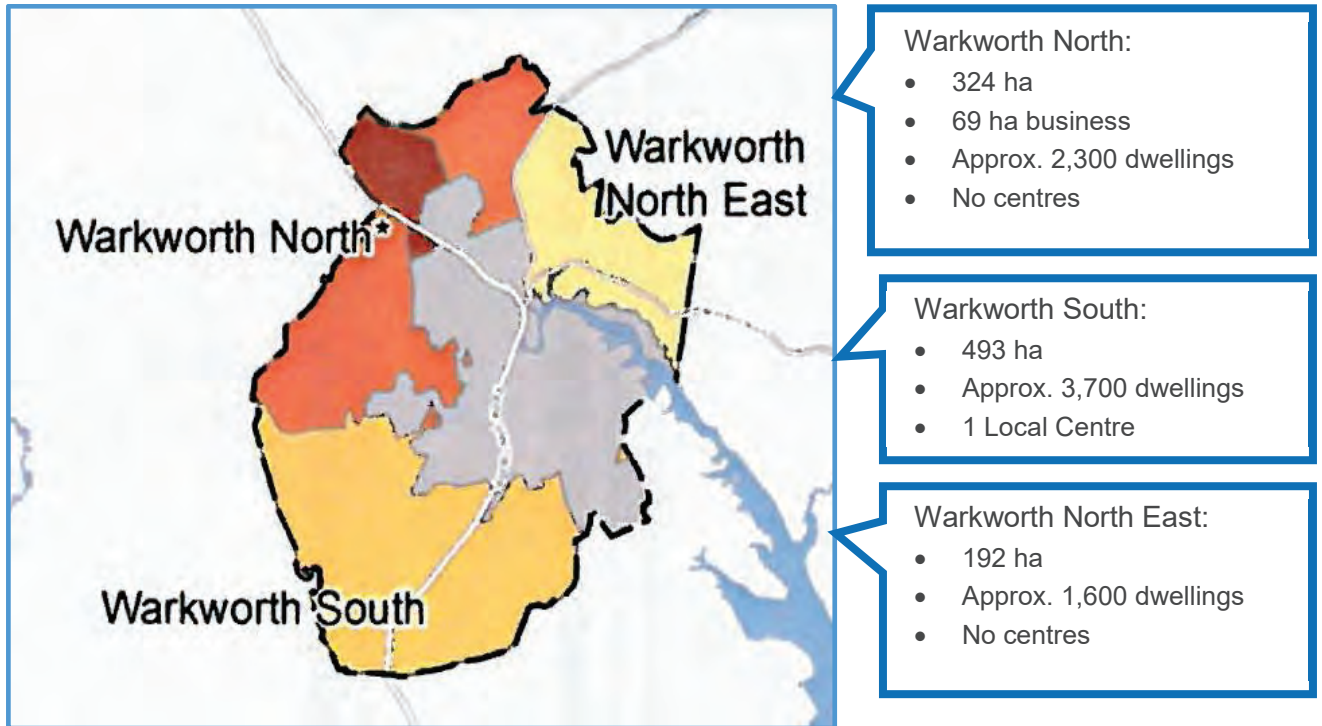


Figure 34: Future Urban Land Supply Strategy (2017)

As outlined in Figure 35 below, the overall yields in the Warkworth Structure Plan are consistent with the dwelling numbers anticipated in the high-level Future Urban Land Supply Strategy.

Development ready date	Future Urban Land Supply Strategy (2017)	Warkworth Structure Plan (2019)
2017	69ha business	69ha business ('live' zoned)
From 2022	Approx. 2,300 dwellings	25ha industrial land Approx. 2,200 dwellings
2028-2032	Approx. 3,700 dwellings 1 Local Centre	Approx. 4,100 dwellings 1 Local Centre 40ha industrial land
2033-2037	Approx. 1,600 dwellings	Approx. 1,200 dwellings

Figure 35: Anticipated yield comparison between the Future Urban Land Supply Strategy and the Warkworth Structure Plan

During the structure plan process, the staging of development was reviewed. In particular, consideration was given to whether some areas might be brought forward. However, the Warkworth Structure Plan does not propose to change the sequencing identified in the

Future Urban Land Supply Strategy. No areas are identified to be brought forward due to the significant infrastructure funding issues combined with the wider Auckland compact city focus on redevelopment of brownfield areas and the higher priority greenfield areas in Auckland that would take any additional greenfield infrastructure funding before Warkworth.

3.5.2 Infrastructure funding

The critical council infrastructure that provides essential bulk services which enable land development include:

- Parks and Open Spaces
- Transport networks
- Stormwater networks
- Water and Waste water networks
- Community assets

The infrastructure projects needed to increase capacity require substantial public and private investment and have long lead times for planning and construction. It is critical that this investment is coordinated and aligned with growth, in order to get the best outcome for the ratepayer.

The council funds and delivers public growth infrastructure projects primarily through the collection of development contributions, Watercare's infrastructure growth charges, and rates. Additional funding options are being investigated and may include targeted rates or special purpose vehicle private financing

Council infrastructure providers have identified those critical projects to enable land and housing development to support the Warkworth Structure Plan. This includes an estimate of the development timeframe in which the asset is expected to be delivered. Not all projects have funding allocated. Cost estimates to deliver this infrastructure are currently (i.e. 2019) between \$950m and \$1.4b. It is also important to acknowledge that although these projects will facilitate the provision of new housing in Warkworth, these projects also provide a dual purpose in meeting the growing needs of the existing community.

Council endeavors to ensure efficient coordination between public and private infrastructure providers. Apart from council, other utilities and service providers will deliver other key infrastructure such as power, fibre, and schools. State Highways are delivered by the New Zealand Transport Agency ('NZTA').

3.5.3 Potential matters for future plan changes

The Warkworth Structure Plan forms the foundation for a plan change to the Auckland Unitary Plan²⁶. Various Plan changes will rezone the land currently zoned as Future Urban in accordance with land use indications in the Warkworth Structure Plan. The zonings

²⁶ Although it is important to note that specific matters in the structure plan could be amended with further specific information

anticipated to be used in plan changes to rezone the Future Urban zone to 'live' urban zonings include:

- Residential – Large Lot
- Residential – Single House
- Residential – Mixed Housing Suburban
- Residential – Mixed Housing Urban
- Residential – Terrace Housing and Apartment Buildings
- Business – Light Industry
- Business – Heavy Industry
- Business – Local Centre
- Business – Neighbourhood Centre
- Open Space – Conservation Zone/ Informal Recreation Zone/Sports and Active Recreation Zone/Civic Spaces Zone/Community Zone

In addition to zones, the Auckland Unitary Plan has other spatial tools such as overlays, Auckland-wide and precinct provisions that control different resource management matters. It is anticipated that additional overlay matters that may (subject to further investigation) be part of future plan changes are:

- Additions to the Notable Trees Schedule
 - 360 Sandspit Road (mature English oak tree)
 - 190 Matakana Road (mature English oak tree)
 - other sites to be determined on further detailed assessment of study area
- Subdivision Variation Control – increasing the minimum site size of the Single House zoning in the Viv Davie-Martin Drive area and around the Clayden Drive area
- Quarry Buffer Area – extension around the full perimeter of the limestone quarry
- Heritage – the extent of place to be added to the historic heritage overlay for the site of Combes and Daldy's lime works
- Heritage – the dam for Wilson's Portland Cement Company to be evaluated for potential inclusion in the Schedule of Historic Heritage
- Heritage – *Riverina* (outside study area) to be evaluated for potential inclusion in the Schedule of Historic Heritage

Precincts provide detailed place-based provisions that allow for local differences. Precincts vary the zone, overlay and Auckland-wide rules that underlie them. It is anticipated that the following matters may (subject to further investigation) form part of the precinct provisions over the structure plan area as part of future plan changes:

- Indicative transport network layout
- Protection areas (requiring protection and active revegetation)
- Potential buffer/screening area from motorway in the northern area
- Landscape screening area, setbacks and other controls around industrial edges
- Landscape protection controls in most areas of the Large Lot zones (e.g. possible controls on building location, size, height, colour and requiring revegetation of land within each section in the Large Lot zone)

- Landscape protection controls in some areas of the Single House zone and Mixed Housing Urban zone in the north (e.g. possible controls on building location, height, colour, and requiring buffer planting around the urban edge)
- Controls to protect the visual amenity of the backdrop to the Warkworth Town Centre (e.g. possible 'no build' areas, vegetated buffer areas, setbacks)
- Morrison's Heritage Orchard to address future activities that complement the orchard use and manages potential reverse sensitivity issues.
- "Rear loading" on collector roads to minimise interruption to separated cycle facilities
- Housing affordability
- Design of subdivision to retain mature trees/shelter belts as features
- Preserving local views and vistas
- Managing the interface between industrial and residential areas
- Managing the interface of industrial sites with residential development on the Western Link Road to facilitate good urban design outcomes
- Managing interface between active recreation parks and residential areas
- Fencing standards in the lower density residential zones to maintain front open boundaries
- Stormwater management
- Non-spatial options to manage erosion and sediment (e.g. modelling to assess levels of erosion and sediment generation would assist in balancing cut and fill volumes)
- The possibility for roads, streets and pathways be used to increase canopy and vegetation cover to improve environmental and health and wellbeing outcomes
- Further mapping of wetlands for the areas not included in this assessment to date
- Additional sediment controls for development in the vicinity of streams

Together the zones, Auckland-wide, overlay and precincts form different layers of Auckland Unitary Plan provisions to meet the vision, land use proposals and principles set out in the Warkworth Structure Plan.

3.5.3.1 Warkworth North Plan Change

As outlined in the Future Urban Land Supply Strategy, the Warkworth North areas is sequenced to be 'development ready' from 2022. 'Development ready' includes having a live urban zoning. This indicates that the first council initiated plan change should be for Warkworth North.

This plan change will include the rezoning of the land in general accordance with the land uses shown in the Warkworth Structure Plan. That will involve the following zones:

- Residential – Large Lot
- Residential – Single House
- Residential – Mixed Housing Suburban
- Residential – Mixed Housing Urban
- Business – Light Industry
- Business – Neighbourhood Centre
- Open Space - Conservation Zone/ Informal Recreation Zone/Sports and Active Recreation Zone

An overlay matter that is likely to form part of a plan change for Warkworth North is the Subdivision Variation Control to increase the minimum site size in specific areas of the Single House zone.

A new precinct for the Warkworth North area will also likely form part of the plan change. It will need to cover many of the possible precinct matters listed in section 3.5.3 above.

The infrastructure requirements to service the Warkworth North Structure Plan area are outlined in the various infrastructure reports listed in **Appendix 1**. A council initiated plan change could commence for Warkworth North when it is clear that the appropriate funding for infrastructure is confirmed.

3.6 Monitoring and Review

To ensure the efficacy of the Warkworth Structure Plan a monitoring and review framework will need to be developed. The monitoring and review framework will ensure that the vision in the Warkworth Structure Plan is being achieved. The vision in the Warkworth Structure Plan is being achieved when:

- the Warkworth area is being developed in accordance with the land uses and sequencing indicated in the structure plan
- the planning principles identified in the Warkworth Structure Plan are being met

A suite of indicators with clear links to structure plan outcomes will need to be developed as well as a roadmap for data gathering to test those indicators will be developed. There is a significant amount of data gathering for the monitoring of other policies and plans across council, that the structure plan will be able to use. Of particular relevance to the Warkworth Structure Plan includes:

- the Future Urban Land Supply Strategy (2017)
- the Auckland Plan (2018)
- the Auckland Unitary Plan (2016)
- Environmental Monitoring

Information from other council departments such as resource consents and environmental monitoring will also help build a picture of the implementation of the Warkworth Structure Plan.

3.7 Possible further work outside scope of the structure plan

During the Warkworth Structure Plan project a number of issues were raised that did not sit within the scope of the project but may warrant further investigation through other processes. To be able to efficiently work through the structure plan process, the structure plan project was focused on developing a land use and supporting infrastructure plan for the 1,000ha of Future Urban zoned land around the edge of Warkworth. The issues listed below are to

acknowledge their existence only. They could be looked at further through separate processes outside of the structure plan project.

- Further investigation into a number of historic heritage places have been identified just outside the boundaries of the study area (i.e. in the existing town centre area). Some of these appear to be of sufficient significance to potentially meet the threshold for inclusion in the schedule of historic heritage in the Auckland Unitary Plan.
- Further documenting heritage sites within the study area that may not warrant scheduled but have the potential for further research (where warranted due to their contribution to the history of Warkworth).
- Possible review of Warkworth's western RUB along the Ara Tūhono – Pūhoi to Warkworth motorway route should any land surplus to NZTA's requirements be identified. This is particularly for the western edge of Warkworth where there is a narrow band of Rural Production land wedged between the motorway and the Heavy Industry zone. There may be the potential for this to become additional industrial land.
- Investigate the potential rezoning of small areas of undeveloped 'live' zoned on the edge of the study area (i.e. the area north of the Showgrounds as indicated on the structure plan map).
- A review of the 'live' zoned land in Warkworth to address matters such as residential density and the potential further expansion for employment areas around the town centre.
- A Warkworth Centre Plan for the existing town centre area to focus on some key ideas and actions to improve the town centre.
- A parking study in town centre area to identify parking issues and possible solutions.

Glossary

Development ready: Land that has had a structure plan prepared, is zoned for urban uses in the Auckland Unitary Plan, and has bulk infrastructure available.

Future Urban Land Supply Strategy: The council's programme to sequence future urban land over 30 years to assist with the ongoing supply of greenfield land for development. The strategy is a long-term and proactive approach to delivering land that is 'ready to go' in these future urban areas. It will help provide greater clarity and certainty to landowners, iwi, developers, infrastructure providers and council about when future urban land will have bulk infrastructure in place and be ready for urban development.

Future Urban zone: A zone that is applied to greenfield land that has been identified as suitable for urbanisation. The Future Urban Zone is a transitional zone. Land may be used for a range of general rural activities but cannot be used for urban activities until the site is rezoned for urban purposes.

'Live' zones: Zones in the Auckland Unitary Plan that can be developed (according to the zone objectives and policies) without delay. This is in contrast to the Future Urban zone.

'New Network' for Warkworth: Auckland Transport's new simpler, more frequent and better connected public transport network for the Auckland region. New Warkworth routes include local routes from Snells Beach, Matakana and Wellsford and a connection to the Hibiscus Coast from Warkworth.

Protection areas: Areas that the structure plan identifies are important for ecology, stormwater, heritage, and cultural reasons and therefore are set aside from development (and excluded from the development yield). The protection areas make up a large part of the Green Network (along with existing and future open space). The protection areas include flood plains, streams (10m buffer), wetlands, Significant Ecological Areas, covenanted bush, and historic heritage extent of place area.

Satellite Town: A rural town which has the potential to function semi-independently from the main urban area, providing a full range of services and employment opportunities to the wider rural area. The Auckland Plan applies this classification to the towns of Pukekohe and Warkworth.

Supporting Growth Alliance (Te Tupu Ngātahi): The Government and Auckland Council's strategic transport planning programme set up to investigate and deliver the transport networks Auckland needs over the next 30 years to accommodate future urban growth.

List of acronyms

Auckland Unitary Plan: Auckland Unitary Plan Operative in Part 2016

HAIL: Hazardous Activities Industries List

LATM: Local area traffic management

NES: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

NRLTIP: Northern Regional Long Term Investment Plan

NPS-UDC: National Policy Statement on Urban Development Capacity

NZTA: New Zealand Transport Agency

RMA: Resource Management Act 1991

RPS: Auckland Unitary Plan's Regional Policy Statement

RUB: Rural Urban Boundary

SH1: State Highway 1

UFB: Ultra-Fast Broadband

WDHB: Waitemata District Health Board

WWTP: Warkworth Wastewater Treatment Plant

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Appendix 1 – Supporting documents

List of supporting technical reports to the Warkworth Structure Plan.

Report Title	Author	Date
Draft Warkworth Structure Plan		
Draft Warkworth Structure Plan (February 2019)	Ryan Bradley, Plans and Places Department	February 2019
Background Topic Reports		
Business land demand topic report	Austin Fox, Plans and Places, Auckland Council. Authored based on Market Economics Warkworth Business Land Assessment	June 2018
Community facilities topic report	Liz Ennor, Policy Analyst, Community Policy, Auckland Council.	June 2018
Education topic report	Rosie Stoney (Senior Analyst – Planning) and Janet Schofield (Planning Manager Schooling Networks), Ministry of Education	February 2018
Environment topic report	Jacinda Woolly (Biodiversity); Sietse Bouma and Sarah Le Claire (Natural Environment Strategy); and Melissa Foley (RIMU), Auckland Council.	June 2018
Geotechnical and coastal hazards topic report	Ross Roberts (Geotechnical & Geological Practice Lead) and Natasha Carpenter (Coastal Management Practice Lead), Engineering and Technical Services, Auckland Council.	October 2018
Historic Heritage topic report	Robert Brassey (Principal Specialist Cultural Heritage) and Megan Walker (Specialist Historic Heritage), Plans and Places, Auckland Council.	June 2018
Land contamination topic report	Marija Jukic, Senior Specialist, Resource Consents, Auckland Council.	March 2018
Land use topic report	Ryan Bradley and Jasmin Kaur, Plans and Places, Auckland Council.	Updated June 2018
Landscape topic report	Brown NZ Ltd	April 2018
Parks and open spaces topic report	Roma Leota, Policy Analyst, Parks and Recreation Policy, Auckland Council.	March 2018
Stormwater topic report	Tonkin and Taylor	March 2018
Sustainability topic report	Matthew Blaikie, Senior Sustainability and Resilience Advisor, Auckland Plan	June 2018

	Strategy and Research, Auckland Council.	
Transport topic report	Auckland Transport, New Zealand Transport Agency	March 2018
Urban design topic report	Sarah Coady, Principle Urban Designer, Auckland Design Office, Auckland Council.	February 2018
Water and wastewater topic report	Andre Stuart and Lindsay Wilson, Watercare Services Ltd	February 2018
Background information report	Compiled by Austin Fox, Plans and Places, Auckland Council.	March 2018
Consultation Summary Reports		
Warkworth Structure Plan-Engagement Summary report (June 2018)	Ryan Bradley and Jasmin Kaur, Plans and Places, Auckland Council.	June 2018
Warkworth Structure Plan-Community Workshops Summary Report (August 2018)	Ryan Bradley and Jasmin Kaur, Plans and Places, Auckland Council.	August 2018
Warkworth Structure Plan-Community engagement 'Report back' (October 2018)	Ryan Bradley, Plans and Places, Auckland Council.	October 2018
Warkworth Structure Plan – Mana Whenua engagement	Jasmin Kaur, Plans and Places, Auckland Council.	April 2019
Warkworth Structure Plan – Engagement summary on draft plan (May 2019)	Ryan Bradley and Jasmin Kaur, Plans and Places, Auckland Council.	May 2019
Warkworth Structure Plan - Response to feedback on draft plan (May 2019)	Ryan Bradley, Plans and Places, Auckland Council.	May 2019
Assessment Reports on the Warkworth Structure Plan		
Business land assessment	Derek Foy, Rebecca Foy, Market Economics Consulting	October 2018
Community facilities assessment	Liz Ennor Policy Analyst, Community Policy, Auckland Council.	September 2018
Education facilities assessment	Rosie Stoney (Senior Analyst – Planning) and Janet Schofield (Planning Manager	November 2018

	Schooling Networks), Ministry of Education	
Funding Plan	Alan Hanley (Infrastructure Funding Agreements Specialist), Auckland Council.	December 2018
Geotechnical and coastal hazards assessment	Ross Roberts (Geotechnical & Geological Practice Lead), Engineering and Technical Services Department, Auckland Council.	November 2018
Historic heritage assessment	Robert Brassey (Principal Specialist Cultural Heritage) and Megan Walker (Specialist Historic Heritage), Plans and Places, Auckland Council.	November 2018
Integrated transport assessment	Supporting Growth Alliance	December 2018
Land contamination and remediation assessment	Marija Jukic, Senior Specialist, Resource Consents, Auckland Council.	October 2018
Landscape assessment	Brown NZ Ltd	November 2018
Natural Environmental assessment	Adam Morris (Natural Environment Strategy) and Jacinda Woolly (Biodiversity), Auckland Council.	November 2018
Neighbourhood design statement	Lisa Mein, Boffa Miskell	November 2018
Parks and open space assessment	Roma Leota, Policy Analyst, Parks and Recreation Policy, Auckland Council.	November 2018
Stormwater assessment	Tonkin and Taylor and Hill Young Cooper Ltd.	February 2018
Stormwater Management Plan (Warkworth)	Tonkin and Taylor	November 2018
Sustainability assessment	Matthew Blaikie (Senior Sustainability & Resilience Advisor), Auckland Plan Strategy and Research, Auckland Council.	November 2018
Water and wastewater servicing plan	Andre Stuart & Lindsay Wilson, Watercare Services Limited	November 2018

Appendix 2 – Addressing Structure Plan Guidelines

Appendix 1 of the Auckland Unitary Plan contains a set of Structure Plan Guidelines. The table below identifies the matters in the guidelines and where each of these matters are addressed in this report.

