

**Proposed Whenuapai Plan Change
Section 32 Report**

21 September 2017

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1. Introduction

1.1 Scope and purpose of the report

This report has been prepared by Auckland Council to fulfil the statutory requirements of section 32 of the Resource Management Act 1991 (RMA or the Act). It is a record of the processes and evaluation undertaken for the Proposed Whenuapai Plan Change (plan change) to the Auckland Unitary Plan (Operative in Part) (AUP (OP)), in accordance with section 32 of the RMA.

When preparing a plan change (proposal) under the RMA, the council must carry out an evaluation under section 32 of the Act. This evaluation must occur prior to the public notification of any proposed plan change. A section 32 evaluation report examines:

- the extent to which the objectives of the proposals are the most appropriate way to achieve the purpose of the RMA – these are specific objectives being introduced or amended, or the purpose of the proposal (if they do not relate to specific objectives); and
- whether the provisions of the proposal are the most appropriate way to achieve the objectives – these are the specific policies, rules and other methods that implement, or give effect to, the objectives of the proposal.

The evaluation report must be made available at the same time as the plan change being notified.

1.2 Overview of the plan change

Whenuapai is located approximately 23 kilometres northwest of central Auckland, with a majority of the area being currently zoned Future Urban under the AUP (OP). This plan change proposes to rezone 351 hectares of land in the southern part of Whenuapai, most of which is zoned Future Urban, to a mix of residential and business zones.

While the predominant zoning of the land within the plan change area is Future Urban, the plan change also includes a small area of existing Residential – Mixed Housing Urban Zone along Hobsonville Road, Business – Light Industry Zone south of State Highway 18, Open Space – Conservation Zone and Open Space – Informal Recreation Zone.

The plan change area and existing AUP (OP) zoning are shown in Figure 1 following.