Auckland Unitary Plan Operative in Part Appendix 1 Structure Plan Guidelines 1.3 External documents to be taken into account		Structure Plan Section Reference
When preparing structure plans, the external documents in the following list are to be considered where appropriate		
(1)	Auckland Plan, including the directions of the Auckland Plan to be considered as an integrated whole, Auckland's High-Level Development Strategy (refer to section D of the Auckland Plan), and any sub-regional analyses prepared by Auckland Council.	Appendix 4 (4.1.1)
(2)	National policy statements and national environmental standards including but not limited to the New Zealand Coastal Policy Statement, the National Policy Statement for Freshwater Management and the National Environmental Standards for Electricity Transmission Activities.	Appendix 4 (4.1.3)
(3)	This Plan, in particular the regional policy statement	Appendix 4 (4.1.6)
(4)	Auckland Council's 10-year budget (the Long-Term Plan) and implementation programmes.	Appendix 4 (4.1.7)
(5)	Local board plans and area plans.	Appendix 4 (4.1.8)
(6)	Existing integrated catchment management plans and associated network discharge consents.	Appendix 4 (4.3.8), 3.3.9
(7)	Strategies, plans, codes of practice or programmes of economic, environmental, social and cultural infrastructure providers, with particular regard to the Regional Land Transport Plan, Auckland Transport's Integrated Transport Programme and Watercare's Asset Management Plan.	Appendix 4 (4.1.9)
(8)	Iwi planning documents.	Appendix 4 (4.1.5)
(9)	Treaty settlement legislation	Appendix 4 (4.1.4)
(10)	Auckland Council's Parks and Open Space Strategy Action Plan.	3.3.3, Appendix 4 (4.3.4, 4.5.3)
(11)	Auckland Council's Auckland Design Manual.	Appendix 4 (4.1.10.3), 3.3.10.5
(12)	Auckland Council's Code of Practice for Land Development and Subdivision.	Appendix 4 (4.1.10.4)

Auckland Unitary Plan Operative in Part Appendix 1 Structure Plan Guidelines 1.4 Matters to identify, investigate and address		Structure Plan Section Reference
A structure plan is to identify, investigate and address the matters set out below.		
1.4.1 Urban growth		
(1)	The future supply and projected demand for residential and business land in the structure plan areas to achieve an appropriate capacity to meet the sub-regional growth projections in the Auckland Plan adopted under the Local Government (Auckland Council) Act 2009.	2.1, Appendix 4 (4.1.1, 4.1.2, 4.1.3.4), 3.3.2, 3.3.4, 3.3.5
(2)	The phases and timing for the staged release of greenfield land or the staged conversion of land within the existing urban area to a	3.5.1

	more intensive activity for urban development or for comprehensive redevelopment, in coordination with infrastructure.	
(3)	The location, type and form of the urban edge, its appropriateness to the structure plan area and the surrounding area and how transitions between the area to be urbanised and other areas with different activities, building types and densities or levels of intensity are to be managed.	2.4, 3.3.10.9
(4)	Linkages and integration with existing urban-zoned and/or rural-zoned land adjoining the structure plan area through careful edge or boundary treatment.	3.3.10.9
(5)	Opportunities to improve access to landlocked parcels, including Māori land.	3.3.7
1.4.2 Natural resources		
(1)	The protection, maintenance and enhancement of natural resources, particularly those that have been scheduled in the Unitary Plan in relation to mana whenua, natural resources, and the coastal environment.	Appendix 4 (4.3.6, 4.3.7)
(2)	Demonstrate how proposed subdivision, use, and development will protect, maintain and enhance the values of the resources identified in 1.4.2(1) above.	3.3.10.1, 3.3.10.2
(3)	The integration of green networks (such as freshwater and coastal water systems, and ecological corridors) with open space and pedestrian and cycle networks, showing how they reflect the underlying natural character values and provide opportunities for environmental restoration and biodiversity.	3.3.1, 3.3.3, 3.3.7.1
(4)	Measures to manage natural hazards and contamination.	3.3.9, Appendix 4 (4.3.9, 4.3.10)
(5)	The location of mineral resources and how access to regionally significant extractable deposits is to be managed.	3.3.10.9
1.4.3 Natural and built heritage		
(1)	The existence of natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, mana whenua, natural resources, coastal environment, historic heritage and special character.	3.3.10, 3.3.1, Appendix 4 (4.3.6, 4.3.12)
1.4.4 Use and activity		
(1)	Contribution to a compact urban form and the efficient use of land in conjunction with existing urban areas to give effect to the regional policy statement.	3.2, 3.3, Appendix 4 (4.5.5)
(2)	The adoption of standard Unitary Plan methods and provisions where possible to ensure a consistent approach across the region by all of the following:	3.3.2, 3.3.3, 3.3.4, 3.3.5
(a)	seeking to avoid the introduction of additional zones;	3.3.2, 3.3.3, 3.3.4, 3.3.5
(b)	recognising the values of natural heritage, mana whenua, natural resources, coastal, historic heritage and special character through identification of sites or places to be scheduled and the use of existing overlays in the Plan; and	3.3.10, 3.5.3
(c)	recognising specific place-based provisions through the use of precincts.	3.5.3

(3)	Establishment of new centres and the expansion of existing centres in ways that complement the hierarchy and network of existing centres. Centres should be located and designed to maximise access by walking, cycling and public transport.	3.3.4, Appendix 4 (4.5.2)
(4)	A mix of residential intensities sufficient to support the vitality of centres and communities and to provide housing and transport choice.	3.3, 3.3.2, Appendix 4 (4.5.5)
(5)	A mix and distribution of land uses within the structure plan area to provide opportunities for business activities and employment, community facilities and open space close to where people live.	3.3, 3.3.4, 3.3.5, Appendix 4 (4.3.13, 4.5.1, 4.5.2)
(6)	The location and protection of infrastructure and management of reverse sensitivity effects on infrastructure from subdivision, use and development.	3.3.7, 3.3.8, Appendix 4 (4.5.4)
(7)	The location and protection of use and development and management of reverse sensitivity effects on use and development.	3.3.2, 3.3.5, 3.3.10.9, Appendix 4 (4.3.15)
1.4.5 Urban development		
(1)	A desirable urban form at the neighbourhood scale including all of the following:	3.3.10.5, 3.3.10.9
(a)	a layout providing pedestrian connectivity with a network of streets and block sizes which allow for a choice of routes particularly near centres and public transport facilities;	Appendix 4 (4.3.2, 4.5), 3.3.7, 3.3.10.5
(b)	provision of a diversity of site sizes within blocks to enhance housing choice, accommodate local small-scale community facilities and where appropriate enable a range of business activity and mixed use;	3.3.10.7, Appendix 4 (4.5)
(c)	provision of open spaces which are highly visible from streets and of a scale and quality to meet identified community needs	3.3.3, Appendix 4 (4.5.3)
(d)	appropriate transitions within and at the edge of the structure plan area between different land use activities, intensities and densities	3.3.2, 3.3.5, 3.3.10.9, Appendix 4 (4.5)
(e)	the application of an integrated storm water management approach within developments to reduce impacts on the environment while enhancing urban amenity.	3.3.9.1, Appendix 4 (4.3.8)
1.4.6 Transport networks		
(1)	Integration of land use and development within the local and strategic transport networks	3.3.7, Appendix 4 (4.5.4)
(2)	Layout of the transport network and facilities in a manner that is safe, attractive, efficient, and resilient to hazards, well connected to local facilities and integrated with land uses, the surrounding area and the wider transport network	3.3.7, Appendix 4 (4.5.4)
(3)	Support for transport and accessibility that is multi-modal and interconnected with an appropriate number and location of access points.	3.3.7, Appendix 4 (4.5.4)
(4)	Transport effects on land uses and the management of these effects.	3.3.7, Appendix 4 (4.5, 4.5.4)
1.4.7 Infrastructure		
(1)	The location and protection of existing and planned infrastructure, including network infrastructure corridors.	3.3.8, Appendix 4 (4.3.1, 4.3.3, 4.3.5, 4.3.8, 4.1.6)

(2)	The location, scale and capacity of existing and new infrastructure to serve the structure plan area.	3.3.8, Appendix 4 (4.3.1, 4.3.3, 4.3.5, 4.3.8, 4.1.6)
(3)	The location, scale and function of stormwater management facilities based on the principles of an integrated stormwater management approach, including the retention of natural water systems and the primary use of onsite flow and quality controls (and related impervious area limits) to manage stormwater runoff from proposed sites and roads.	3.3.9.1, Appendix 4 (4.3.8)
(4)	The location, scale, function and provision of community facilities, including educational, health, welfare and cultural facilities and open space to cater for the needs of communities in the structure plan area and neighbouring areas.	3.3.3, 3.3.8.5, 3.3.8.6, 3.3.8.7, Appendix 4 (4.3.3, 4.3.4, 4.3.5)
1.4.8 Feedback from stakeholders		
(1)	Feedback from landowners, infrastructure providers, council controlled organisations and communities gained through consultation during the structure planning process.	Appendix 4 (4.4)

Auckland Unitary Plan Operative in Part Appendix 1 Structure Plan Guidelines 1.5 Specialist documents to support the structure plan and plan changes process		Structure Plan Section Reference
The scale and detail of the investigation and reporting required needs to be at a level appropriate to the scale of the area subject to the structure planning process and the complexity of the issues identified by the process. Reports may be required on the matters listed below to support the structure planning and plan change process.		
(1)	Land use:	
(a)	evaluation of the identified role of and principal objectives for the structure plan area in terms of land uses and amenity values;	3.1, 3.2, 3.3, 3.4, Appendix 4 (4.5)
(b)	assessment against any relevant sub-regional spatial plan; and	Appendix 4 (4.1.1, 4.1.2, 4.5)
(c)	analysis of anticipated land use supply and demand informing the spatial allocation of areas for different activities, intensities and densities.	3.3, Appendix 4 (4.5)
(2)	Infrastructure:	
(a)	integrated catchment management plan - stormwater management plan, including network plans, updates to catchment or zone management plans and variations to existing or new network discharge consents, where relevant;	3.3.9.1, Appendix 4 (4.3.8)
(b)	integrated transport assessment;	3.3.7, Appendix 4 (4.3.2)
(c)	water and wastewater servicing plan; and	3.3.9.1, Appendix 4 (4.3.8)
(d)	other infrastructure plans.	3.3.7, 3.3.8, Appendix 4 (4.3.8)
(3)	Impact on natural and cultural values:	
(a)	landscape assessment	Appendix 4 (4.3.12), 3.3.10.4

(b)	assessment of effects on the cultural well-being of people and communities who have relationships with the area, including where appropriate mapping of local history and whakapapa;	Appendix 4 (4.1.5, 4.1.4, 4.1.6, 4.4.5)
(c)	archaeological, historic heritage and special character assessment;	Appendix 4 (4.3.11), 3.3.10.3
(d)	natural heritage assessment; and	Appendix 4 (4.3.11, 4.3.12), 3.3.10.
(f)	freshwater and ecological assessment.	Appendix 4 (4.3.7, 4.3.6), 3.3.10
(4)	Environmental Risk	
(a)	geotechnical assessment	3.3.9.2
(b)	land contamination and mediation assessment; and	3.3.9.3
(c)	health impact assessment	3.3.8.7
(5)	Implementation	3.5
(a)	staging plan	3.5.1
(b)	Funding plan	3.5.2
(c)	Affordability assessment	3.3.10.7
(d)	Neighbourhood design statement	3.3.10.5, Appendix 4 (4.3.14)
(e)	Other documents depending on the characteristics of the land and water resources of the area	Appendix 1

Appendix 3 – Yield calculations

Appendix 4 – Developing the Warkworth Structure Plan

4 Developing the Warkworth Structure Plan

4.1 Strategic Context

This section sets out the relevant statutory and non-statutory plans and strategies that should be considered in the development of structure plans, in accordance with the Structure Plan Guidelines in Appendix 1 of the Auckland Unitary Plan. The key outcomes sought by each document, where relevant to the structure plan, are summarised in this section.

4.1.1 The Auckland Plan 2050 (2018)

The Auckland Plan sets the long-term strategic direction for Auckland and integrates social, economic, environmental and cultural objectives.

A key component of the Auckland Plan is the high-level Development Strategy for accommodating future growth until 2050. Around 62 per cent of development over the next 30 years is anticipated to be within the existing urban area. The remaining development is anticipated to occur in future urban areas (32 per cent) and in rural areas (6 per cent). The future urban areas will be urbanised in a managed, staged approach to ensure integration between land use planning and delivery of bulk infrastructure.

The Auckland Plan aims to provide sufficient capacity for up to 313,000 dwellings and 263,000 extra jobs over the next 30 years. Warkworth is identified in the plan as a Satellite Town and a rural node. The Auckland Plan expects Warkworth to grow over the next 30 years by approximately another 7,500 additional dwellings or an additional 20,000 residents. The Auckland Plan acknowledges this expected growth will require investment in supporting infrastructure including transport, water and wastewater upgrades. Significant future employment growth is anticipated alongside residential growth.

The plan signals that the structure plan will identify the mix and location of housing, employment, retail, commercial and community facilities and review/potentially refine the timing of the development of the future urban zone.

The Warkworth Structure Plan is consistent with the Auckland Plan as it follows through on the identified need to structure plan the Future Urban zoned area around the town. The structure plan is also consistent with the anticipated dwelling yields noted in the Auckland Plan and the direction to cater for significant employment growth. The structure plan has also reviewed the timing of the development of Warkworth's Future Urban zone.

4.1.2 Future Urban Land Supply Strategy (2017)

The overarching purpose of the Future Urban Land Supply Strategy is to identify the sequencing of future urban land for development over a 30-year timeframe. This is to assist with the provision of an ongoing supply of greenfield land for development integrated with associated infrastructure. It is

a live document with a process to review and monitor the strategy to respond to changing population growth demands, market conditions and infrastructure delivery.

Infrastructure funding priorities across the region are informed by the strategy which feeds directly into future council long-term plans, annual plans, the Auckland Unitary Plan and other strategic documents. The major infrastructure components in areas of greenfield growth include transport facilities, water, wastewater, stormwater and community facilities (such as libraries and parks).

Warkworth's Future Urban zone is identified in the Future Urban Land Supply Strategy as being split into three stages that are 'development ready'²⁷ between 2022 and 2037. Warkworth North will be development ready from 2022, Warkworth South between 2028-2032 and Warkworth North East between 2033-2037.

The reasoning for Warkworth North being sequenced from 2022 is due to key elements of infrastructure projects being delivered around this date. A new wastewater treatment plant at Snells Beach, along with an associated new pipeline from Warkworth and upgraded outfall, is required to service development in Warkworth North. This work is consented and is expected to be implemented by 2022. The Ara Tūhono - Pūhoi to Warkworth project is expected to be completed in late 2021, and associated upgrades to the local roading network (e.g. Matakana Link Road (Te Honohono ki Tai)) align with the sequencing of Warkworth North.

The later sequencing of Warkworth South provides for the efficient staging of wastewater infrastructure. Warkworth North East is sequenced later to enable connections to the town centre to be adequately addressed.

The Warkworth Structure Plan is consistent with the Future Urban Land Supply Strategy in terms of the anticipated yields from the Future Urban zone and the 'development ready' sequencing of the Warkworth North, South, and North East areas.

4.1.3 National policy statements and national environmental standards

National policy statements are instruments which set objectives and policies for matters of national significance to achieve the sustainable management purpose of the Resource Management Act 1991. National environmental standards are regulations that prescribe standards for environmental and human health protection matters. The government sets standards where appropriate to ensure a consistent standard for an activity or resource use.

4.1.3.1 New Zealand Coastal Policy Statement (2010)

The New Zealand Coastal Policy Statement sets out the policies for sustainably managing the coastal environment. It is a relevant consideration as Warkworth is adjacent to the coastal waters of the Mahurangi Harbour and the study area drains into the Mahurangi Harbour. The New Zealand Coastal Policy Statement sets the direction for balancing the unique challenges associated with managing uses within the coastal environment, including effects on natural

²⁷ 'Development ready' means that the land has had a structure plan prepared, is zoned for urban uses in the Auckland Unitary Plan, and bulk infrastructure is available.

character and landscapes, the dynamic nature of the coast, competing uses, coastal hazard risks, effects on coastal biodiversity and declining water quality.

The policies recognise and provide for appropriate use and development in the coastal environment while seeking to protect natural values and enhance water quality. There is a need to adopt a precautionary approach to the use and management of coastal resources in areas potentially vulnerable to effects from climate change. The New Zealand Coastal Policy Statement promotes public access to areas in and near the coast.

In order to achieve the objectives of the New Zealand Coastal Policy Statement, the structure plan proposes a water-sensitive design approach to stormwater management. This will help to address potential water quality issues. Maintaining and enhancing public access to, and along, the coast is also a key part to the structure plan as shown by a future esplanade reserve being shown along the one small part of the study area that adjoins the coastal area.

4.1.3.2 National Policy Statement for Freshwater Management (2014)

The National Policy Statement for Freshwater Management provides direction for the council on the management of freshwater. The council must give effect to the statement through the provisions of the Auckland Unitary Plan; notably through the Regional Policy Statement and the Auckland-wide provisions.

As part of this structure planning process, a detailed assessment of the watercourses within the Warkworth Future Urban has been undertaken. Overall, over 25km of watercourses were assessed to identify the watercourse classifications (permanent, intermittent, transitional, ephemeral, wetlands), provide baseline information on the existing condition of waterways (ecological health, infrastructure condition, flooding), and to identify parts of the watercourse network that would meet the requirements to have future esplanade reserves vested. The proposed approach to managing freshwater is outlined in the Stormwater Management Plan listed in **Appendix 1** of the main Warkworth Structure Plan document.

4.1.3.3 National Policy Statement on Electricity Transmission (2008)

The council gives effect to the National Policy Statement on Electricity Transmission through the National Grid Corridor overlay provisions in the Auckland Unitary Plan. The National Policy Statement on Electricity Transmission is not relevant to the Warkworth Structure Plan because high-voltage electricity transmission lines, as part of the National Grid Corridor, are not located near the structure plan area.

4.1.3.4 National Policy Statement on Urban Development Capacity (2016)

The National Policy Statement on Urban Development Capacity ('**NPS-UDC**') is relevant to the Warkworth Structure Plan process. The NPS-UDC directs local authorities to provide sufficient development capacity in their resource management plans, supported by infrastructure, to meet demand for housing and business space. Development capacity refers to the amount of development allowed by zoning and regulations in plans that is supported by infrastructure. This development can be 'outwards' (on greenfield sites) and/or 'upwards' (by intensifying existing urban environments).

The NPS-UDC requires that high growth councils (of which Auckland is one) must produce a future development strategy that demonstrates there will be sufficient, feasible development capacity in the medium and long terms and that the minimum targets will be met.

The Auckland Plan 2050 Development Strategy serves as Auckland's Future Development Strategy. It identifies the location, timing and sequencing of future development capacity and anticipates that the Future Urban zone around Warkworth will be split into three stages that are 'development ready' between 2022 and 2037.

The Warkworth Structure Plan is consistent with the Development Strategy and is a step towards meeting the NPS-UDC.

4.1.3.5 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (2011)

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 ('NES') provides a national environmental standard for activities on pieces of land where soil may be contaminated in such a way as to pose a risk to human health. Any sites where activities on the HAIL list have occurred must be identified. This NES provides a nationally consistent set of controls and soil contaminant standards to ensure land affected by contaminants in soil is appropriately identified and assessed before it is subdivided or developed.

A high-level investigation of contaminated land within the Warkworth Structure Plan study area has been undertaken as part of the structure plan process and a summary is provided in section 3.3.9.3 of the main Warkworth Structure Plan document.

4.1.4 Treaty settlement legislation

Treaty settlements acknowledge the cumulative effects of breaches of the Treaty of Waitangi and its principles on the economic, social, physical, cultural and spiritual wellbeing of mana whenua. Treaty settlement legislation enacts the deed of settlement between the Crown and Iwi that contain relationship, cultural and commercial redress relevant to Iwi. Statutory acknowledgements and deeds of recognition are part of cultural redress relevant to the Iwi settlement bodies.

Structure planning must take into account Treaty settlements particularly where there are statutory acknowledgements, cultural or commercial redress. Statutory acknowledgements recognise an association between an iwi and an area. This together with council's enacting legislation prioritises iwi participation in resource management processes.

Five mana whenua have been involved in the development of the Structure Plan. In addition to this direct involvement, the relevant Treaty settlement legislation and deeds of settlement includes:

- Te Kawerau ā Maki Claims Settlement Act (2015)
- Ngāti Whatua o Kaipara Settlement Act (2013)
- Ngāti Manuhiri Claims Settlement Act (2012)
- Ngaati Whanaunga Deed of Settlement (2017)
- Tāmaki Makaurau Collective Redress Deed (2012)
- Marutūahu Collective Redress Deed (2018)

Figure 36 below summarises Treaty settlements in the immediate vicinity of the Warkworth Structure Plan boundaries.

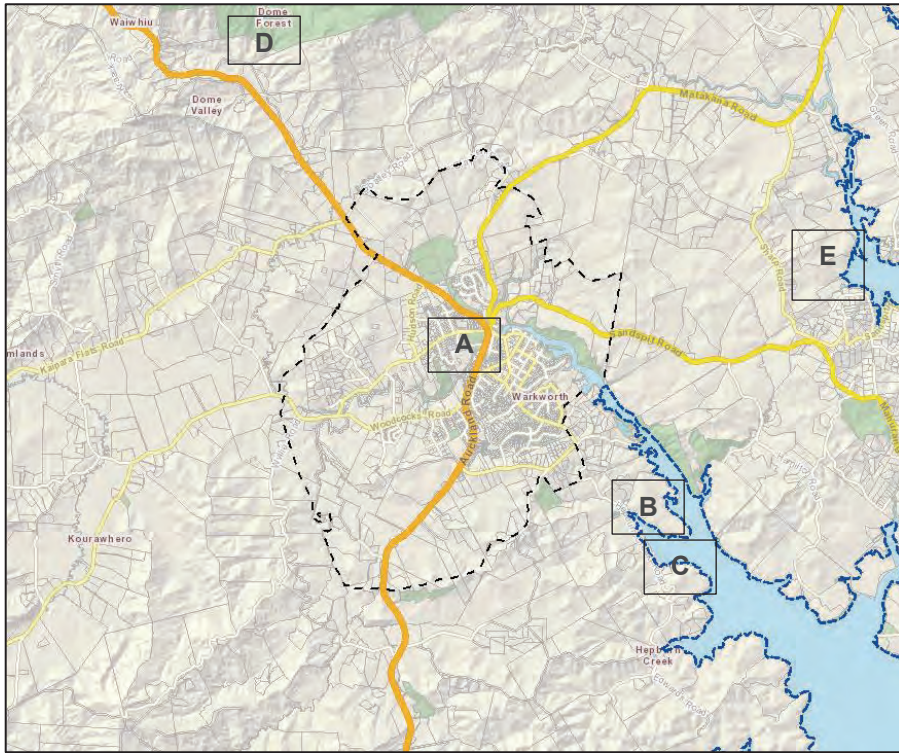


Figure 36: Treaty settlement type and mana whenua²⁸ and approximate locations

(Note: this is not an exhaustive list of Treaty settlements in the area, but a visual snapshot of settlements in the immediate vicinity of Warkworth)

Ref	Settlement type	Location name	Settlement party
A	Commercial redress	Warkworth District Court land	Ngāti Manuhiri
B	Coastal Statutory Acknowledgement Area	Mahurangi River	Ngāti Manuhiri
C	Coastal Statutory Acknowledgement Area	Mahurangi River	Te Kawerau a Maki
D	Statutory Acknowledgement	Tohitohi o Reipae (the Dome)	Ngāti Manuhiri
E	Statutory Acknowledgement	Matakana River	Ngāti Manuhiri

Figure 37: Table of treaty settlement types

4.1.5 Iwi planning documents

Iwi management plans that are lodged by the iwi authority and relevant to the region/district/ rohe, must be taken into account in structure planning. Iwi management plans may express

²⁸ Office of Treaty Settlements, Ministry of Justice, <https://www.govt.nz/organisations/office-of-treaty-settlements> - Deed of Settlements

environmental, cultural, economic, spiritual aspirations and values, areas of cultural significance and outline how the iwi/hapu expects to be involved in resource management practices.

There are many forms of iwi management plans and each plan depends on the preferences and priorities of the iwi/ hapu. Not all mana whenua involved in this Structure Plan have an iwi management plan prepared at this stage.

Accordingly, the following iwi planning documents were considered in the development of the Warkworth Structure Plan:

- Ngāti Whatua o Kaipara Environmental Protection and Management Plan (2013)
- Te Kawerau ā Maki (1995)
- Ngāti Wai Environmental Policy (2007)
- Ngāti Whātua o Ōrākei (2018)

In addition to these, the cultural values assessments and feedback from Hui were used in the development of the Warkworth Structure Plan. Refer to the Mana Whenua Engagement report listed in **Appendix 1** of the main Warkworth Structure Plan document.

4.1.6 Auckland Unitary Plan Operative in Part (2016)

The Auckland Unitary Plan provides the regulatory framework for managing Auckland’s natural and physical resources while enabling growth and development and protecting matters of national importance. It is the principal statutory planning document for land use in Auckland.

The Regional Policy Statement within the Auckland Unitary Plan sets out the overall strategic framework and is intended to give effect to the Auckland Plan. It includes objectives, policies and methods to achieve a quality compact urban form through the implementation of a RUB to define the extent of urban growth over the next 30 years.

In addition to the objectives and policies for urban growth, the Regional Policy Statement also sets the framework for enabling economic growth, protecting historic and natural heritage, addressing issues of significance to mana whenua, sustainably managing our natural resources and coastal environment, and responding to climate change.

The Warkworth Structure Plan study area is almost exclusively zoned Future Urban, with some small areas zoned Open Space – Conservation (esplanade reserves), and Strategic Transport Corridor (SH1). The Future Urban Zone is applied to greenfield land that has been identified as suitable for urbanisation. The Future Urban Zone is a transitional zone. Land may be used for a range of general rural activities but cannot be used for urban activities until the site is rezoned for urban purposes through a plan change process. This rezoning can occur following a structure planning process as informed by Appendix 1 of the Auckland Unitary Plan.

The following Auckland Unitary Plan overlays apply to the study area:

- Significant Ecological Areas -Terrestrial Overlay
- Natural Stream Management Areas Overlay
- High-Use Stream Management Areas Overlay
- High-Use Aquifer Management Areas Overlay

- High Natural Character Overlay
- Outstanding Natural Landscapes Overlay
- Quarry Buffer Area Overlay

The following controls apply to the study area:

- Rural Urban Boundary ('**RUB**')
- Coastal Inundation Control – 1 per cent AEP Plus 1m control
- Stormwater Management Area Control
- Macroinvertebrate Community Index

The following designations apply to the study area:

- (#9374) 86 Hudson Road: Watercare Services Limited water supply purposes
- (#1471) Mansel Drive: Auckland Transport roading purposes (Mansel Drive to Falls Road)
- (#9341) 20 View Road: Watercare Services Limited water supply (reservoir and associated structures)
- (#406) 36 View Road: Auckland Council local park
- (#6769) New Zealand Transport Agency Puhoi to Warkworth Roads of National Significance
- (#9101) First Gas Limited Taupaki to Topuni Gas Pipeline
- (#6763) New Zealand Transport Agency State Highway 1- Puhoi to Topuni
- (#7501) Satellite Station Road: Spark New Zealand Satellite earth station surrounding land use building restrictions

Maps and further details on the zonings, overlays, controls, and designations in the Auckland Unitary Plan can be found in the Land Use Topic Report (see **Appendix 1** of the main Warkworth Structure Plan document).

Appendix 1 of the Auckland Unitary Plan sets out the guidelines for developing structure plans. It covers when structure plans should be used, documents to be considered, matters to identify, investigate and address, and specialist documents required to support the structure plan. These guidelines ensure to that all the effects of development are addressed in advance of development occurring. A summary of how the matters in Appendix 1 of the Auckland Unitary Plan have been addressed in the Warkworth Structure Plan is provided in **Appendix 2** of the main Warkworth Structure Plan document.

4.1.7 Auckland Council Long-term Plan 2018-2028 (2018)

The council's Long-term Plan 2018-2028 was adopted in June 2018 with three key issues identified:

- Population growth and its implications
- Sharing prosperity with all Aucklanders
- Reducing environmental degradation

The plan acknowledges Warkworth is anticipated for future development. The following projects have been facilitated with funding from the Long-term Plan that will have a direct impact on the development of Warkworth:

- contributing \$150,000 to the design of the future multisport building at Warkworth Showgrounds
- beginning work on an Open Space Omnibus Plan to address the needs and future uses of Rodney's reserves and open space
- funding Rodney's conservation volunteers in public spaces, including community planting programmes, plant and animal pest control, and providing materials and green waste disposal
- progressing the design of priority greenways links that have completed feasibility assessments.
- funding the investigation and detailed design of town centre improvements in Warkworth and Helensville, followed by Wellsford and Kumeu-Huapai.
- continued funding of the healthy harbours fund, to provide landowners and community groups with financial assistance to protect and restore the riparian margins of our waterways

Funding for new projects identified through the structure plan process as necessary to support urban growth at Warkworth will be considered in the next rounds of the Annual Plan (2020-21), Long-term Plan (2021-2031), and other mechanisms.

4.1.8 Rodney Local Board Plan (2017)

Warkworth is located within the Rodney Local Board area. The Rodney Local Board Plan sets out priorities and guides the local board's activities for the 2017-2020 period. The aspirations of the plan are that:

- We can get around easily and safely
- Communities are influential and empowered
- Parks and sports facilities that everyone can enjoy
- Our harbours, waterways and environment are cared for, protected and healthy
- Arts and culture are vibrant and strong

Specific key initiatives of the Rodney Local Board Plan relevant to Warkworth include:

- Advocate to Auckland Transport to prioritise the establishment of key public transport links and mode share in Rodney including new north-south and east-west connections.
- Support the establishment of park-and-ride facilities in Rodney, including advocating to Auckland Transport to expand existing facilities in neighbouring local board areas
- Investigate a targeted rate to pay for additional projects such as road sealing, public transport options (e.g. shuttles, buses, trains, light rail, ferries) and park-and-ride facilities and progress those projects (pending the results of the investigation and further consultation).

- Advocate to Auckland Transport and to the NZ Transport Agency for higher prioritisation of Rodney transport projects, such as fixes to Hill Street in Warkworth and improvements on SH16.
- Work on realising Rodney's greenways plans, including working with our key stakeholders to complete our plans, identify priority areas, and design and build the greenways.
- Advocate for all new developments to include high-quality footpaths, walkways, bridleways and cycleways options.
- Investigate the options for multisport facilities in Kumeū-Huapai, Warkworth and Wellsford. Support and advocate for their funding and construction.
- Support and advocate for the construction of a swimming pool or aquatic facility in Warkworth and identify swimming pool needs in other parts of Rodney.
- Promote riparian planting workshops and education and environmental planting networks within our communities.
- Promote and support efforts to improve the water quality in our harbours and waterways such as by working with community, landowners, farmers and iwi to implement riparian fencing and planting.

Based on the support received from the local board plan submissions, the Rodney Local Board introduced a targeted rate in 2018 to accelerate transport investment in the local board area. The specific targeted transport rate projects to Warkworth are a new bus service from Wellsford to Warkworth and a Park & Ride at Warkworth.

The Warkworth Structure Plan is consistent with the Rodney Local Board Plan as the structure plan has a transport network (notably walking/cycling and public transport) that integrates with the initiatives in the local board plan, it promotes improved water quality through setting aside areas around streams for protection and replanting, and it identifies the potential for future community facilities consistent with those in the local board plan.

The structure plan process has also enabled the Warkworth community to be influential and empowered through various consultation stages of the project, most notably the community workshops that were 'hands-on' sessions to generate ideas on how the Warkworth Structure Plan could look. The collaborative workshops were an opportunity for community members to come up with a land use plan for Warkworth's expansion area.

4.1.9 Infrastructure strategies, plans, and initiatives

4.1.9.1 Supporting Growth Programme

The Supporting Growth Programme is the Government and Auckland Council's strategic transport planning programme set up to investigate and deliver the transport networks Auckland needs over the next 30 years to accommodate future urban growth. Transport has an important role to play in enabling urban development and helping ensure Warkworth continues to be an enjoyable place to live, work and play.

Te Tupu Ngātahi (the Supporting Growth Alliance) are determining the preferred high-level strategic transport network required to urbanise the Warkworth Future Urban zone according to the sequencing set out in the Future Urban Land Supply Strategy. A set of required transport projects

will be determined and then further detailed work will identify the specific routes to be route protected (i.e. designated).

Auckland Transport and the New Zealand Transport Agency are already progressing several priority projects as separate workstreams. These include:

- Matakana link road (Te Honohono ki Tai)
- Hill Street intersection interim and long-term improvements

Related projects being delivered outside the Supporting Growth Programme include:

- Ara-Tūhono – Pūhoi to Warkworth
- Rodney Local Board transport improvements – funded through targeted transport rates
- Frequent bus services as part of Auckland Transport’s New Network for Warkworth
- Route protection for the future Ara-Tūhono – Warkworth to Wellsford stage

Options for new or improved transport connections to enable the development of Warkworth’s Future Urban zone that are being investigated by the Supporting Growth Alliance include, but are not limited to:

- Future Matakana Road extension to Sandspit Road
- Western Link Road (previously referred to as the Western Collector)
- Wider Western Link Road
- Frequent bus services to Auckland, potential Park and ride facilities and local services
- Walking and cycling network
- A potential southern interchange with south facing ramps only on Ara-Tūhono – Pūhoi to Warkworth

The Supporting Growth Alliance were engaged by Auckland Transport to prepare the Integrated Transport Assessment to support the Warkworth Structure Plan. The Integrated Transport Assessment presents the high-level draft strategic transport network²⁹ and develops additional assumptions on likely corresponding future local network-level roading, public transport and walking and cycling facilities. This is further outlined in section 3.3.7 of the main Warkworth Structure Plan document.

4.1.9.2 Regional Land Transport Plan 2018-2028 (2018)

The Regional Land Transport Plan sets out the funding programme for Auckland’s transport services and activities over a 10-year period. Planned transport activities for the next three years are provided in detail while proposed activities for the following seven years are outlined. The Regional Land Transport Plan is jointly delivered by Auckland Transport, NZTA and KiwiRail, and forms part of the National Land Transport Programme.

The key directions of the Regional Land Transport Plan include:

- To better connect people, places, goods and services
- Increase genuine travel choices for a healthy, vibrant and equitable Auckland
- Maximise safety and environmental protection.

²⁹ To be endorsed by the Auckland Transport and NZTA boards

The key priority areas for the Regional Land Transport Plan, as relevant to the Warkworth Structure Plan, include:

- Road safety- the development of a new road safety strategy with the target of zero road deaths.
- Public transport to be a single connected service network across all modes (rail, light rail, ferry etc.).
- Walking and cycling programmes, as delivered by Auckland Transport and NZTA. This includes regional footpaths and Urban cycle ways programme.
- Corridor improvements, including the Puhoi to Warkworth motorway and Matakana Link Road (Te Honohono ki Tai). This also includes the seal extension programme in rural areas.

4.1.9.3 Regional Public Transport Plan 2018-2028 (2019)

The future public transport network is identified in the Regional Public Transport Plan ('RPTP') which identifies services over the next 10 years.

The RPTP has four focus areas: delivering a step-change in the Rapid Transit Network; improving customer access to public transport; improving Māori responsiveness; and Harnessing emerging technologies.

There are four bus routes are described in the service lists of the RPTP. These are:

- Route 995 – Warkworth to Hibiscus Coast (which will be via the new Puhoi to Warkworth State Highway alignment once complete)
- Route 996 Warkworth to Algies Bay via Snells Beach
- Route 997- Warkworth to Omaha via Matakana and Point Wells
- Route 998 – Wellsford to Warkworth

The plan states the patronage expectation is low and identifies the service categories as local (996, 997, 998) and connector (995).

The Warkworth Structure Plan is consistent with the RPTP as the public transport network in the structure plan builds on the public transport network in the RPTP.

4.1.9.4 Watercare Asset Management Plan 2016-2036 (2016)

Watercare's Asset Management Plan shows how it will operate, maintain and renew existing water and wastewater assets, and provide new assets to meet future demand as Auckland grows.

The location, size and timing of new development directly influence the infrastructure required to service that development. The council has worked closely with Watercare throughout the structure planning process to ensure that water and wastewater infrastructure provision is aligned with the timing of development in Warkworth.

The Asset Management Plan identifies significant work programmes to meet growing demands. The projects that will directly impact the structure plan area are:

- a proposed new North East Sub-regional wastewater facility and conveyance to service the Warkworth and Snells/Algies communities.
- a new groundwater source to replace the current Mahurangi River source which is constrained by minimum flow requirements, particularly during summer. Further water

source augmentation will be required within the next 30 years to meet the long-term population growth projections

Further detail on the water and wastewater strategy for the Warkworth Structure Plan is provide in section 3.3.8.1 and 3.3.8.2 of the main Warkworth Structure Plan document.

4.1.10 Other Auckland Council plans and strategies

4.1.10.1 Low Carbon Auckland (2014)

Low Carbon Auckland sets out a 30-year pathway and a 10-year plan of action to transform to a greener, more prosperous, liveable, low carbon city. A city that is powered by efficient, affordable, clean energy and using resources sustainably.

The plan focuses on five key areas of transformation:

1. the way we travel
2. the way we generate energy
3. our built environment and green infrastructure
4. zero waste
5. forestry, agriculture and natural carbon assets.

It is noted that the council is currently developing Auckland's Climate Action Plan and this will supersede Low Carbon Auckland once adopted.

The Warkworth Structure Plan is consistent with Low Carbon Auckland, particularly in the provision for active transport modes, public transport, and the identification and protection of a Green Network throughout the study area.

4.1.10.2 Auckland Urban Ngahere (Forest) Strategy (2018)

Auckland's urban forest is defined as the network of all trees, other vegetation and green roofs – both native and naturalised – in existing and future urban areas. It includes trees and shrubs in road corridors, parks and open spaces, green assets used for stormwater management, community gardens, green walls and roofs, and trees and plants in the gardens of private properties.

Auckland Council's Urban Forest Strategy is a comprehensive regulatory and non-regulatory approach to enhancing our urban forest and green infrastructure by increasing the tree canopy cover around the city.

A key target of the strategy is to increase canopy cover across Auckland's urban area up to 30 per cent, with no local board areas less than 15 per cent.

The Warkworth Structure Plan is consistent with the Auckland Urban Ngahere (Forest) Strategy as it shows a significant area for a Green Network for protection and rehabilitation (where required). The Green Network will over time will create corridors of native habitat connecting fragments of native vegetation.

4.1.10.3 Auckland Design Manual

The Auckland Design Manual (an online tool) is a non-statutory best practice guide for designing Auckland's neighbourhoods, buildings and spaces. It is a valuable tool for identifying appropriate typologies that can be utilised within Warkworth. The Neighbourhood Design Statement, discussed further in Section 3.3.10.5 of the main Warkworth Structure Plan document, refers to the Auckland Design Manual. The plan change process that follows the structure plan will consider any more detailed and specific provisions required to implement a quality built environment in Warkworth.

4.1.10.4 Code of Practice for Land Development and Subdivision

The Code of Practice for Land Development and Subdivision, or any subsequent updates of that document, will be a relevant consideration at the time of subdivision and development.

4.2 Local Context

4.2.1 Study area description

Warkworth is located approximately 60km from central Auckland and lies within the Rodney Local Board area. The Statistics New Zealand 2018 population estimate for Warkworth³⁰ was around 5,300 residents. The town has a higher percentage of the population aged 65 years and over compared to the Auckland average.

Much of Warkworth's existing urban footprint is concentrated around its town centre and the Mahurangi River. Residential uses surround the town centre and there are small areas of light industrial land in the outskirts of the existing urban footprint.

Warkworth sits at the edge of the Mahurangi River and lies within a large topographic bowl that is framed to the north and south by hill country and a mixture of both native and exotic production forests. The outer edges of this 'basin' culminate in the peaks of The Dome, Conical Peak and Mt Tamahunga to the north and Moirs Hill to the south.

The structure plan study area is the land zoned Future Urban under the Auckland Unitary Plan. It comprises around 1,000ha of land and is shown outlined in purple on Figure 5. The outer edge of the study area follows the RUB and some key activities around the edge include a limestone quarry, motorway (under construction), the satellite station, and rural production activities.

The landform within the study area is undulating with only a small area of predominately flat land (in the south). The land cover in the study area is predominately pastoral grassland with some patches of remnant bush (dominated by totara and kahikatea) in the upland areas and following major streams that feed into the Mahurangi River. Some discrete areas of orchards/vineyards are also present. Existing land uses in study area are predominately of a rural lifestyle nature. There are some larger blocks of rural production activities and a handful of smaller properties that contain industrial activities.

There is a wide range of land titles sizes across the Future Urban zone and buildings are generally sparsely distributed across the area. The areas that have the smaller titles and the higher density

³⁰ Within the Warkworth Census Area Unit, which does not include the future urban zoned land

of building coverage are around Viv-Davie Martin Drive, the western end of Sandspit Road, and the southern end of Clayden Road.

The vast majority of the study area is privately owned with only small areas of publicly owned land for parks, esplanade reserves, and Watercare assets.

4.2.2 Warkworth's context in northern Auckland

Warkworth is the largest rural town in the northern part the Auckland Council's jurisdiction. Surrounding smaller towns and settlements such as Snells Beach, Matakana, Omaha, Wellsford and Kaipara Flats all rely on Warkworth as their major centre for various needs including employment, shopping, education, and recreation. There is also a large rural population served by Warkworth.

Warkworth's anticipated growth means that it will remain as the largest settlement in the rural north. Warkworth has around 1,000ha of Future Urban zoned land which dwarfs the growth areas planned for other northern settlements in Auckland³¹.

Looking further north, across the Auckland Council boundary into the Kaipara and Whangarei districts, Warkworth is currently the largest population node and employment hub between Auckland³² and Whangarei. Even with the growth predicted in some parts of the Kaipara District (e.g. Mangawhai), Warkworth is anticipated to remain the largest settlement between Auckland and Whangarei.

4.2.3 Motorway development

Warkworth is currently split by the existing SH1 route through the urban area. There are planned and proposed motorway projects that will significantly influence the future of the town.

The Ara Tūhono – Pūhoi to Warkworth motorway project will extend the four-lane Northern Motorway (SH1) 18.5km from the Johnstone's Hill tunnels to just north of Warkworth. The motorway is currently under construction and is expected to be completed and open in late 2021.

The new motorway's terminus just north of Warkworth (near the Showgrounds) will result in the northern part of Warkworth becoming the main vehicle entrance point to the town rather than the current entrance from the south (using the existing SH1).

The Ara Tūhono – Pūhoi to Warkworth motorway will generally improve transport times and reliability to and from Auckland for the northern Auckland area. However, as the project terminates at Warkworth itself, the town is expected to gain the most from this project. Other northern towns such as Wellsford will gain some transport improvements but the overall time savings from the new motorway are reasonably small for a Wellsford-Auckland trip and a commute would still traverse the winding Dome Valley section of State Highway 1.

³¹ Wellsford, with around 100ha of Future Urban zoned land, has the second largest Future Urban zoned area of the northern settlements in Auckland.

³² The northern urban edge of Silverdale/Orewa

It is anticipated that the new motorway will take on the state highway function and the existing SH1 route through Warkworth's urban area will be transferred to Auckland Transport to operate as an arterial road. This offers the potential for the road to function differently to what it does now in terms of speed limits, amenity, and active transport provision.

NZTA is completing the work necessary to designate Ara Tūhono – Warkworth to Wellsford. The indicative alignment for the Ara Tūhono – Warkworth to Wellsford project is publicly available and documentation to support the designation and consents are programmed to be lodged by NZTA in 2019.