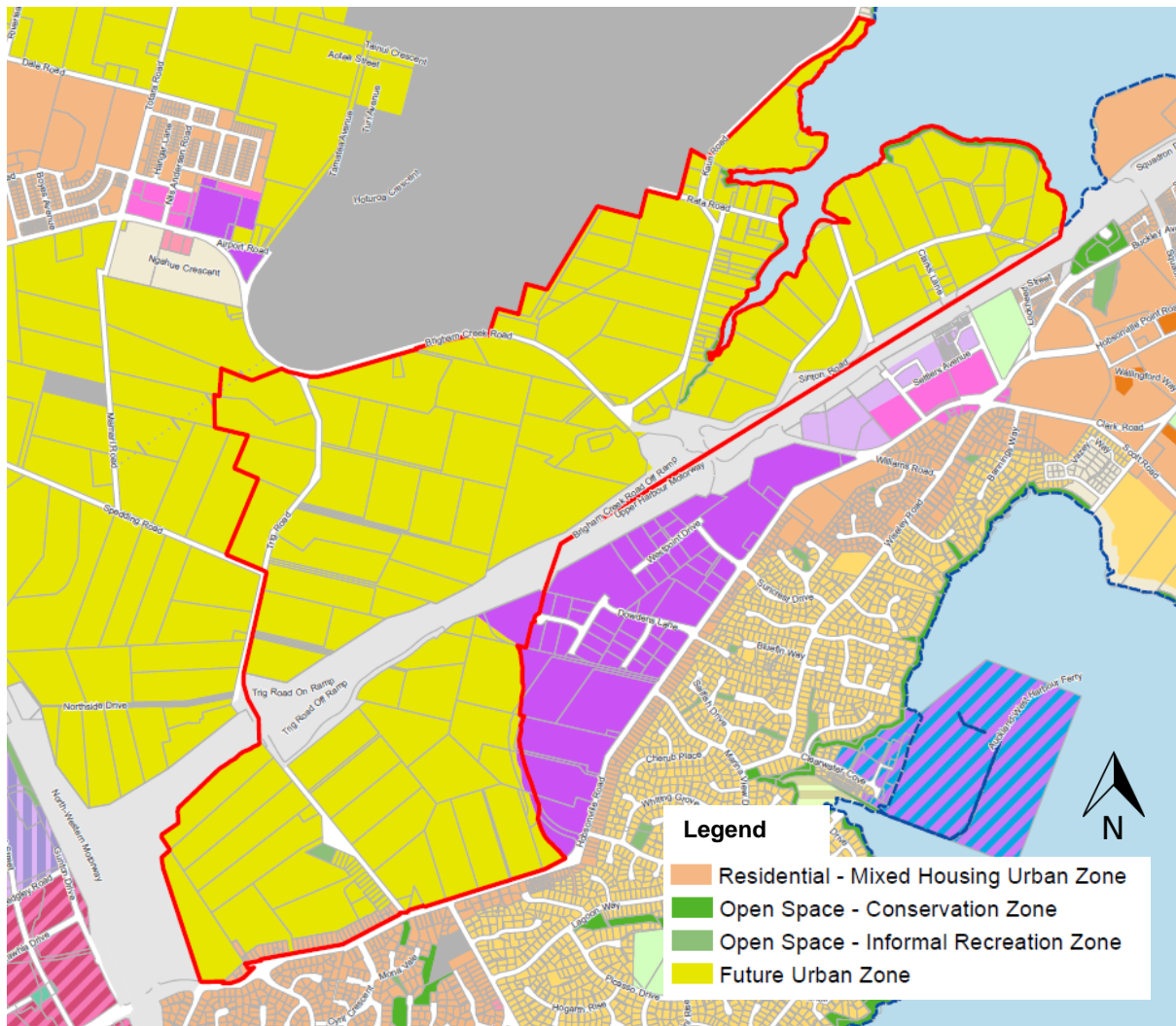


Figure 1: Proposed plan change area shown within the red line

The existing area is predominantly rural with a mix of lifestyle blocks generally located along Kauri Road, and low density housing along the western end of Hobsonville Road and the southern end of Trig Road. There is a Special Housing Area established at Ockleston Landing, immediately north of Hobsonville Centre, which will provide 70 to 80 dwellings of various housing types. The first houses will be available there at the end of 2017 with the entire development projected to be completed by the end of 2018.

In addition to rezoning, this plan change also introduces a new precinct to ensure subdivision, use and development within the plan change area are integrated with infrastructure provision and take into account the sensitive receiving environment of the Upper Waitematā Harbour. The precinct is the part of the plan change that contains the majority of text and contains the objectives, policies, rules and other methods.

Amendments are also proposed to Schedule 14.1 Schedule of Historic Heritage and Schedule 14.2 Historic Heritage Areas – Maps and statements of significance of the AUP (OP), to recognise a new historic heritage site in the plan change area and the new Clarks Lane Historic Heritage Area.

A stormwater management area – Flow 1 control is proposed to be applied to the whole plan change area.

1.3 The evaluation approach

This section outlines how the plan change will be evaluated. This report follows the evaluation approach described in Table 1 below.

In line with section 32(6) of the RMA, and for the purposes of this report, the following definitions are used:

- **the proposal** refers to this plan change;
- **the objectives** refers to the objectives of the Proposed Whenuapai 3 Precinct; and
- **the provisions** refers to the policies, rules and other methods that implement the objectives of the Proposed Whenuapai 3 Precinct.

The plan change is not seeking to alter existing provisions in the AUP (OP). The AUP (OP) contains existing objectives, policies and rules which have been used as a basis for the additional, and more specific, provisions in this plan change.