The indicative alignment of Ara Tūhono – Warkworth to Wellsford (Figure 38) shows a system interchange just north of Auckland, incorporating a section of the Ara Tūhono – Pūhoi to Warkworth project. This form of interchange is to cater for high volumes of traffic with free flowing ramps to keep traffic moving. The interchange is shown indicatively on the Warkworth Structure Plan map. There is currently no confirmed timing for the construction of this project.

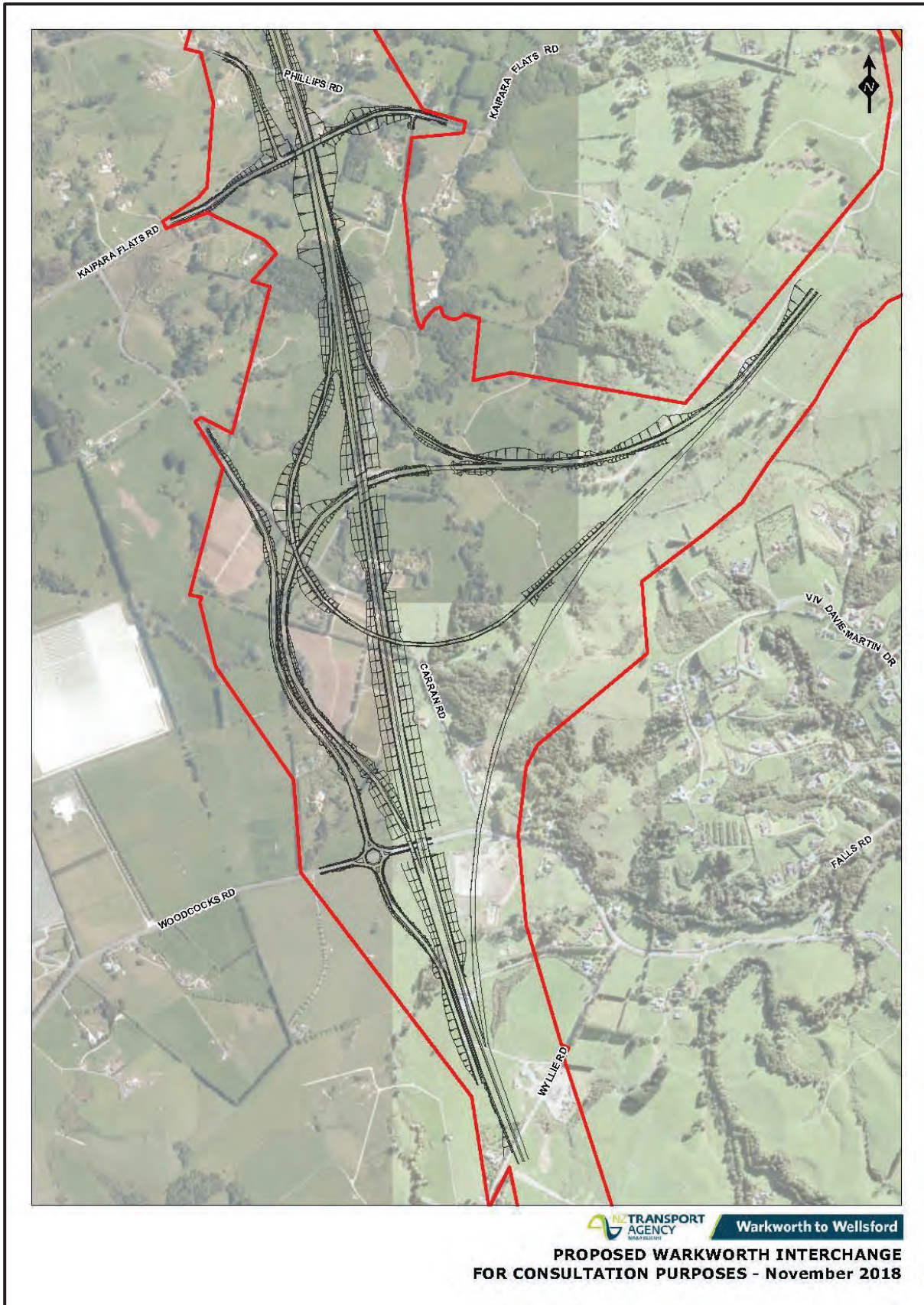


Figure 38: Indicative Ara Tūhono – Warkworth to Wellsford alignment around Warkworth

4.3 Background research

A number of background technical reports were prepared at the start of the process to inform the Warkworth Structure Plan project. These reports examined the existing environment, statutory considerations, and outlined opportunities and constraints in the Warkworth structure plan area. These reports are summarised below and a list of all the background topic reports can be found in **Appendix 1** of the main Warkworth Structure Plan document.

4.3.1 Water and wastewater

There are existing local network assets in place to provide both water and wastewater services to the existing urban area in Warkworth. Currently, there are no constructed assets in the Future Urban zoned land, but a series of projects are underway to provide bulk water and wastewater services to this land.

4.3.1.1 Water

Water service to Warkworth is provided from the new Sanderson Road Water Treatment Plant, using water abstracted from bores. The treated water is pumped to two main reservoirs. This will provide water for the medium term growth of Warkworth.

4.3.1.2 Wastewater

The current Warkworth wastewater network is a combination of gravity and low pressure systems and has limited capacity for population growth. The Warkworth Wastewater Treatment Plant at Alwick Street, Warkworth is nearing capacity and will be expanded to cater for short term growth in the existing 'live' zoned catchment.

A discharge consent was granted for the servicing the combined Warkworth, Snells Beach and Algies Bay communities in April 2017. The discharge consent provides sufficient capacity in flow terms to provide for a population of around 30,000 in Warkworth, Snells Beach and Algies Bay. The associated new scheme will be constructed and operational by 2022, which includes a transfer pipeline between Warkworth and Snells Beach, a new Snells Beach WWTP, plus a new outfall. The current Warkworth Wastewater Treatment Plant will be decommissioned when the new scheme is operational.

4.3.2 Transport

The existing SH1 corridor provides a dual role in connecting Auckland and Northland for through traffic while also providing local access to the Warkworth town centre and settlements to the east, including Snells Beach, Algies Bay and Matakana (Eastern Beaches). At peak times, this corridor is heavily congested, with significant delays occurring regularly at the Hill Street intersection.

The Hill Street intersection is a critical pinch point in the Warkworth road network, providing the only access across the Mahurangi River to settlements to the east (Snells Beach, Algies Bay, Matakana etc.). It also provides direct access to the Warkworth town centre and Warkworth Primary School. Congestion levels at the Hill Street intersection are particularly high during holiday and weekend peaks, where existing capacity issues are exacerbated by holiday traffic heading to

and from the eastern beaches and further north on this nationally significant corridor. There are also very few east/west connections across SH1, restricting intra-network movement.

No regular public transport service is currently provided for trips within Warkworth itself. The 'New Network' for public transport in Warkworth began in September 2018 and introduced a new service between Warkworth and Hibiscus Coast Station (route 995), and new local services between Warkworth and Algies Bay/Snells Beach (route 996), between Warkworth and Point Wells, Omaha, Matakana (route 997), and between Wellsford and Warkworth (route 998).

Warkworth acts as a service town for the surrounding rural area, where significant distances and isolated locations mean that car travel is often the only option for access to essential services.

The Auckland Plan identifies Warkworth as having an important role as a Satellite Town – highlighted for its potential to function semi-independently from the main metropolitan area, and to provide a full range of services and employment opportunities to the surrounding rural areas. Local employment opportunities in Warkworth are a key factor to ensuring an efficient and sustainable transport network in the future.

4.3.3 Education

The Ministry of Education is responsible for managing the network of schools within New Zealand. Within the Auckland region, significant population growth is expected to occur as a result of natural increase and migration from overseas and other parts of the country. The Ministry is developing an Auckland Education Growth Plan to identify how growth in Auckland's school age population can be managed over the next 30 years.

Warkworth has been identified as an area of high priority, given the projected resident population growth and high-level of development planned for the area. The projected population growth indicates increasing demand for services and infrastructure, including primary and secondary education. Growth in the school age population of Warkworth is very dependent on the uptake and speed of development once land becomes available.

A number of network management options can be investigated to respond to forecast growth in Warkworth, including:

- Increasing capacity of existing schools to accommodate future growth demand
- Reviewing enrolment zone boundaries
- Adding new schools to the network
- Reviewing schooling structure alongside the above options

New schools would require land acquisition and designation, development planning and review of enrolment scheme home zones.

Based on the high-level anticipated levels of growth identified in the Auckland Plan, two further primary schools are likely to be required. Forecast growth also requires additional secondary provision in the wider catchment. New primary schools typically require between 2 to 4 hectares of land. Around 6-10ha of land is generally required for new secondary schools.

Opportunities exist around sharing of education and community facilities and aligning the delivery of additional schooling capacity and facilities with key infrastructure delivery timeframes.

4.3.4 Open space

There are a number of existing esplanade and native bush reserves within the Warkworth Structure Plan area, but no parks or open spaces specifically for recreational purposes. Given the significant population growth expected in the structure plan area, there is a need for the provision of parks and open space to provide adequate informal recreational opportunities and experiences for the anticipated residents.

Through the structure plan process an assessment of the Warkworth Structure Plan study area will be undertaken to develop a parks and open space network. The council will then need to acquire land to create a network of open space such as large suburb/sports parks, a network of neighbourhood parks, and off-road walkways/cycleways connecting the parks.

The acquisition of additional land will be required to facilitate the development of connections and linkages. Esplanade reserve and riparian margins present an opportunity to create off-road recreational walkways and cycleways.

4.3.5 Community facilities

Existing council community facilities are mainly located within the existing 'live' zoned Warkworth area such as the Warkworth Town Hall, Masonic Hall, Warkworth Library and two venues for hire in Shoesmith Domain. There are also nearby facilities in Snells Beach such as the Mahurangi East Library and Mahurangi Community Centre. In addition, there are community leases on council owned land such as the Warkworth Showgrounds.

The Community Facilities Network Plan guides Auckland Council investment in the provision of community facilities. The plan focuses on having the right facility in the right place at the right time.

The Community Facilities Network Action plan is a companion document to the network plan. It identifies actions and priorities required to address gaps, growth or fit for purpose issues across the community facilities network. The action plan identifies five actions that impact on the Warkworth area. One of these (the upgrade of Warkworth Town Hall) is identified as a priority and has been completed. The remaining four are not identified as priorities.

In the medium-term the following actions (identified in the Community Facilities Network Action plan) are required:

- investigate the feasibility and innovative opportunities to meet the need for a pool and leisure space in the Rodney area
- a needs assessment to assess whether the existing facilities are aligned to community needs in Rodney
- investigate the need for a multi-purpose community space in Warkworth
- investigate the need for expansion and refurbishment of Warkworth Library

Where these actions identify an unmet need, further work will be required. This could include changes to the way services are provided, innovative ways of providing new services, or the provision of new facilities.

Subject to the outcomes of the actions identified above, it is anticipated there will be adequate provision of library, arts and culture and community centre space to meet the forecast growth in Warkworth. There is currently adequate aquatic and leisure provision in the wider region given the current and forecast population but drive times to access facilities are at the upper limit of the guidelines. Provision of additional aquatic space may be required in the medium-term to serve Warkworth (and the surrounding area). There may be options to provide this through partnerships, or other innovative methods.

4.3.6 Environment

The Warkworth Structure Plan area is a highly modified landscape with predominantly arable livestock/pastoral and rural lifestyle activities surrounding the existing Warkworth urban area. Small patches of native vegetation remain across the landscape and freshwater habitats are of moderate condition.

Formulation of the structure plan provides an opportunity to improve ecological values, set objectives for ecological enhancement, guide the placement of reserves and align community recreation corridors with ecological areas.

Ecological constraints for development include:

- proximity of developable area in relation to watercourses
- proximity and scale of development in relation to floodplains
- avoidance of watercourse loss (i.e. no permanent loss with reclamation or culverting)
- avoidance of native vegetation loss (especially Significant Ecological Areas)

Key ecological opportunities include:

- retaining and enhancing remaining native vegetation to improve wildlife habitat
- retaining and buffering natural watercourses to improve water quality and increase numbers and diversity of instream biota
- retaining natural topography as far as possible to ensure watercourses can maintain natural form and function
- aligning reserves and recreational connections with existing natural watercourse corridors to provide user integration with nature and wider buffering for wildlife movement
- reintroducing riverine wetlands to natural floodplains
- restoring modified watercourses to reinstate a meandering form and habitat diversity

In the context of the wider landscape, the Warkworth Structure Plan area could provide a key linkage between the Dome Valley forest in the north, through to the Mahurangi River, and out into the Mahurangi Harbour and pest free islands of the Hauraki Gulf in the east. This means that restoration of ecological values in the Warkworth Structure Plan area will help bridge this current gap and as such could yield ecological benefits of a larger scale and across a larger area of the Auckland region.

4.3.7 Sustainability

When considering sustainability opportunities and constraints in the context of structure planning it is necessary to focus on issues that are relevant and can be influenced by decision making at this early stage and high level.

The structure plan presents a significant opportunity to influence sustainability outcomes and support a low carbon development model for the area. The scale and predominantly undeveloped nature of the Warkworth structure plan area provides opportunities to plan for broader sustainability outcomes from the outset.

The opportunities related to sustainability include:

- The Warkworth structure plan area is of a sufficient scale to create a new urban area with a mix of land uses that promote a functioning, self-sustaining community (reducing the need to travel longer distances).
- Promoting areas of mixed use within the structure plan area can deliver a range of benefits including reducing the distance that residents need to travel within the structure plan area, supporting a walking and cycling friendly environment and helping to establish a vibrant community with a sense of place.
- Planning for transit-oriented development through assigning higher density residential and mixed-use zones within convenient walking distances of public transport stations and stops can increase the accessibility and appeal of public transport to a greater number of people.
- Enabling a quality compact urban form allows for a more efficient use of land and reduces urban sprawl. Using land in the future urban zone efficiently can reduce the need for further urbanisation of rural land in the region.
- Establishing a transport network that promotes low carbon and active transportation modes within the structure plan area and to and from the area. This can support a wide range of positive environmental and social outcomes.
- Using Auckland specific climate change projections to inform the development of the Structure Plan presents an opportunity to arrange land uses and infrastructure in a way that is resilient to the projected impacts of climate change and therefore exposed to a reduced level of climate related risk.
- Defining land uses during the development of the structure plan presents an opportunity to consider the integration of green infrastructure in a way that supports climate change adaptation.
- Integrating urban forest planning in the development of the structure plan to deliver an increase in urban forest canopy cover with a wide range of benefits.

The constraints or risks related to sustainability include:

- Potential for the urbanisation of the structure plan area to generate a large increase in private vehicle trips and traffic congestion. This could increase transport related greenhouse gas emissions and result in negative social and economic outcomes including lost productivity.
- There may be resistance and challenges from the development sector towards delivering higher density residential developments based on market conditions and perceptions of

market demand for higher density housing. This may be reinforced by traditional values associated with housing and residential subdivision in the local area, illustrated by the very few examples of higher density residential developments in Warkworth.

- There may be resistance and challenges from the development sector towards zoning a mix of land uses due to a preference for residential zoning.

4.3.8 Stormwater

The study area is located within the lower Mahurangi River Catchment which is approximately 5,892ha in area and drains to the Mahurangi Harbour within the Hauraki Gulf. The Warkworth Structure Plan study area comprises approximately 17% of the wider Mahurangi Catchment. Within the study area the topography is generally characterised as rolling to moderately sloping with elevations ranging from approximately 100m RL at its northern, western and southern extents to sea level around the existing urban area alongside the Mahurangi River.

Streams within the study area are all part of the Mahurangi River system. These streams vary from natural streams with good quality indigenous riparian vegetation to farm drains. The north and south branches of the Mahurangi River join at the intersection of Falls Road and Woodcocks Road and the river then travels west to east, bisecting the study area.

The removal of riparian vegetation, livestock access to waterways and pollution from agricultural runoff have all influenced water quality, as well as reduced habitat diversity and biodiversity. However, as the catchment currently has a low extent of impervious surfaces, a low degree of channel modification, and comparatively low pollution from stormwater and wastewater discharge, the water quality overall for the catchment is rated as “good” in Auckland Council’s 2016 freshwater report card.

The study area is underlain by the Mahurangi Waitematā aquifer. The aquifer is designated as a High-Use Aquifer Management Area in the Auckland Unitary Plan with an annual water availability of 1,605,500m³. In general, high use aquifers are sensitive to increasing imperviousness which can result in a reduction in infiltration and aquifer recharge. Minimising reductions in infiltration as a result of development is an important consideration for the continuing viability of aquifer resources. Further work needs to be undertaken to determine the sensitivity of the Mahurangi Waitematā aquifer to changes in catchment imperviousness.

Auckland Council’s Mahurangi Catchment model has been used to determine the extent of the 100 year floodplain. In the Warkworth study area the 100 year floodplain will act as a constraint for development as generally buildings and infrastructure should not be located within the floodplain. However, the floodplain as a development constraint may overlap with the requirement for protecting permanent and intermittent streams as well as protecting areas of existing riparian vegetation which is prominent along the Mahurangi River.

Identifying and integrating stormwater constraints and opportunities and infrastructure needs for the intended land use is an integral part of the structure plan process. The following stormwater constraints and opportunities for the study area have been identified:

Managing flood risk

Constraints

- Upstream development may increase the flood risk to existing buildings in Warkworth. If this is found to be the case, then catchment scale attenuation devices may be required to avoid increasing flooding to habitable floors.
- Any new development should occur outside of the 100 year floodplain.
- Allow for conveyance of overland flow.

Opportunities

- Protection of 100 year floodplain also provides an opportunity to enhance riparian corridors. This provides enhanced stormwater management functions, contributes to the ecological values of stream corridors and provides public amenity. Green corridors should be considered to manage the flood hazard, protect ecological values, provide amenity and for walking and cycling tracks.

Hydrological mitigation

Constraints

- The presence of low permeability ultic clays in the structure plan area may preclude the use of infiltration devices in some areas.
- The viability of water reuse as a stormwater management tool is contingent on land use activity and will need to be assessed on a site by site basis.

Opportunities

- The structure plan area is a greenfield site which provides an opportunity to incorporate integrated stormwater management to maintain pre-development hydrology.
- Providing opportunity for on-site infiltration to improve aquifer recharge and stream baseflows.
- Providing opportunities for water reuse especially for housing and for industrial/commercial activities (depending on water demand).

Opportunities to enhance freshwater systems

Constraints

- Permanent and intermittent streams will need to be protected.
- Riparian buffer area around streams needs to be included. In some areas existing riparian vegetation has been classified as a terrestrial Significant Ecological Area and must be protected.

Opportunities

- Water quality in the water bodies within the structure plan area is currently relatively good for an urban catchment. Use of integrated stormwater management is an opportunity to maintain or enhance water quality.
- Design stormwater management that provides for a high level of water quality to protect the high ecological values and good water quality present in the area.
- Use riparian margins as part of water conveyance and to provide connections to other freshwater systems and other habitat types.

- The change in land use from rural land to urban is an opportunity to reduce sedimentation loading in freshwater systems and in the harbour

4.3.9 Contaminated land

Within the study area there are a number of potentially contaminating activities included on the Ministry for the Environment HAIL list that are either being undertaken or are more likely than not to have been undertaken in this area.

The majority of the study area has historically been and continues to be utilised for pastoral farmland and rural-residential purposes. Although these land uses are generally considered to be low risk with regards to contamination, localised occurrences may exist, resulting from a number of potential sources, including:

Livestock dips or spray race operations in pastoral farmland areas;

- On-site wastewater disposal systems;
- Asbestos;
- Lead-based paints;
- Burial and burning of farm waste;
- Importation of unverified fill;
- Fuel storage.

A number of properties within the study area are known or are suspected to have been utilised for horticultural purposes, including market gardening, orchards, green houses and viticulture. Persistent bulk storage and use of pesticides (HAIL Category A10) are commonly associated with such horticultural activities.

Other potentially contaminating HAIL activities identified within the study area included:

- A golf driving range. This may have persistent bulk storage and use of chemicals such as pesticides (HAIL Category A10) are the primary HAIL activities.
- A motor mechanic workshop. Depending on the age and condition of the workshop infrastructure, including floors and drainage pits, waste disposal practices, and depth of groundwater beneath the site, the level of contamination could range from negligible to significant.
- A spare car parts business. As with the motor mechanics workshop, the level of contamination will depend on the age and condition of the workshop infrastructure, including floors and drainage pits waste disposal practices, and depth of groundwater beneath the site.
- A search of the council's consent database revealed that a property had held a consent to discharge wastewater including wash down from stock holding pens, from an abattoir operation. The consent expired in 2004. Given the length of time since the assumed cessation of operations, no biological or nutrient issues are anticipated to be of concern. However, any chemicals used by the abattoir for cleaning and disinfecting purposes may potentially have impacted the site soils.
- Two properties appear to be utilised as laydown/ storage areas, one for a freight company and the second for a drilling company. Whether the properties can be assessed as potential

or actual HAIL sites will depend in part on the type of freight or drilling equipment/chemicals being stored, and whether vehicle/drill equipment maintenance works are carried out on these properties.

An evaluation of the constraints, opportunities and information gaps with respect to contaminated land was carried out, and determined that further assessments within the study area, particularly land proposed for high sensitivity end use, such as residential, children's play areas, child care centres, schools and rest homes would be required at the resource consent stage. This would include:

- A comprehensive Preliminary Site Investigation to confirm the actual or potential location and nature of HAIL activities.
- Should the Preliminary Site Investigation identify that HAIL activities are more likely than not to have occurred on a property within the study area, then a Detailed Site Investigation will be required.
- On the basis of the results of the Detailed Site Investigation, the requirement for remedial works and/or resource consents would be assessed.

In general, contamination within rural-residential, pastoral farmland properties, if present, is likely to occur as discrete, low volume hotspots (although it is recognised concentrations may be high). Contamination associated with the horticultural and recreational land uses identified are likely to be dispersed at lower levels across the properties. Overall it is considered that issues arising from contaminated land are unlikely to present significant constraints to land development in the study area.

4.3.10 Geotechnical and coastal hazards

From a geotechnical perspective, the study area is underlain by a mixture of geology types that include some of the more challenging conditions encountered within the Auckland Region. Of particular concern are landslide prone rock types, including Northland Allochthon ('Onerahi Chaos') and large scale block slides within the Pakiri Formation. However, there is some evidence that despite the poor geological conditions in parts of the area, the conditions may be less onerous than other similar areas such as Wellsford. Therefore, the problems encountered are likely to be within the ability of local engineering firms to resolve, with suitably rigorous investigation and design.

With respect to coastal hazards, the proposed Warkworth Future Urban Zone is 14km inland from the open coast and extends landward in a northerly, westerly and southerly direction from the upper limit of Mean High Water Springs. The site is outside of the activity controls identified in the Auckland Unitary Plan for coastal erosion, coastal inundation and the future effects of sea-level rise. As a result, there are no identified coastal hazard constraints identified.

4.3.11 Heritage and archaeology

A significant number of places of heritage interest or significance exist within the study area, including several that are unrecorded. Only one of these, the Combes and Daldy lime works, is currently scheduled in the Auckland Unitary Plan schedule of historic heritage. The Wilson's

Portland Cement Company dam also appears to be of sufficient significance and integrity to be considered for evaluation to determine if it meets the criteria for inclusion in the schedule.

Further unscheduled significant heritage places were identified just outside the study area and these may also be affected by urban or other development in the longer term. Some unscheduled archaeological sites are present in the study area. Other presently unidentified sites are likely to exist in certain locations that have not yet been surveyed or researched in detail. Sites that pre-date 1900, whether recorded or not, are protected under the provisions of the Heritage New Zealand Pouhere Taonga Act and may not be modified or destroyed without an archaeological authority.

The Accidental Discovery Protocol provides a process for managing the unanticipated discovery of sensitive materials including archaeological sites. Compliance with the archaeological provisions of the Heritage New Zealand Pouhere Taonga Act (2014) and the Auckland Unitary Plan will be triggered.

The historic settlement pattern in this area is scattered and is not considered to meet the requirements of Special Character.

Overall, there are few constraints associated with historic heritage in relation to the development of the study area. It will be difficult to avoid the loss of some heritage places including several World War II camp sites. Where this occurs, there are a number of mitigation measures that should be considered.

4.3.12 Landscape

Warkworth sits at the edge of the Mahurangi River, a northern reach of the Mahurangi Harbour, and lies within a large topographic bowl that is framed to the north and south by the hill country and a mixture of both native and exotic production forests. The outer edges of this 'basin' culminate in the peaks of The Dome, Conical Peak and Mt Tamahunga to the north, while Moirs Hill is the main hill feature to the south, separating Warkworth from a complex valley system around Puhoi. Inland, the channelised valley of the Kaipara Flats extends towards the small peak of Clements Hill, then the much more layered and elevated sequence of hills and ridges that denote the Kaipara Hills and – further west Mt Auckland/Atuanui.

In the closer vicinity of Warkworth's existing settlement, a mixture of more localised stream valleys and basins are intermixed with a rolling matrix of ridges and hills north, south and west of the Mahurangi River and current town centre. Patches of remnant bush dot these upland areas, while tracts of residual bush – often dominated by totara and kahikatea, but also kauri within the Falls catchment – follow the line of the major streams that feed into the Left and Right Branches of the upper Mahurangi River and their various tributaries. These culminate in several major stands of coastal forest/bush:

- spread along the main escarpment of the Mahurangi River facing the current township's commercial core and the sequence of waterfalls, rapids and sedimentary pavement that denote its transition into the smaller rivers described above;
- a sequence of mature totara and kahikatea at the centre of a broad catch basin near the Warkworth Showgrounds extending northward below Matakana Road;

- a sequence of totara dominated forest following the stream corridors immediately east of that same road;
- a complex mixture of kahikatea, kauri and totara either side of the Falls and its small weir, north of Woodcocks Road – to the west of the current township; and
- a corridor of totara and kahikatea following the Right Branch of the Mahurangi River from Woodcocks Road towards Perry Road and SH1 to the south.

These stands of native vegetation, together with others on more elevated ridges and hill slopes, contribute very markedly to Warkworth's endemic signature. They provide linear points or areas of focus within the individual catchments arrayed around the current township, have considerable aesthetic appeal in their own right and offer a feeling of linkage with the main body of the Mahurangi River and Harbour. They also lend each catchment feelings of naturalness and maturity that would otherwise be difficult to realise amid the open paddocks of grass and – near the showgrounds – sports fields.

At the centre of both this network and Warkworth's current urban area, the combination of mature forest overlooking the upper Mahurangi River, combined with its well defined, even intimate, river corridor, 'rapids' and falls, creates a landscape that is central to the township's enduring 'village' character and identity. It reinforces the town's feeling of being at the heart of a confined basin, while the development of a timber esplanade, grassed recreation areas and children's playground – all directly opposite the river escarpment and forest – creates an attractive interplay between the river's natural and cultural halves. The mooring of an old scow and other historic vessels next to the walkway reinforces this engagement, which is fundamental to Warkworth's appeal for locals and visitors alike.

Consequently, a town that once largely turned its back on the Mahurangi River is increasingly realising the benefits of integration with this key landscape feature and asset. The river and escarpment are identified as an Outstanding Natural Landscape in the Auckland Unitary Plan and will remain absolutely critical to the aesthetic appeal and ambience of Warkworth into the foreseeable future.

Elsewhere, much of the study area currently remains dominated by pasture, rural-residential blocks and – south of the township – the Ransom Vineyard. Around Thompson Road, this rural open space transitions into large tracts of bush just outside the study area that focus on Avice Miller Reserve (near Satellite Station Road) and Parry Kauri Park – near the junction of Thompson Road with Wilson Road. Large blocks of bush extend eastwards from this edge of the structure plan area towards the Mahurangi Harbour, although relatively few locations offer views towards the main body of the harbour. It is effectively isolated from nearly all of the study area. These stands of native forest provide the focus for a large Outstanding Natural Landscape that wraps around the western side of the Mahurangi Harbour and travels along the ridge north of Satellite Station Road.

On the opposite side of Warkworth, around Viv Davie Martin Drive, significant rural-residential development is already spread across the rolling to steep slopes that frame the Falls catchment, while smaller pockets of both rural-residential development and more conventional residential lots already straddle both sides of Matakana Road as it leaves the current township, heading northwards. A small pocket of more historic, suburban housing is also located within the apex of Matakana Road and Clayden Road, but most of the remaining land within the catchments north to north-east of the current town centre still remain dominated by pastoral activities, notwithstanding

the presence of the Warkworth Golf Club and course (off Matakana Road) and the Rodney Coop Lime Quarry (both just outside the study area).

These areas are interspersed with the tracts of native bush following stream corridors already described. In addition, at the southern SH1 entryway/gateway to Warkworth between Valerie Close and Toovey Road, as well as around Sandspit Road, the study area landscape is also notable for a complex matrix of lanes, accessways, properties and fields framed by Chinese poplars together with other poplar and willow species.

These regimented stands of trees help to define, and attractively enclose, both main road corridors. They also help to screen houses, sheds and other structural elements within individual properties, and lend the landscape around the township a sense of remaining bucolic, rural and mature, even in quite close proximity to the current, rapidly changing town margins. As a result, they contribute appreciably to both the landscape character and amenity values of the wider study area and town.

The topographic margins of the study catchment are also defined by a number of other landscape features, including:

- The ridge that Wilson Road and Thompson Road run along;
- The prominent ridge that Viv Davie Martin Drive climbs up near the Falls;
- A knoll directly north of the Warkworth Showgrounds, merging with a significant ridgeline that extends towards Clayden Road and Matakana Road;
- Part of the Mahurangi River escarpment; and some smaller tributaries off the Right Branch of the Mahurangi River near Perry Road and lower Wyllie Road.

The Landscape Topic Report develops a broad strategy around what landscapes should be protected and conserved or retained as far as possible.

4.3.13 Business land needs

Warkworth and the surrounding areas are projected to experience significant growth over the next three decades, and that growth will require significant new provision of retail and services space and business land to accommodate employment and meet the future needs of the community.

Applying the higher end estimates, there will be demand for an additional 68ha (net) of business land in Warkworth out to 2047. That 68ha includes 3ha Town Centre, 1-2ha for new Neighbourhood Centres, up to 57ha of Light/Heavy Industry, 4ha of General Business, and 3ha of Mixed Use.

The demand for Town Centre, General Business and Mixed Use land can be supplied through development of currently vacant existing zones and/or intensification of existing zones (e.g. the Mixed Use land surrounding the town centre).

In the Future Urban zone only a few small new Neighbourhood Centres are likely to be needed for local convenience needs.

Up to 95ha (gross) of industrial land would be needed in the Future Urban zone under the highest demand scenario. Under the lowest demand scenario, no further industrial land would be needed

and the existing vacant industrial areas would be sufficient to cater for the growth. It would be prudent to plan to accommodate for the higher end of the demand scenario given the difficulties with finding more industrial land once other activities are in place.

4.3.14 Urban design

Urban design is the process of planning and designing development holistically, from the macro scale (such as this structure planning process) through to the micro level (site specific and building design). For the purposes of this structure planning process, only macro urban design is involved. However, this macro planning must always be done with the micro level in mind – considering the impacts the decisions made at the higher level will have when developments are built on the ground and attempting to identify issues and pre-empt problems from arising.

4.3.15 Land use planning

The Land Use Topic Report looked at a number of different issues within the study area without overlapping too far into specific areas covered by other topic reports. The issues covered are outlined below with a summary of the findings.

- **Land cover:** The land cover in the study area is predominately grassland with some smaller areas of native vegetation. Some discrete areas of orchards/vineyards are also present. The types of land cover in the study area do not raise any significant concerns in terms of significantly limiting future urban land use options.
- **Existing land uses:** The existing land uses in the study area are predominately of a rural lifestyle nature. There are some larger blocks of rural production activities and a handful of smaller properties that contain industrial activities. The types of existing land uses are unlikely to significantly limit future urban land use options within the study area.
- **Existing land titles and buildings:** There is a wide range of land titles sizes in the study area; from sites under 1ha to sites over 50ha. There is a concentration of smaller sites of approximately 1ha around Viv-Davie Martin Drive, the western end of Sandspit Road, the southern end of Clayden Road, and around McKinney Road. The size of land titles in the Future Urban zone can impact on the types of future land uses that can occur. Larger titles give more flexibility for a range of land uses to be developed (e.g. residential, industrial, centres, large parks).

The areas mentioned above where there has been significant fragmentation of land titles (through subdivision) will be more difficult to develop for a range of uses. This is because smaller titles are generally more expensive per square metre and the high value of the land can make some types of typically lower value land uses more difficult (i.e. industrial, parks). Areas with smaller titles will also have a number of different land owners, each with their own aspirations (or lack of) and timing for future urban development. Coordination amongst

a number of smaller landholdings can be difficult and can impact on the type of future land uses and the potential infrastructure networks.

Existing buildings are generally sparsely distributed across the study area except for a few areas that have a higher density of building coverage. These are largely in the areas with smaller land titles. The concentration of buildings in these areas has the potential to hinder the types of future urban land uses that can occur and potential future infrastructure networks. This is linked to the value of the building. Buildings with high values can be difficult to shift or remove and therefore can hinder the range of future land uses that can occur and can potentially obstruct infrastructure networks. There are many sites in the study area with lower value (under \$250k) buildings on them. These titles will be flexible for a range of future land uses and infrastructure networks. There are only a few sites in the study area with building values over \$1m.

- **Unimplemented consents:** The existing land use planning environment includes unimplemented resource consents. That is, land use developments that have gained a resource consent but have not yet been built. These developments are not apparent when visiting a property or viewing recent aerial photos. However, the developments can occur now without further council planning consents required. For the purposes of the Warkworth Structure Plan project it is assumed that any unimplemented consent in the Future Urban zone will be implemented (before the consent lapses). Therefore, the Future Urban zoned land covered by the granted consent should be shown in the structure plan as a land use to match the type of consented development. The roading network and other infrastructure should follow and join into the consented development plans.
- **Covenants:** There are a number of land titles in the Future Urban zone that are subject to covenants. The covenants that protect areas of indigenous vegetation are largely around the Viv Davie-Martin Drive area and some stream corridors. These covenants will limit future urban activities on the covenanted indigenous vegetation areas. The structure plan will need to largely design land uses and infrastructure around the covenanted areas, leaving the vegetation intact.
- **Publicly owned land:** There is minimal publicly owned land in the study area. The small areas of publicly owned land are for parks, esplanade reserves, motorway purposes, and Watercare assets. Land within the study area that is already publicly owned has the potential to be more easily be used for public works (e.g. pump stations, open space network) and the council can have more certainty around the land use outcomes on council owned land.
- **Auckland Unitary Plan overlays and controls:** A number of district plan overlays and controls apply to the study area. These are outlined in section 4.1.6 of this appendix and are covered in more detail in other topic reports relevant to the overlay or control.

- **Designations:** Several designations impact on the study area, the most pertinent being the gas pipeline (9101), the Ara Tūhono – Pūhoi to Warkworth motorway (6769), and the Satellite Station building restriction area (7501).
- **Boundary issues:** The land uses on the outer edge of the study area (along the RUB) have the potential to create reverse sensitivity issues with lawful neighbouring land uses. The key boundaries of the study area that will require the most management are those that directly adjoin the Ara Tūhono – Pūhoi to Warkworth motorway corridor, land zoned for productive rural purposes, and the Limestone quarry. The land uses on the inner edge of the study area (along the 'live' zoned urban area of Warkworth) also have the potential for reverse sensitivity issues. The key boundaries requiring the most management are those adjoining the existing industrial zones.

4.4 Consultation

Consultation on the future of Warkworth has been an ongoing process in the development of the Warkworth Structure Plan. The structure plan process was preceded by consultation on higher level strategic planning matters including Warkworth's status as a Satellite Town (via the Auckland Plan 2012 and 2018), the location of the RUB (via the Auckland Unitary Plan process 2013-2016), the sequencing of greenfield growth areas in the Future Urban Land Supply Strategy in 2015 and 2017, and more recently with (in collaboration with NZTA and Auckland Transport) the Supporting Growth Programme (2018 and ongoing).

The engagement strategy for the Warkworth Structure Plan project focused on engagement with mana whenua, landowners, residents and businesses in the area, community groups, and the general public.

The requirement for consultation as part of the structure planning process is to collect feedback from landowners, stakeholders, infrastructure providers and communities³³ to inform the content of the structure plan. Engagement for the Warkworth Structure Plan project sought to move beyond these consultation requirements and involve stakeholders and the community in generating ideas for the structure plan. The objectives of the structure plan engagement were to:

- inform landowners within the structure plan area, and the public and other relevant stakeholders about the project;
- invite interested parties (i.e. landowners, stakeholders and the public) to participate in the structure planning process;
- better understand the land use opportunities and constraints to create a robust structure plan for the Warkworth area;
- consider stakeholders and community's views in relation to the development of the Warkworth area; and

³³ Section 1.4.8 of Appendix 1 of the Auckland Unitary Plan

- satisfy formal statutory requirements for consultation and engagement.

Engagement on the structure plan project used the International Association for Public Participation framework, in that it sought to:

- **inform:** to keep stakeholders and the public informed at key stages of the structure plan process
- **consult:** to obtain feedback to be used for the Warkworth Structure Plan
- **involve:** to work with interested parties in the development of the Warkworth Structure Plan through community workshops

The Warkworth Structure Plan project has included four main stages of public engagement:

- Stage 1 – April 2018 (Initial engagement)
- Stage 2 – June 2018 (Community workshops)
- Stage 3 – August 2018 (Reporting back on community workshops)
- Stage 4 – February/March 2019 (Feedback on draft structure plan)

These stages are outlined in further detail below.

4.4.1 Stage 1 – April 2018 (Initial engagement)

In April 2018 the council undertook the first of four planned stages of public consultation for the Warkworth Structure Plan project. The purpose of this initial stage was to:

- promote awareness of the Warkworth Structure Plan project;
- receive comments on the background information papers ('topic reports') prepared by specialists within council; and
- gain a local perspective on what is valued in Warkworth as it grows, and any potential opportunities and constraints associated with its growth.

Just prior to (and during) this period the project team sought to build awareness of the consultation process to encourage feedback. These awareness building initiatives included:

- letters to owners and occupiers of properties within the Future Urban zone in Warkworth;
- articles in local and regional papers including Mahurangi Matters, Rodney Times and Our Auckland;
- a Project newsletter entitled "*Warkworth Structure Plan project news*" (April 2018 issue) sent to households in the Warkworth area and wider surrounds;
- emails to identified stakeholders;
- posts on the Rodney Local Board Facebook page;
- creating a hashtag #FutureWarkworth to follow any discussion on this project on social media;
- attendance and presentations at various community group meetings;
- posters at businesses and community facilities in Warkworth town centre; and
- information on the council website.

The main method through which feedback was received was the online feedback forms on the council website. However, in an effort to promote other channels to receive feedback, the project team held other events, as detailed below.

- Project stands events and ‘drop-in’ sessions
- Exercises with students at Warkworth Primary School and Mahurangi College

In total 223 pieces of feedback were received during the April consultation stage with a fairly even split between respondents from Warkworth and those in the surrounding area. Key themes that emerged from public consultation are outlined below:

- The most common feedback theme was around **transport**. This included comments around congestion on the roading network (e.g. Hill Street intersection) and the need for new road network connections. There were also comments around the need for improved public transport to Auckland, the surrounding area, and within Warkworth itself. Improved cycleways/walkway connections were sought and there were comments on the lack of parking in the town centre.
- The second most common theme was around **general infrastructure provision**. The issues raised were about the need for infrastructure to come before development including infrastructure for transport, water/wastewater, education, health, community facilities, and open space.
- The **character and identity** of Warkworth was another key theme raised in feedback. This included comments around retaining the small rural ‘village’ character of Warkworth and the sense of community that currently exists. Retaining the existing town centre as a focal point was also important, as was the desire that Warkworth not become like a suburb of Auckland.
- **Environmental considerations** received a high degree of feedback. Comments were mostly around protecting the sensitive Mahurangi River and identifying and protecting environmental areas before development occurs.
- The other main theme was around **business and employment**. The issues raised were around the benefits of additional services that will be available as Warkworth grows (e.g. retail, recreation) and the importance of businesses being able to locate in Warkworth and provide local jobs.

Further information on the Initial Engagement stage of consultation can be found in **Appendix 1** of the main Warkworth Structure Plan document.

4.4.2 Stage 2 – June 2018 (Community workshops)

During June 2018, the second stage of public consultation for the project was undertaken over two separate (but identical) sessions at the Warkworth Town Hall. The purpose of this consultation stage was to involve the public in ‘hands-on’ sessions to generate ideas on how the Warkworth Structure Plan could look in terms of a land use layout and supporting infrastructure.

The workshops were run by an independent facilitator and council planners and specialists were in attendance to assist the public. The purpose of the workshops was to provide the community with the opportunity to generate and contribute informed ideas alongside the council team for the future

of Warkworth. The process ensured that workshop participants were aware of all specialist information before ideas were generated.

The project team sought to build awareness of the community workshops through various channels including a project newsletter ("*Warkworth Structure Plan project news*" – June 2018 issue) sent to households in the Warkworth area and wider surrounds, emails to stakeholders, social media posts, community group meetings, advertisements/media articles, posters and the council website.

Approximately 50 public participants were recorded at the first weekday evening workshop, forming into eight groups for the design session. The second workshop was held on a Saturday morning and approximately 40 public participants formed into six groups for the design session.

The workshop outputs included a series of annotated and/or colour coded plans showing future land uses and supporting infrastructure for the Future Urban zoned area.

Further information on the community workshops stage of consultation can be found in **Appendix 1** of the main Warkworth Structure Plan document.

4.4.3 Stage 3 – August 2018 (Reporting back on community workshops)

The third stage of public consultation for the project was to report back on the ideas generated at the community workshops. This consultation stage was held in conjunction with the Supporting Growth Alliance who were exploring and planning the transport networks needed to support Warkworth's future urban growth over the next 30 years.

After the community workshops in June, the council reviewed and summarised all the ideas generated over the two workshops. The workshop outputs included a series of 15 different land use plans for Warkworth. While each plan was unique, common themes emerged including increasing roading connections, having future industrial uses in a few similar locations, and clustering schools/parks/higher density housing around centres.

The outputs have been interpreted through analysis of the maps, and by reviewing the spoken summary of the maps by each group at the end of each workshop. There were several common themes throughout the workshops, including the desired location of elements included in the exercise brief, and requests for elements not listed. The outcomes of the two community workshops held in June 2018 expressed the following general themes:

- Increasing connections in the roading network.
- An interchange connecting to the Ara Tūhono – Pūhoi to Warkworth motorway at the southern part of the study area.
- Park and ride areas.
- Clustering industrial uses in two or three locations close to major arterials.
- A desire to keep the Warkworth Town Centre as the primary centre, with additional services required to be spread over several Neighbourhood Centres.
- Various land uses were commonly clustered alongside the Neighbourhood Centres, including schools, parks, and medium and high density housing.
- Lower density housing was commonly placed on the periphery, and in environmentally sensitive areas.