Table 1: Evaluation approach

Section 2	The growth challenge	This section outlines the overarching issue, being Auckland’s growth challenge, which the plan change seeks to contribute to addressing.
Section 3	Resource Management Act 1991	This section sets out the RMA purpose and principles.
Section 4	Strategic context	This section provides strategic context for this plan change by providing an overview of relevant statutory and non-statutory planning documents.
Section 5	Development of the plan change	This section provides information on how the plan change was developed and includes an evaluation of the options. In this section, the options considered are in relation to the overall approach of the plan change, rather than for each individual resource management issue.
Section 6	Resource management issues and desired outcomes	This section identifies the resource management issues to be resolved, states the desired outcomes for each issue and describes how the issues are being addressed through the current planning provisions (status quo).
Section 7	Evaluation of the objectives	This section states the objectives of the plan change and examines the extent to which the objectives are the most appropriate way to achieve the purpose of the RMA. This section of the report fulfils the requirements of section 32(1)(a) of the Act.

Section 8	Assessment of the provisions	This section evaluates reasonably practicable options for achieving the objectives of the plan change. An evaluation of whether the provisions are the most appropriate way of achieving the objectives of the plan change is provided. This section fulfils the requirements of sections 32(1)(b) and 32(2) of the Act.
Section 9	Section 86B of the RMA	This section describes the provisions of this plan change that have immediate legal effect under section 86B of the RMA.
Section 10	Conclusions	This section is the conclusion for this report.

2. The growth challenge

The population of Auckland was 1,493,200 people at the time of the 2013 Census and was estimated to be over 1.6 million in 2016. By 2043, the population is projected to grow to 2.3 million¹. To accommodate this population growth, an adequate supply of housing and jobs will be required alongside significant further investment in infrastructure. The Auckland Plan 2012 anticipates that 400,000 new dwellings and 277,000 additional jobs will be needed to accommodate Auckland's population by 2040. As part of a quality compact approach to growth, up to 240,000 dwellings are expected to be developed within the existing urban area. However, up to 160,000 dwellings and 1,400 hectares of business land will be required outside the existing urban area, in the land zoned Future Urban in the AUP (OP).

2.1 Background

Auckland's northwest has been identified for future urban growth since the late-1990s/early-2000s and a number of strategic documents from the last two decades help inform the council's current plans and strategies for urban growth in the northwest.

The Auckland Regional Growth Strategy 1999 identified the area immediately south of Whenuapai and land along Hobsonville Road and at Westgate as future growth areas. The shortage of business land in the west was acknowledged in that document and in the 2001 Northern and Western Sectors Agreement which was signed by the former North Shore City, Waitakere City and Rodney District Councils. It identified the Brigham Creek/Waiarohia area was identified as an existing rural area with capacity for growth.

In 2010, the former Waitakere City Council published the Best for the West – Growth Management Strategy for Waitakere. That strategy suggested staged new urban development at Redhills, Trig Road and Whenuapai and prioritised structure planning for the Whenuapai Business Area and Hobsonville Corridor West. The structure planning exercise undertaken by the council in 2016 generally aligned with the approach of this strategy.

A concept plan for the area was prepared in 2010.² The plan included land at Redhills, Westgate, Whenuapai North, the triangle south of Brigham Creek Road between State Highway 16 and State Highway 18, Hobsonville Corridor West, Hobsonville Corridor, Hobsonville Point and Scott Point. Land between State Highway 16, State Highway 18 and Brigham Creek Road was identified as business land. It also identified Hobsonville Corridor West (Trig Road area, south of SH18) as development ready in 2020 and Whenuapai North as scheduled for development after 2030.

Subsequent council documents including the Auckland Plan (2012), AUP (OP), Future Urban Land Supply Strategy (2015), the Whenuapai Structure Plan (2016) and the updated

¹ Based on medium growth scenario, Subnational Population Projections: 2013(base)-2043 update, Statistics New Zealand, 22 February 2017

² Whenuapai Development Area Stage Two: Hobsonville Corridor West and Whenuapai Business Area Planning Review and Revision of the Development Concept, 2010

Future Urban Land Supply Strategy (2017) all identify Whenuapai as a future urban growth area. The Whenuapai Structure Plan is discussed in section 5.1 of this report. The Future Urban Land Supply Strategy, adopted by the council in July 2017, identified Whenuapai Stage 1 as 'development ready' in 2018-2022 and Whenuapai Stage 2 ready in 2028-2032. Stage 1 in the Future Urban Land Supply Strategy is the same area as the plan change area.