- There were different ideas for the location of schools, although most were clustered with other uses such as parks, centres or the Warkworth Showgrounds, and distributed to enable accessibility with future growth.
- Locating a hospital and/or other medical facilities in Warkworth.
- Cycling and pedestrian links to encompass recreation, increase accessibility for all abilities and enable a variety of modes of transport.
- Cycling and pedestrian pathways connected to waterways and green spaces.
- Urban growth should respond in a responsible way, with an environmental focus.

A summary of the outputs from the community workshops was displayed using overlay maps and these were presented to the public on two information days in August 2018. These sessions showcased a summary of the main outputs of the community workshops. The sessions were also used as an opportunity to show a set of seven draft planning principles to guide the Warkworth Structure Plan (that were developed using existing community consultation resources, iwi consultation, and considering the feedback on the structure plan project to date). These planning principles were available on the day for informal comments.

The Supporting Growth Alliance were in attendance at both information days to outline some of the emerging preferred transport options for Warkworth. Other teams working on Warkworth transport projects such as the Ara Tūhono – Puhoi to Warkworth motorway, the Hill Street intersection, and the Matakana Link Road were also in attendance.

The information days were advertised by the Supporting Growth Alliance. Approximately 60 people attended the weekend session and 80 people attended the weeknight session.

Further information on the Reporting Back stage of consultation can be found in **Appendix 1** of the main Warkworth Structure Plan document.

4.4.4 Stage 4 – February/March 2019 (Feedback on draft structure plan)

The final stage of consultation for the Warkworth Structure Plan project was to receive feedback on the draft plan. Feedback on the draft plan was open from 25 February to 25 March 2019. The purpose of this final consultation stage was to test the draft layout of land uses and supporting infrastructure and any other matters (e.g. staging) set out in the draft plan. The draft version of the structure plan is shown in Figure 39 below.

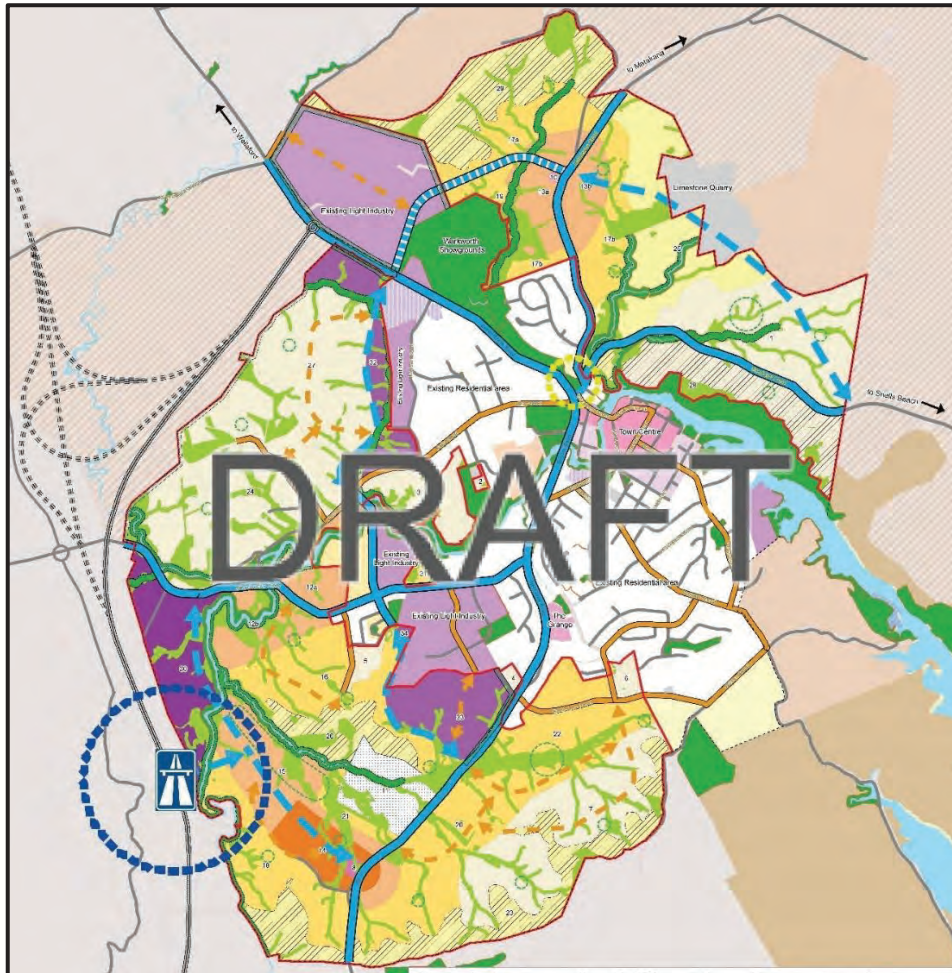


Figure 39: Draft Warkworth Structure Plan (February 2019)

The project team sought to build awareness of the consultation process through letters to Future Urban zone land owners, a Project newsletter entitled “*Warkworth Structure Plan project news*” (February 2019 issue), local paper advertisements and articles, an email to identified stakeholders, posts on the Rodney Local Board Facebook page, attendance at various community group meetings, posters at local businesses and community facilities, and information on the council website.

The consultation on the plan included two ‘drop in days’ at the Warkworth Town Hall, two event stand sessions and sausage sizzles outside the Warkworth New World supermarket, and a number of community group meetings.

A total of 219 pieces of feedback on the draft plan were received. Overall, there was an even level of support and opposition on the draft Warkworth Structure Plan. The general comments on the plan were mainly around transport, the scope of the plan, open space provision, new facilities sought, business land, and generally ensuring infrastructure is provided before growth is enabled.

There was strong feedback on some specific elements of the plan including opposition to the industrial land. There was a desire that it be reduced and be more clustered. There were also concerns about the interface between industry and residential areas and/or streams. There was

support for the indicative parks shown in the draft plan and two-thirds support for the retention of the Morrison's Orchard.

There were 83 site specific requests covering zonings, overlays/controls and staging. Of these, 34 supported the indicative zonings, mainly around the proposed Single House zoning for the Viv Davie-Martin Drive area and Warkworth North East. A total of 49 requests opposed the indicative zonings shown in the draft structure plan and requested changes. The most common areas where changes were requested were the Viv Davie-Martin Drive area (to lower density zones) and 89ha of the 90ha of industrial land (to residential, mixed use or general business).

There were 31 requests on site or area specific matters around the Green Network and these mostly commented that the mapping was incorrect. There were 22 requests seeking to add, remove, amend or support various overlays/controls shown in the plan.

There were 25 requests that related to site or area specific staging matters. The majority of these were supporting the Viv Davie-Martin Drive area being sequenced for development in 2022 as shown in the draft structure plan. There were also requests seeking that the Warkworth North East area be brought forward to the first stage (2022).

Based on the feedback, a number of changes have been made to the structure plan. Generally, rezoning requests were accepted where a compelling case was made to show that the rezoning was suitable in light of any site specific issues while also being consistent with the zoning principles in the plan and the overall land use layout sought for the of the wider town. Other rezonings were not supported because they did not demonstrate adherence to the above matters.

The key areas where zone changes have occurred between the draft structure plan and the final structure plan are explained below and identified on the map in Figure 40.

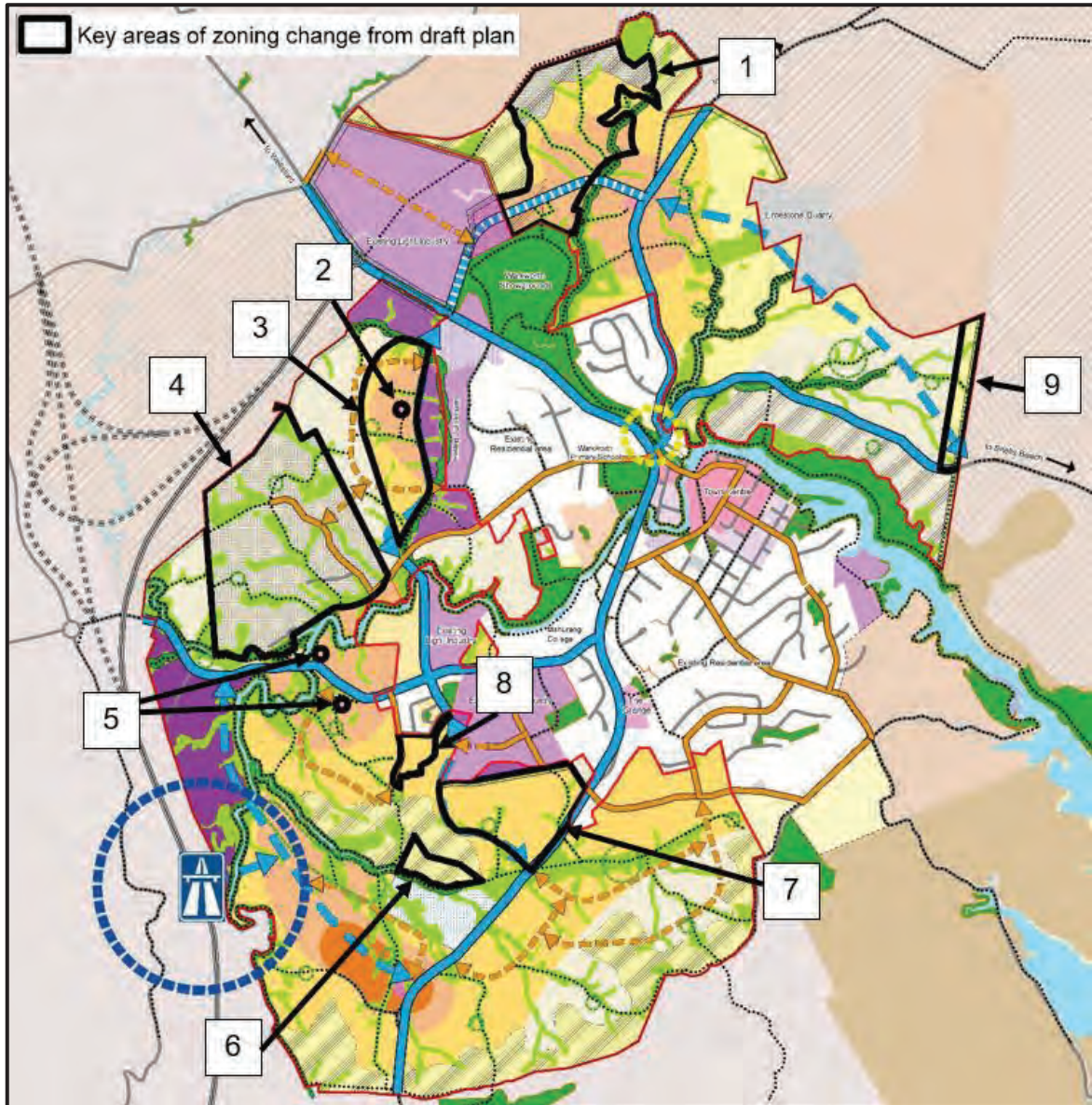


Figure 40: Key areas of change between the draft and final structure plans

Area 1: Various changes including a change from Large Lot to Single House (with an overlay to increase the minimum site size from 600m² to around 1,000m², landscape controls and planting) around the northern edge of Warkworth and increased residential density enabled around the Warkworth Showgrounds.

Area 2: A new small Neighbourhood Centre enabled in the northwest to service the needs of a relatively constrained catchment, being the northern part of the residential area to the west, and the industrial zones to the east.

Area 3: Increased residential density enabled around the new small centre.

Area 4: Retention of the Single House zone but the addition of an overlay to increase the minimum site size from 600m² to somewhere around 1,500m² – 2,500m² (to be determined at the plan

change stage). This is to reflect the compromised nature of this area to achieve standard urban development and also acknowledges the current spacious residential amenity of the area.

Area 5: Shifting the western Neighbourhood Centre further south to the other side of Woodcocks Road, in light of the additional centre in the north west.

Area 6: Changing from Orchard to Large Lot as this steep land is not required for the orchard operation and it is part of the knoll feature in the south of Warkworth that has the Large Lot zone and landscape overlay on it.

Area 7: Change from Light Industry to Mixed Housing Suburban reflecting the general opposition to the amount of industrial land proposed in the draft plan, the visual impacts of industrial development in this area, the topography of the land making feasible industrial development difficult, the ability to use the ridgeline to demarcate an industrial/residential boundary, and the still high overall future local employment anticipated for Warkworth. The land adjoins other Mixed Housing Suburban zoned land.

Area 8: Change from Single House to Mixed Housing Suburban to be consistent with a granted resource consent that allows for a type of development (lot sizes) more in keeping with the Mixed Housing Suburban zone.

Area 9: Change from Single House to Large Lot to reduce the number of urban neighbours along this rural/urban interface to mitigate the possibility of reverse sensitivity issues arising. A landscape screening area along this boundary is also indicated on the structure plan.

Note that the final structure plan has shown the zone boundaries in a more general way than in the draft plan. This is because the structure plan zonings are high level and indicative only and are likely to be refined through a later (more detailed) plan change process.

There was also feedback requesting changes to the staging of the development areas in the draft Warkworth Structure Plan. This was mostly seeking that areas sequenced for later on (2028 onwards) be brought forward to be part of the first stage in 2022.

The final Warkworth Structure Plan does not propose to change the sequencing to bring forward any areas as requested through feedback. This is due to the significant infrastructure funding issues combined with the compact city focus on redevelopment of brownfield areas and the higher priority greenfield areas that would take any additional greenfield infrastructure funding before Warkworth. The staging in the Warkworth Structure Plan remains the same as that identified in the Future Urban Land Supply Strategy.

Further information on the Feedback on the draft structure plan stage of consultation can be found in **Appendix 1** of the main Warkworth Structure Plan document including a report outlining the main issues and themes from feedback and why the final structure plan incorporates some changes from feedback and why other requested changes have not been incorporated.

4.4.5 Mana Whenua

Mana whenua have a special cultural and spiritual relationship with the environment, which is a matter of national importance under the Resource Management Act 1991 and the Local Government (Auckland Council) Act 2010.

Appendix 1 of the Auckland Unitary Plan sets out guidelines for structure plan development. It stipulates that in the preparation of structure plans, council must:

- consider iwi planning documents
- consider Treaty settlement legislation
- investigate and address potential effects of urbanisation on mana whenua values.

Clause 4A of Schedule 1 of the Resource Management Act 1991 also sets out pre-notification requirements for iwi authorities, which requires the draft proposal to be considered by iwi authorities prior to public notification.

For the Warkworth Structure Plan, the project team sought an ongoing dialogue with mana whenua to meet the needs and aspirations of iwi authorities and strengthen the structure plan.

Warkworth sits within the area of interest of approximately 13 mana whenua groups. These mana whenua groups include:

- Ngāti Wai
- Ngāti Manuhiri
- Te Rūnanga o Ngāti Whātua
- Te Uri o Hau
- Ngāti Whātua o Kaipara
- Ngāti Whātua Ōrākei
- Ngāi Tai Ki Tāmaki
- Te Kawerau a Maki
- Te Akitai Waiohua
- Ngāti Te Ata Waiohua
- Ngāti Paoa
- Ngāti Maru
- Ngaati Whanaunga

In July 2017, the structure planning programme was introduced by the Plans and Places senior leadership team at a meeting with the Mana whenua Kaitiaki Forum of mana whenua governance to socialise the structure planning programme and seek guidance on engagement. In January/February 2018, letters were sent to 13 mana whenua groups to further introduce Warkworth Structure Plan process and to gauge interest in participating.

Of these, five mana whenua groups indicated that they would like to be involved in the Warkworth Structure Plan project. These mana whenua groups include:

- Ngāti Manuhiri
- Te Kawerau ā Maki
- Ngaati Whanaunga
- Te Rūnanga o Ngāti Whatua
- Ngāti Whatua o Kaipara

Mana whenua engagement and discussions have been ongoing throughout the structure plan project. Four mana whenua engagement Hui have been undertaken as part of the project. The first mana whenua Hui was held in April 2018 in Warkworth.

The purpose of this initial Hui was to introduce the project, establish an ongoing relationship with mana whenua, and understand how they wanted to be involved in the project. Following the first Hui, mana whenua were invited to provide a cultural assessment of the area prior to drafting of the plan. Two cultural values assessments were received from Ngāti Manuhiri and Ngāti Whatua o Kaipara.

A second Hui was held in July 2018 to discuss responses to the two cultural values assessments, Treaty Settlement information, and to undertake a planning exercise akin to the community workshops (see section 4.4.2 of this appendix). The iwi represented at the Hui preferred not to undertake the mapping exercise but rather outline key principles that they wanted the structure plan to consider.

A third Hui was held in September 2018 where the council presented some of the key ideas being developed for the preliminary draft structure plan and demonstrated how the principles outlined at the July Hui had influenced this early version of the plan. There was general support for the direction of the draft structure plan at the Hui, particularly for the Green Network concept.

A fourth Hui was held in March 2019 to discuss the notified draft Warkworth Structure Plan. There was general support for the land uses and infrastructure in the draft Warkworth Structure Plan at the Hui. There was some feedback on various issues including seeking more reference to cultural values in the structure plan document and some concerns around industrial land interfaces.

Further information on mana whenua engagement is provided in the Mana Whenua Engagement Summary (see **Appendix 1** of the main Warkworth Structure Plan document).

4.5 Drafting and refining the plan

The Warkworth Structure Plan was developed using a sequential approach to land use planning. In the first instance the land uses required to enable Warkworth to be a thriving and self-sustaining community as it grows over the period of the structure plan were identified. This was based on the high-level expectations of the Auckland Plan for Warkworth's Future Urban zone to accommodate around 7,500 new dwellings along with significant employment.

The land uses were grouped based on the amount and type of land required for each use. Some land uses, such as industrial, generally require larger sites, on land with mainly flat to slightly sloping topography. Other land uses, such as low density residential, do not have such requirements and can physically be developed on a wider range of land types and topographies. In addition, some land uses have considerable implications for the location of other uses (e.g. transport infrastructure has implications for the location of industry while the location of centres has implications for the location of higher density residential areas).

The main land uses that have particular topographical constraints or other significant land use implications were categorised into four groups:

- Industrial land
- Centres

- Parks
- Transport infrastructure

The identification of these land uses allowed for the future of the study area to be considered with a holistic and evidence based approach, leading to a structure plan land use layout that takes into account the area's existing land forms and constraints. This also ensured that the planned growth of the town does not undermine the functioning of Warkworth as a service town for the wider eastern Rodney region (e.g. retaining the role and function of the existing Warkworth town centre).

This grouping of land uses enabled initial options for the main 'building blocks' of the Future Urban zone of Warkworth to be considered. These building blocks for the major 'anchor' land uses were then able to be used as a basis for considering the locations for the residential elements of the study area.

The locations for residential land use types (i.e. high, medium, and low density) were considered for the areas surrounding, and in between, the 'anchor' land uses outlined above. The various Auckland Unitary Plan residential zonings were applied in line with provisions of the Regional Policy Statement while allowing for area specific adjustments where required.

This overall approach for the creation of the Warkworth Structure Plan has resulted in a plan that enables the town to grow in a sustainable manner conducive to long term economic, social, and environmental success. This approach was also able to mitigate the effects of issues associated with reverse sensitivity from major land uses (such as industrial) by considering the location of such negative externality generators at an early stage of the land use scenario process.

The draft version of the Warkworth Structure Plan land use pattern was developed over a number of internal workshops. These workshops were held to understand the views of the topic specialists and to discuss and debate the different land use options. Once a preliminary draft land use pattern was determined, specialist Assessment Reports were commissioned to assess the plan. The findings of these reports led to further changes to the plan through an iterative process.

Following feedback on the draft structure plan, further internal workshops with specialists were held to review the feedback and assess what changes to the structure plan were needed. The specialist Assessment reports were updated in light of the changes to the plan.

4.5.1 Industrial land options

The most inflexible of required land uses, in terms of the type and topography of the land needed for successful implementation, is industrial. The Auckland Plan signals that Warkworth is to accommodate significant future employment growth alongside residential growth. Independent economic analysis indicates that up to 95ha (gross) of industrial land might be needed in Warkworth under the highest demand scenario. The draft structure plan sought to supply towards the high end of this indicated future demand. Such a level would support the town's growth and retain its function as a Satellite Town with a sphere of influence for services and employment that reaches well into rural Rodney.

A number of options were considered for the location(s) of industrial land within Warkworth's Future Urban zone. The range of options considered for the location of the industrial land use were determined through a number of inputs including the public feedback received during earlier states

of the structure plan project, the constraints and opportunities of the study area ('topic reports'), and the economic analysis of the amount of land required. The location for industrial land in the Future Urban zone was narrowed down into three high-level options. Each option supplied around the same amount of industrial land (around 90-95ha) but differed in the areas it was proposed.

Industrial land Option 1 (Figure 41) proposed the majority of new industrial land between Hudson Road and the currently under construction motorway to the west of Warkworth. A small extension to the existing industrial area around Morrison Drive south to a ridgeline was also proposed.

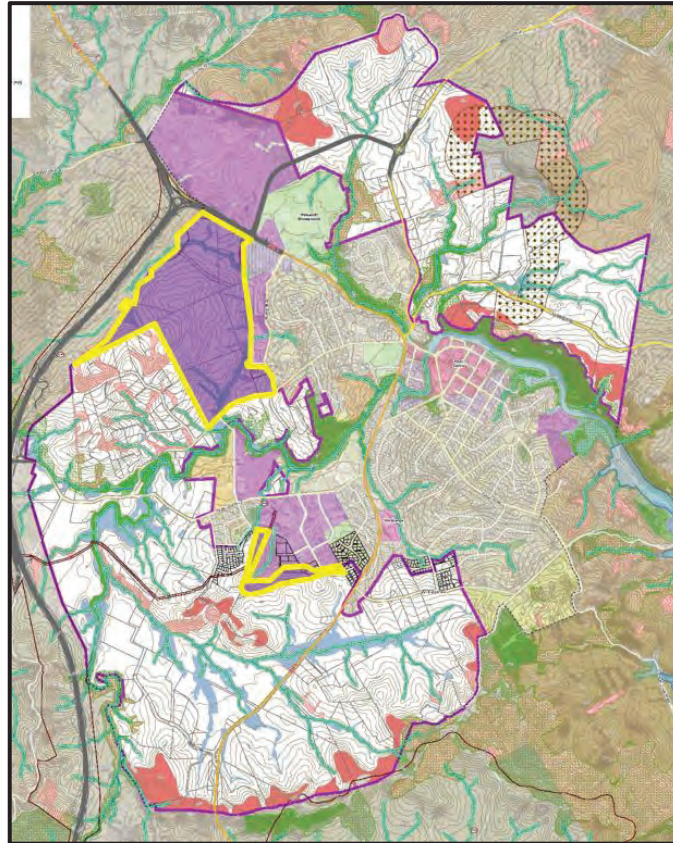


Figure 41: Industrial land location – Option 1 (Industrial land shown in purple and proposed new areas outlined in yellow)

This option locates most of the new industrial land close to existing areas of industrial zoned land and the potential Ara Tūhono – Pūhoi to Warkworth northern terminus (roundabout). However, this option was ultimately discounted as the bulk of the land has steep topography and significant geological constraints unsuitable for large floorplate industrial buildings.

Industrial land Option 2 (Figure 42) was for all of the industrial land required for Warkworth's growth to be accommodated on the western periphery of the Future Urban zone south of Woodcocks Road.

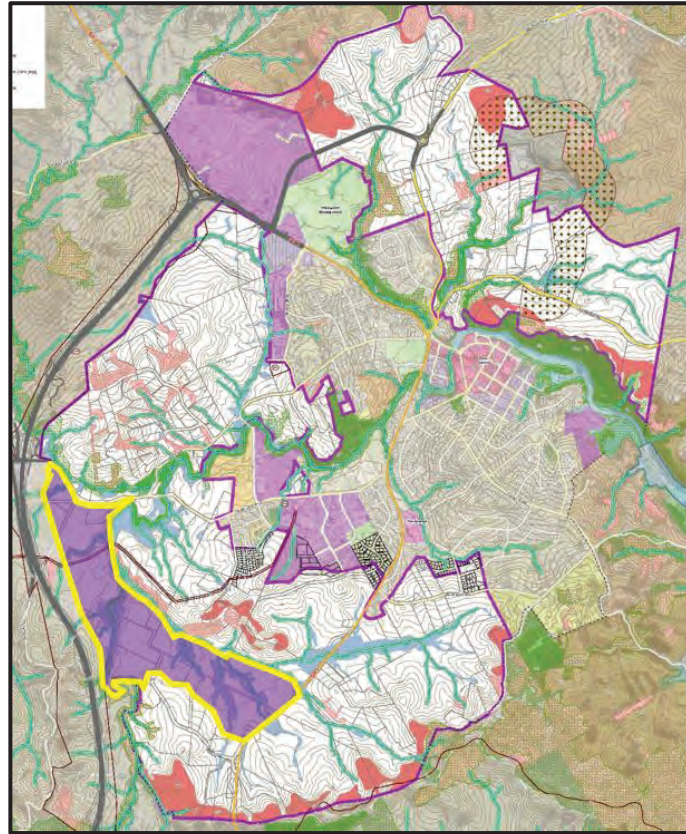


Figure 42: Industrial land location – Option 2 (Industrial land shown in purple and proposed new areas outlined in yellow)

This option includes flat topography suitable for industrial uses and is close to a potential southern interchange with Ara Tūhono – Pūhoi to Warkworth (south facing ramps only). However, this option was ultimately discounted as it was considered the opportunity costs of using the majority of the flat land in Warkworth’s Future Urban zone for industrial uses was too high. There is little flat land across the structure plan study area and therefore this flat southern land is a desirable location for a number of different land uses (e.g. sports fields, schools, high density residential, centres) as well as industry. This flatter land has the potential to be used for a collection of non-industrial activities to create a node around a new centre, high-quality intensive residential areas, and community uses such as a large sports park and a possible school. It was considered that such a node was critical to the success of Warkworth in the future and that the requirements for industrial land had the potential to be met elsewhere. Therefore, Option 2 was not pursued.

Industrial land Option 3 (Figure 43) split the required industrial land into three generally equally sized areas, two of which adjoin existing industrial land. These three areas were made up of an area fronting SH1 in the north with a sleeve of industrial land along the western side of Hudson Road, an area south of Woodcocks Road between the Ara Tūhono – Pūhoi to Warkworth motorway and the southern Mahurangi River tributary, and an area immediately south of the existing Morrison Drive industrial area.

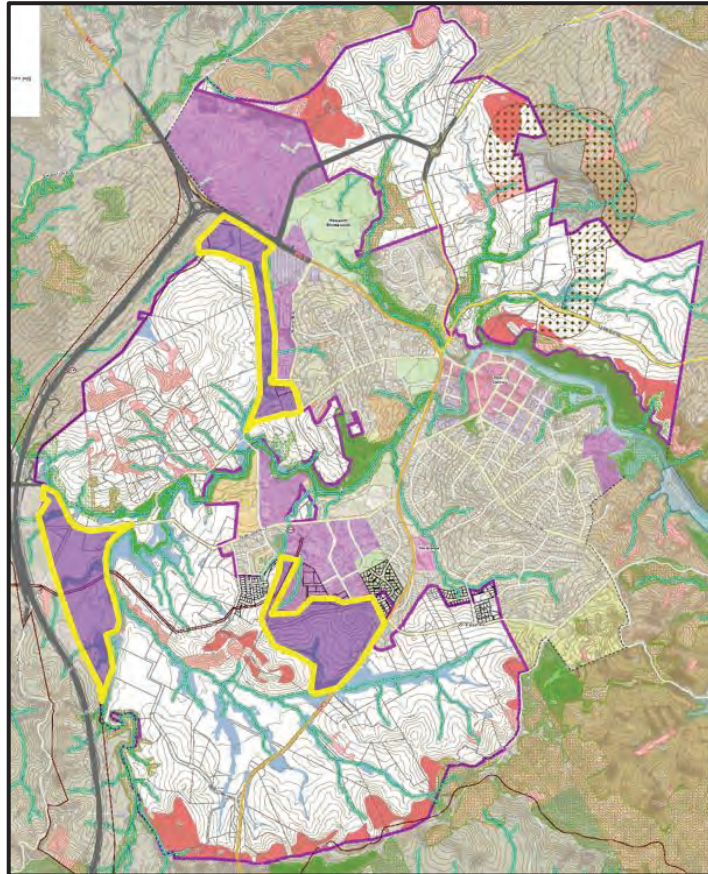


Figure 43: Industrial land location – Option 3 (Industrial land shown in purple and proposed new areas outlined in yellow)

Option 3 was preferred in the draft structure plan a number of reasons. Firstly, this option largely builds on the existing industrial areas in Warkworth (Hudson Road and Morrison Drive) and therefore contains the industrial land to discrete areas of Warkworth and avoids creating more areas with an industrial-residential interface.

While the land is not all flat, there are significant areas of flat land provided in this option, particularly in the north and west. The land in the west provides for an area of flat land that supports larger floorplate industrial buildings at the western edge of the town, next to the new motorway. This location also benefits from the potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only) and provides a more compatible interface with the motorway in this location. This land is able to be separated from the surrounding residential area through an arterial road (Woodcocks Road) and a stream with esplanade reserves on either side (40m separation). The Heavy Industry zone is favoured in this location to enable larger scale activities to locate here³⁴.

The Hudson Road area extension of industrial land would be provided in close proximity to the new motorway access to the north of Warkworth, allowing for easy industrial traffic links, that will be

³⁴ Note that the differences between the Heavy Industry zone and the Light Industry zone are relatively small with a key difference being around subdivision site size.

further improved with the completion of a proposed arterial road (Western Link Road) along the western edge of this proposed industrial area. The Western Link Road and a future esplanade reserve enable the additional industrial areas to be adequately separated from surrounding residential uses.

The extension of the Morrison Drive industrial area to the south would support this existing industrial area and will also benefit from good transport links via a proposed arterial road along the area's western and southern boundaries, along with the existing State Highway 1 along its eastern boundary. The arterial road boundaries of this area enable a buffer so the additional industrial areas can be adequately separated from surrounding residential uses. It is acknowledged that this area does create some potential landscape and interface impacts that will need careful management.

Following feedback on the draft structure plan, the majority of the extension of the Morrison Drive industrial area to the south was changed from industry to residential. This reflected the general opposition to the amount of industrial land proposed in the draft plan, the visual impacts of industrial development in this area, the topography of the land making feasible industrial development difficult, the ability to use the ridgeline to demarcate an industrial/residential boundary, and the still high overall future local employment anticipated for Warkworth.

4.5.2 Small centre options

Centres play a vital role in the creation of functioning communities at a local level. They are the main locations for retail, office, community and civic activities. The locations for centres is of paramount importance in ensuring that Warkworth's growth occurs in a structured manner, in which future residents are able to easily access goods, services and employment available at centres within their own neighbourhoods.

There are a number of different types of centres as defined by the Auckland Unitary Plan; City Centre, Metropolitan Centre, Town Centre, Local Centre, and Neighbourhood Centre. Independent economic analysis has been undertaken to determine the amount and type of centres required for the anticipated growth in the study area.

The growth at Warkworth is not of a size to support a City Center or Metropolitan Centre which are substantial in size and of city wide and regional importance. There is an existing Town Centre at Warkworth and the amount of growth proposed through the structure plan is not of a scale to warrant a second Town Centre. Indeed, should another large centre be proposed in Warkworth's Future Urban zone it could undermine the vitality and viability of Warkworth's existing Town Centre and could lead to the loss of its role as the main centre for the wider rural and coastal communities that it currently serves. The structure plan seeks to avoid the undermining of the existing Warkworth Town Centre area.

The economic analysis has found that the growth of Warkworth is anticipated to be of a scale to support around three new small-scale centres in the Future Urban zone. These centres are needed to provide local goods and services only. Larger destination and comparison provision will be within Warkworth's existing Town Centre, the Grange, and in the future Large Format Retail developments proposed at Stockyard Falls and near the SH1/Hudson Road intersection.

A key matter in locating new small centres is around the spread of existing and new centres across the whole of Warkworth. To maximise the utility of the new small centres it would not be appropriate to cluster them together or locate them close to Warkworth's existing centres. Such a clustering of centres would reduce the overall extent of centre catchments across the town and could lead to some areas of Warkworth being a distance from any centre provision. This would lead to an unsustainable outcome, with the need for greater travel.

An even distribution of new small centres within the Future Urban zone would better provide for the community's social and economic needs by providing more balanced access to the goods, services, and jobs of the small centres.

In light of this, the layout of Warkworth's existing centres and the area of the Future Urban zone logically leads to an even spread of centres; one centre somewhere in the northern area, one to the west of the current town, and one to the south (Figure 44). While Warkworth south is the largest area of Future Urban zoned land around Warkworth, some of it is within the catchment of the Grange so still only requires one new small centre.

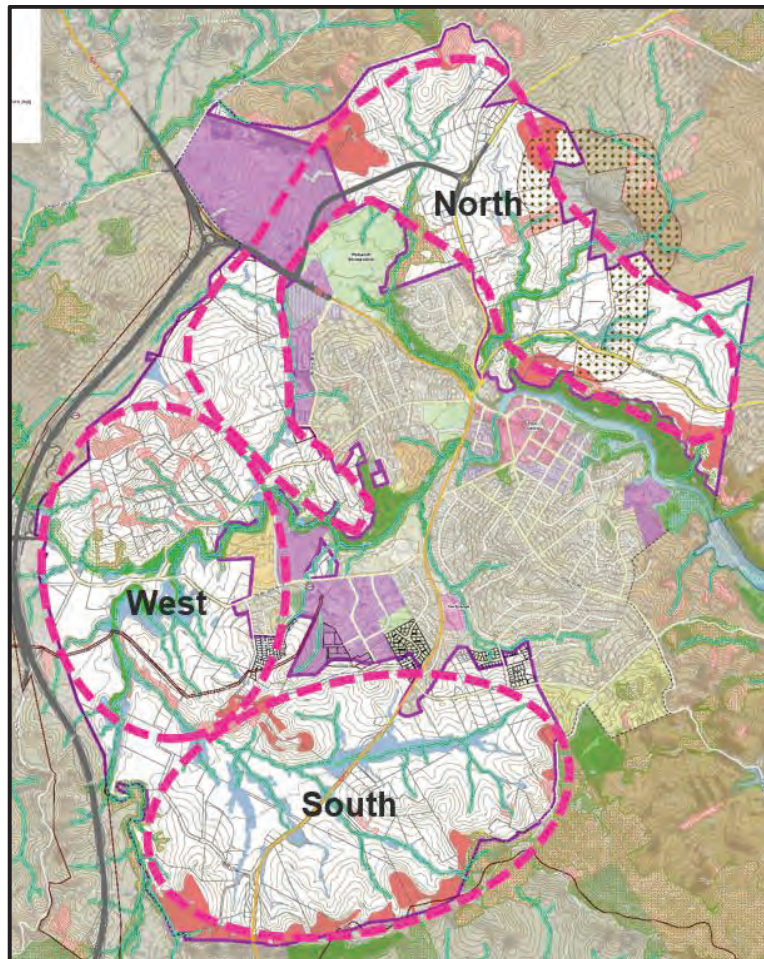


Figure 44: Areas for new small centres to enable an even spread of centres

Six specific locations were considered for the three new small centres as shown on Figure 45 below. These options were developed considering the public feedback received during earlier states of the structure plan project, the constraints and opportunities of the study area (topic reports), potential areas for new schools, potential open space locations, and the economic

analysis of the level of provision required. A further factor was the ability of the new small centre locations to be surrounded by higher density residential development. While the new centres are relatively small, they create the opportunity for higher density residential development to occur directly around them.

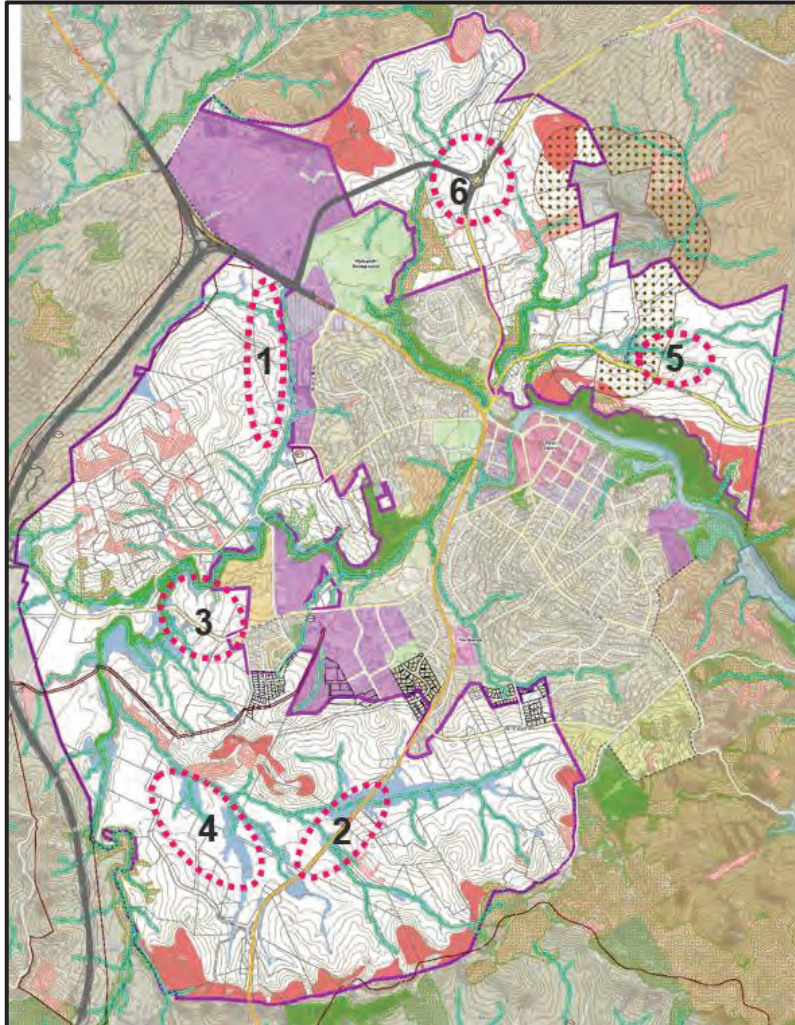


Figure 45: Options for new small centre locations within the Future Urban zone

In the north there were three options considered (Options 1, 5, and 6). Option 1 is on the arterial road network (the existing SH1 and the Western Link Road) and a centre in the southern portion of the Option 1 area is proposed by a private developer via a private plan change. However, this option was not favoured as it did not have a wide residential catchment (due to the neighbouring industrial land). Option 5 is near a potential large park and walking/cycling network, but this option was discounted as it only services a small and relatively remote catchment. Option 6 was preferred due to its more central location to the northern growth area (and therefore wider catchment), its location on the main transport network (including a public transport route), the absence of significant constraints, and the ability for the land around it to be used for higher density residential development.

In the west a number of areas of land were examined but only one viable option (Option 3) was proposed. This was because land to the north of Option 3 has significant constraints through topography, protected bush areas, and would be unable to accommodate higher density residential around any possible centre. Land to the west of option 3, whilst flat, would result in a centre on the very edge of the new urban area and would be too remote to have an efficient residential catchment. Land to the south of Option 3 has flooding constraints.

Option 3 was the best area for a new small centre in the west due to its proximity to the Mahurangi River and associated open space that could create a high-quality small community hub. Option 3 benefits from the activity generated by Woodcocks Road, aiding in the viability of this location. This option would also enable synergies with proposed recreational walking and cycling routes along the river corridor, with the centre being adjacent to it. This would also provide the opportunity for linked trips. Option 3 is also close to an existing area of higher density housing (retirement village) on Woodcocks Road.

In the south two options were considered (Options 2 and 4). While Option 2 is on a main road and centrally located in the southern catchment, this option was not favoured as it is relatively close to the existing Grange centre and therefore would not create a spread of centres across Warkworth, potentially leaving other areas under-served. The ability of the Option 2 land to leverage off the centre for potential residential growth was not as significant as Option 4.

Option 4 was preferred as this land is further away from the existing Warkworth centres while still having a good catchment for the southern area. The flat land in option 4 has the potential create a node around a collection of land uses such as the centre, open space, a possible school, and higher density residential. The Option 4 land also has access to arterial routes, a potential southern interchange with Ara Tūhono – Pūhoi to Warkworth, a public transport interchange, and the walking and cycling network. This potential cluster of land uses and the synergies between them could enable a high-quality node in the south. Along with the generally larger catchment of the south (compared to the other areas) a Local Centre typology is preferred in this location³⁵.

Upon further refinement, a location at the intersection of the existing SH1 and the proposed Wider Western Link Road (just outside Area 4) is preferred. This is to ensure the centre benefits from the 'energy' the junction of these transport routes gives to a centre and to bring areas to the east within the centre's catchment.

Due to the proposed locations of the small centres in the south and in the north at the confluence of two arterial routes, particular attention will need to be given to the urban design approach for the areas. The centres should integrate with the surrounding higher density residential uses, whilst creating a sense of place with a high-quality public realm that is not dominated by vehicular movements but is people and place orientated.

Following feedback on the draft structure plan, an additional small Neighbourhood Centre was added in the north west (in the Option 1 area on Figure 45). This enables accessibility to a centre in the north west area and does not impact on the primacy of the Warkworth town centre. This is subject to this centre being very small (i.e. less than 1,500m² GFA) to service the needs of a

³⁵ This is consistent with the relevant matters set out in B2.5.2(4) of the RPS for the location of new Local Centres.

relatively constrained catchment, being the northern part of the residential area to the west, and the industrial zones to the east.

In light of this additional centre in the north west, the western centre was shifted further south to the other side of Woodcocks Road (to the bottom of the Option 3 area). This limits the benefits of an interface with the Mahurangi River for this centre, but the shift more evenly spreads the centres and their catchment areas around Warkworth.

4.5.3 Large park options

The locations of large parks within the study area is important as a large park can be a focus for higher density residential development.

Two large areas of potentially suitable land for the large sports park and suburb parks were initially identified within the Warkworth Future Urban zone³⁶. These two large areas (Figure 46) contained land to the east of Matakana Road in the north east and the lower-lying land to the south of Woodcocks Road in the southern growth area. These areas were primarily based on the distance from the town’s existing parks and open space network, topography, and waterways.