2.2 Housing demand

Auckland has to ensure an adequate supply of a wide range of housing types to meet demand. While most of the growth is anticipated to be within existing urban areas, the Auckland Plan's Development Strategy expects 30 to 40 per cent of new dwellings to be in greenfield areas. Whenuapai is identified in the Auckland Plan as being a greenfield area for investigation.³

Based on historical trends, population forecasts and feedback received during the recent structure planning process undertaken in Whenuapai, there will be continued interest and strong demand for releasing land in Whenuapai for housing. This is due to its proximity to the Upper Waitemata Harbour, Westgate Centre and accessibility to the state highway network.

2.3 Business demand

2.3.1 Industrial land

Whenuapai is located between State Highways 16 and 18 with good accessibility to the rest of the Auckland region. This makes south western Whenuapai an ideal location for accommodating a significant proportion of future industrial growth in the northwest.

As identified in the structure plan and in previous council documents, there is a need to provide greenfield business land to provide employment opportunities. This is not only for the future population in Whenuapai but for the growing communities within neighbouring developments such as Scott Point and Redhills.

The Auckland Plan Development Strategy identifies that approximately 1400 hectares of Group 1 business land will be required across Auckland in greenfield areas over the next 30 years. Group 1 business land refers to land extensive activities such as manufacturing, transport and storage, logistics, construction and wholesale trade. These are industrial land uses with large buildings that are not easily intensified, so large tracts of land are required to accommodate them. The structure plan identified around 300 hectares of business land to assist in meeting demand for future industrial activities.

Demand for light industry land in the urban west and north is projected to be between six and nine hectares per annum (net) respectively over the next 30 years, or 243 hectares in the west and 350 hectares in the north (gross).⁴

³ Auckland Plan Map D.1 Development Strategy Map

⁴ Market Economics, PAUP Business Land: Land Demand by Activity and PAUP Supply (2016).

This plan change proposes to rezone 124 hectares of future urban land to Business – Light Industry Zone. This will provide business land until Whenuapai Stages 1F and 2, as identified in the structure plan, are development ready. Figure 2 in section 5.1 shows a map of the structure plan area and its stages.

2.3.2 Retail and services

The plan change area is currently served by the existing Whenuapai Local Centre on Brigham Creek Road, Hobsonville Local Centre and Westgate Metropolitan Centre. All of these centres are outside of the plan change area.

Residential growth in the plan change area will result in an increase in the amount of retail and services spending by residents in the area. It is expected that a large proportion of retail spending will be in nearby centres such as Hobsonville and Westgate, but as Whenuapai develops, increased retail and services floor space will be required to cater for the demands of the local population.⁵

The only new centre proposed in the plan change area is a neighbourhood centre on the corner of Hobsonville Road and the proposed realigned Trig Road. This will complement the functions of the existing Whenuapai Local Centre that is located further north and will provide convenience retail particularly for existing and new residents in the plan change area located south of State Highway 18.

2.4 Infrastructure provision

It is essential that greenfield development is aligned and integrated with the provision of infrastructure. To enable development in Whenuapai and the wider northwest area, significant upgrades to existing water supply and wastewater networks are required, along with regional and local upgrades to the transport network.

The Northern Interceptor wastewater project, when completed in 2025, will take wastewater from Whenuapai and Hobsonville to the Rosedale Wastewater Treatment Plant. In respect of water supply, the North Harbour 2 water main will provide public supply water from the Waitakere Ranges to West Auckland, North Shore and Rodney. This water main is anticipated to be completed by 2026.

In relation to transport, the Supporting Growth Strategy, a joint project between the council, Auckland Transport and the New Zealand Transport Agency, identifies a preferred transport network to support and enable growth in greenfield areas, including Whenuapai.