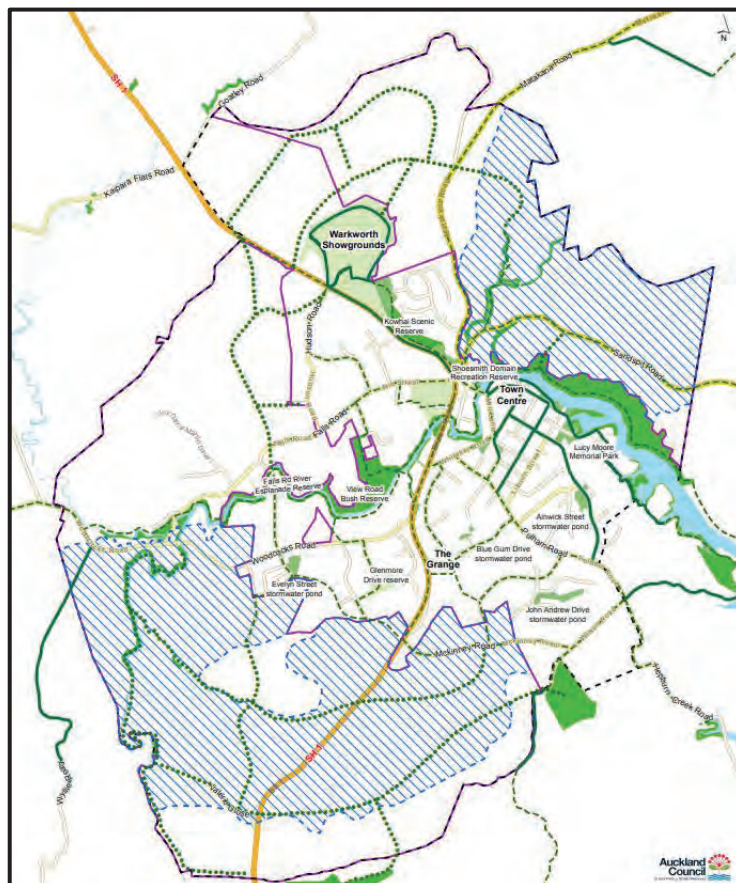


Figure 46: Potentially suitable land for large parks (hatched blue)

³⁶ Options for the neighbourhood parks were not developed as they were not considered of strategic importance. This is due to their small size and flexibility of possible locations.

During the development of the draft structure plan the possible locations of the large parks were refined further. A number of other criteria were considered such as the council’s park and open space policies and planning tools, existing and potential future road corridors, future esplanade reserves, areas of potential housing density, the possible areas for new schools, and other existing planning documents (such as the Rodney Greenways Plan).

This allowed a refinement of the sports and suburb park locations to be shown indicatively on the Warkworth Structure Plan. The two suburb parks are shown indicatively in Warkworth north east and Warkworth south east. The sports park is indicatively shown in the south.

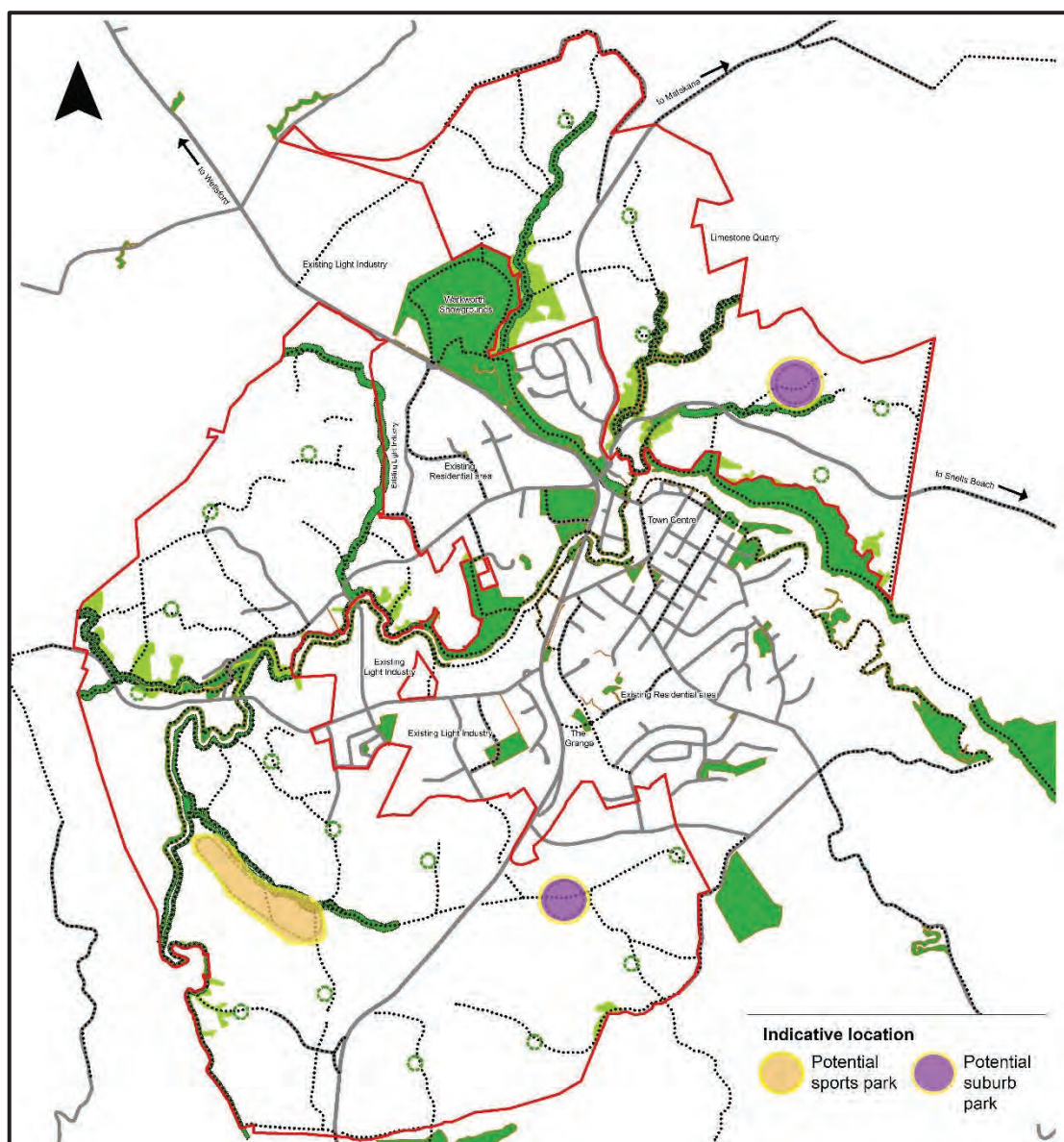


Figure 47: Indicative locations of the potential sports park and suburb parks

The indicative suburb park locations in the north east and south east were selected mainly due to their distance from existing parks and suitable topography. In the north east, the indicative park's location adjacent to a potential future esplanade reserve link was another important factor. As outlined in earlier sections, increased residential density is anticipated around the edge of suburb parks. The structure plan map does not currently show this as the park locations are indicative only and could vary with development.

The indicative sports park location in the south was selected mainly due to its flat land, synergies with the potential for higher density housing, a centre, and a possible school site in the south, and being in the southern catchment area (neatly balancing with the existing sports field provision at the Warkworth Showgrounds in the north).

It is noted that the locations shown are indicative only and the exact locations of the sports park and suburb parks will be dependent on further detailed site selection investigations by the council's parks team to test the physical site, environmental surroundings, topography, and check for any other restrictions.

4.5.4 Transport infrastructure options

The main transport routes for Warkworth's growth area are being developed by the Supporting Growth Alliance. The purpose of the Supporting Growth Programme for Warkworth is to identify and protect the recommended transport networks to support the towns greenfield growth over the next 30 years.

The Alliance is undertaking the detailed investigations needed for business cases to confirm the preferred transport networks for Warkworth. Once confirmed, the Alliance will then carry out the route protection process to protect the land for these networks over the next four years.

An Indicative Business Case is being prepared by the Alliance which will identify key elements of the transport network in the Warkworth growth area. It will recognise that the implementation of this network will need to be appropriately staged to anticipate and support growth and facilitate mode shift particularly towards greater use of public transport, walking, and cycling.

The Warkworth Structure Plan project team have worked closely with the Supporting Growth Alliance in developing a transport network to enable the Warkworth Future Urban zone to develop. The preliminary outcome of this work is a draft high-level strategic transport network with the following characteristics:

- Prioritising active transport in Warkworth through a separated walking and cycling network that utilises the arterial road network, collector road network, riparian margins, and other off-road trails to provide connectivity throughout Warkworth. The network will provide safe and convenient connectivity to centres, employment areas, schools and public transport stations.
- A roading network including Ara Tūhono – Pūhoi to Warkworth, Matakana Link Road (Te Honohono ki Tai), Western Link Road, Sandspit Link Road, Wider Western Link Road, and a potential Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only).

- A public transport network built upon the recently introduced ‘New Network for Warkworth’. In the long term, in addition to the Town Centre station a larger bus station/interchange is proposed in Warkworth South, with a Park and Ride near the Ara Tūhono – Pūhoi to Warkworth southern interchange (south facing ramps only).

Further detail on the draft high-level strategic transport network and the process to develop it can be found in the Integrated Transport Assessment (see **Appendix 1** of the main Warkworth Structure Plan document).

4.5.5 Residential densities

Once some indicative locations for Warkworth’s main ‘building blocks’ were determined (additional industrial land, new centres, new large parks, and the draft high-level strategic transport network) the location and type of residential uses were considered. The structure plan generally follows residential density location principles derived from the Auckland Unitary Plan’s Regional Policy Statement (‘RPS’) on urban growth and form when considering where to locate different residential zones. However, site specific opportunities and constraints were also considered in determining the residential densities.

The RPS seeks that a range of residential zones are provided that enable different housing types and intensities³⁷. In Warkworth, the structure plan applies the full palette of the Auckland Unitary Plan’s urban residential zones to support a range of housing typologies and housing choice. The structure plan uses the high density Terraced Housing and Apartment Buildings and Mixed Housing Urban zones, the more suburban Mixed Housing Suburban and Single House zones, and also the low density Large Lot zone. The full range of zones uses the Future Urban zone efficiently while recognising various constraints and local character.

The RPS seeks that higher residential density is located in areas immediately around centres, the public transport network, large social facilities, education facilities, tertiary education facilities, healthcare facilities, and open space³⁸.

In light of this, the highest residential density zone, the Terrace Housing and Apartment Buildings zone, is located immediately adjacent to the Local Centre in the south. This is the largest of the new centres and is in a location surrounded by relatively flat land with manageable constraints. There are a cluster of proposed or potential uses in this area such as a public transport interchange, sports park, possible school site, and potential motorway access that mean that this southern area could become a node. The purpose of the Terraced Housing and Apartment Building zone is to make efficient use of land and infrastructure, increase the capacity of housing and ensure that residents have convenient access to services, employment, education facilities, retail and entertainment opportunities, public open space and public transport. This zone is designed to promote walkable neighbourhoods and increase the vitality of centres. This is the only area of proposed Terrace Housing and Apartment Buildings zoning in the study area as no other areas are anticipated to have the same mix of land uses to enable such high residential densities.

³⁷ B2.4.2. Policies (1)

³⁸ B2.4.2. Policies (2)

Following on from this, the Mixed Housing Urban zone surrounds the Terrace Housing and Apartment Buildings zone in the south. It also provides the high density living adjacent to the three smaller Neighbourhood Centres in the north, west, and north west. This zone still provides for reasonably high intensity residential development, but in a more traditional form. As this zone is still of a high-density it will also support the viability of the proposed small centres. The extent of this Mixed Housing Urban zoning is dependent on topography, other natural constraints, public transport routes, and the reasonable walking catchment of the centres.

The RPS seeks that medium residential intensities are located in areas within a moderate walking distance to centres, public transport, social facilities, and open space³⁹. This zoning is the most widely used residential zone in urban parts of the Auckland region. This zone enables a suburban built character, providing for a variety of types and sizes of attached and detached housing ensuring housing choice. The structure plan proposes this zone to generally cover areas adjacent to the higher density areas described above (within moderate walking distance of amenities), except where there are constraints that require a lower density zone.

The RPS states that lower residential density is suitable when the land is not close to a centre or public transport, is subject to high environmental constraints or natural/physical constraints, or where there is an existing suburban area with an existing neighbourhood character⁴⁰. The Single House zone is the main zone used for areas meeting these criteria. The Large Lot zone is also used but only where specific additional factors are present including landscape quality and/or physical limitations (e.g. topography, natural hazards).

There are three main areas with various factors meaning they are zoned Single House in the Warkworth Structure Plan. Firstly, the area in the south eastern portion of the study area, south of McKinney Road, is proposed as Single House as it is some distance from any proposed or existing centre or public transport routes. It is therefore not suitable for higher density residential living. This zoning will also act as a transition between the Large Lot zone to its south, and the Mixed Housing Suburban zoning to the north and west.

The second area where the Single House zone is proposed is around Viv Davie-Martin Drive, in north west Warkworth. The Single House zone is proposed as there are geotechnical constraints that preclude high density residential development. This area is also not close to a centre or any long-term public transport routes. The zoning also takes into account the steep topography of this area, which means the walking catchment to a centre or public transport is further restricted. The Viv Davie-Martin Drive area is also somewhat compromised for higher density development due to its fragmented land parcels, multiple different owners, covenanted bush areas, geotechnical issues, and limited road access.

The third area of proposed Single House zoning is to the north east of Warkworth, around Sandspit Road. This area is relatively remote from the centres and there are some topographical and ecological constraints. It is also relevant that part of this area (south of Sandspit Road) has been identified as having a high landscape value which is worthy of protection. As a result, higher density development would generally not be appropriate in this location.

³⁹ B2.4.2. Policies (3)

⁴⁰ B2.4.2. Policies (4) and (5)

The Large Lot zone is proposed around the northern and southern boundaries due to the landscape qualities of these areas at the edge of the town. In addition, a further small area of Large Lot zoning is proposed over the large knoll adjacent to Morrison's Heritage Orchard. This is again to protect the character of this landscape feature in Warkworth. This knoll will act as a landscape backdrop to the southern Local Centre and its associated higher density development and community facilities. The Large Lot zone, with its large section sizes, is the most appropriate way to mitigate the effects from urbanisation of the wider area on this identified landscape feature and the setting for Warkworth's major new urban node.

The Large Lot zone is also proposed around the north eastern edge of Warkworth largely based on the neighbouring quarry and the Quarry Buffer Area overlay on this land. The Large Lot zoning continues down a stream corridor towards the Hill Street intersection. Here, the zone surrounds two significant stream gullies and areas of native vegetation. The Large Lot zoning here acknowledges the physical limitations of the area, including its topography and the likely environmental effects from earthworks to develop the land at a higher density.

Following feedback on the draft structure plan, additional residential density was added in Warkworth north (around the Warkworth Showgrounds) and Warkworth north west (around the new small Neighbourhood Centre). A portion of Large Lot zone around Clayden Road in the north was changed to Single House, but with additional controls for a larger minimum site size (around 1,000m²) and revegetation requirements along the urban edge. An area of Single House along the eastern edge was changed to Large Lot to reduce the number of urban neighbours along this rural/urban interface to mitigate the possibility of reverse sensitivity issues arising. A landscape screening area along this boundary is also indicated on the structure plan.

Find out more: phone 09 301 0101
or visit www.aucklandcouncil.govt.nz/have-your-say



ATTACHMENT 10
NZTA P2WK LANDSCAPE PLANS

7. SECTOR PLANS



LANDSCAPE LEGEND:

GENERAL:

- DESIGNATION BOUNDARY
- SH1 DESIGNATION BOUNDARY (6763)
- SH1 DESIGNATION BOUNDARY (6761)
- PROPERTY BOUNDARIES
- INTERMITTENT STREAM
- PERMANENT STREAM
- CULVERTS
- CUT BATTER
- FILL BATTER
- RIP RAP ROCK
- 1.0m CONTOURS
- HOLD CLOUD

LANDSCAPE:

- MPT - MITIGATION PLANTING - TERRESTRIAL
- PLR - LANDSCAPE RESTORATION PLANTING
- PSP - PLANTED SOIL DISPOSAL AREAS
- WMP - MITIGATION PLANTING - WETLAND
- WSF - MITIGATION PLANTING - SWAMP FOREST
- WLS - MITIGATION PLANTING - LOW STATURE WETLAND
- MPS - MITIGATION PLANTING - STREAM / RIPARIAN
- MPSE - MITIGATION PLANTING STREAM EDGE
- MPSW - MITIGATION PLANTING STREAM WETLAND
- ARE - AMENITY ROAD EDGE PLANTING
- ALR - AMENITY LOCAL ROAD PLANTING
- ARP - AMENITY RIPARIAN PLANTING
- AWW - AMENITY WINGWALL PLANTING
- UBP - UNDER BRIDGE PLANTING
- MSD - MAHURANGI RIVER DIVERSION PLANTING
- GSP - SOIL DISPOSAL AREAS RE-GRASSED
- GPS - GRASS - TO PASTURE
- GCU & GFL - GRASS - HYDROSEEDED
- PGR - PLUME GRASS
- POTENTIAL ECOLOGICAL MITIGATION PLANTING
- ROCK CUT BATTER
- TREES TO BE RETAINED & PROTECTED
- SPECIMEN TREES
- PROPOSED POPLAR VISUAL SCREENING TREES
- POHUTUKAWA SPECIMEN TREE
- KOWHAI SPECIMEN TREE
- TOTARA SPECIMEN TREE

STORMWATER:

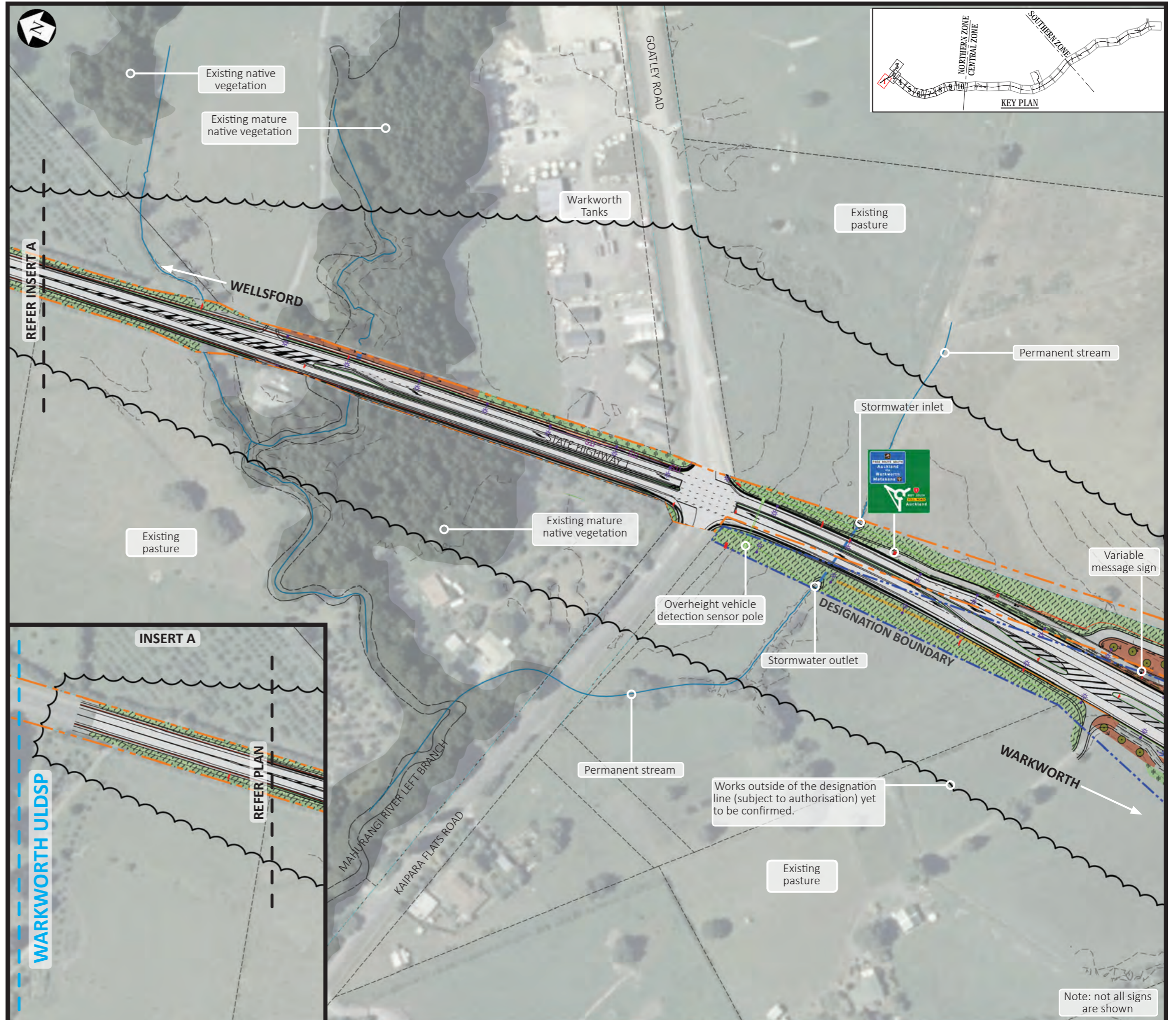
- TYPICAL MANHOLE
- CATCHPIT MANHOLE
- CATCHPIT
- SCRUFFY DOME
- ROCK CUT SEDIMENT TRAP
- WINGWALL
- DRAINAGE DISCHARGE APRON
- KERB & CHANNEL
- ROCK LINED SWALES
- ROCK CUT SWALES
- GRASS LINED SWALE
- STREAM DIVERSION (TYPE C1)
- SOIL SITE DIVERSION (TYPE D2)
- SOIL SITE DIVERSION (TYPE D4)
- SOIL SITE DIVERSION (TYPE C5)

SIGNAGE:

- NEW PORTAL GANTRY
- NEW CANTILEVER SIGN GANTRY
- MULTI-POST MOUNTED SIGN
- SINGLE POST MOUNTED SIGN

LIGHTING:

- NEW LIGHT POLE
- UPGRADE EXISTING LIGHT POLE
- EXISTING LIGHT POLE TO REMAIN
- APPROXIMATE HEIGHT
- AUCKLAND UNITARY PLAN RURAL URBAN BOUNDARY



Note:
 - All Plans are at 1:2000 scale @ A3
 - Final layouts are subject to change due to technical uncertainties onsite, particularly in rock cut areas.
 - Sign type, sign location and size are subject to change.

Note: not all signs are shown