⁵ Market Economics, Whenuapai Structure Plan Business Land Assessment (2016)

3. Resource Management Act 1991

The Resource Management Act (RMA) provides a legislative framework for the sustainable management of natural and physical resources in New Zealand. The purpose of the Act is to promote the sustainable management of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety.

The principles of the RMA are stated in sections 6, 7 and 8 of the Act. An assessment against Part 2 of the RMA is provided in the evaluation of objectives for each topic in section 7 of this report.

Section 6 of the RMA contains the matters of national importance that are required to be recognised and provided for:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development;
- (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;
- (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers;
- (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;
- (f) the protection of historic heritage from inappropriate subdivision, use, and development;
- (g) the protection of protected customary rights;
- (h) the management of significant risks from natural hazards.

Sections 6(a), (d), (e), (f) and (h) are relevant considerations for this plan change. They are discussed in section 7 of this report.

Section 7 of the RMA contains other matters which shall be given particular regard to:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) kaitiakitanga:
 - (aa) the ethic of stewardship:
 - (b) the efficient use and development of natural and physical resources:
 - (ba) the efficiency of the end use of energy:

- (c) the maintenance and enhancement of amenity values:
- (d) intrinsic values of ecosystems:
- (e) [Repealed]
- (f) maintenance and enhancement of the quality of the environment:
- (g) any finite characteristics of natural and physical resources:
- (h) the protection of the habitat of trout and salmon:
- (i) the effects of climate change:
- (j) the benefits to be derived from the use and development of renewable energy.

Of these matters, section 7(a), (b), (c), (d), (f) and (i) are considered to have particular relevance to this plan change.

The principles of the Treaty of Waitangi must also be taken into account under section 8 of the RMA. Section 5.3.2 of this report describes the involvement of mana whenua in the development of this plan change.

4. National and regional planning context

A number of strategic and statutory planning documents have informed the plan change process. This section provides a summary of those documents.

4.1 National policy documents

4.1.1 Hauraki Gulf Marine Park Act 2000

The Hauraki Gulf Marine Park Act 2000 (HGMPA) applies to the Hauraki Gulf, its islands and catchments. This includes any area of land where the surface water drains into the Hauraki Gulf. As the plan change area drains into the Upper Waitematā Harbour within the Hauraki Gulf, the HGMPA is a relevant consideration.

Sections 7 and 8 of the HGMPA are treated as a national policy statement and a New Zealand coastal policy statement. Section 7 of the HGMPA recognises the national significance of the Hauraki Gulf, its islands and catchments, while section 8 of this Act outlines the objectives of the management of the Hauraki Gulf, its islands and catchments. The objectives are intended to protect, maintain and where appropriate enhance the life-supporting capacity of the environment of the Gulf and its islands.

The HGMPA is further discussed in the stormwater management and coastal management sections of this report, sections 6.4 and 6.6.

4.1.2 New Zealand Coastal Policy Statement

The New Zealand Coastal Policy Statement 2010 (NZCPS) contains objectives and policies relating to the coastal environment to achieve the purpose of the RMA. The NZCPS is applicable to this plan change as the Upper Waitematā Harbour is the receiving environment

for the area. Specific provisions of the NZCPS are discussed in sections of this report that relate to stormwater management, biodiversity and coastal erosion risk.

4.1.3 National Policy Statement for Freshwater Management

The National Policy Statement for Freshwater Management 2011 (NPSFM) sets a national policy framework for managing freshwater quality and quantity. The NPSFM was updated in August 2017 to incorporate amendments from the National Policy Statement for Freshwater Amendment Order 2017. The amendments came into effect on 6 September 2017 and include provisions that seek to improve fresh water quality with a target to increase the proportion of rivers and lakes suitable for primary contact to 90 per cent by 2040. There are also new provisions that enable the use of freshwater for economic wellbeing.

The NPSFM is further discussed in the stormwater management and biodiversity sections of this report.

4.1.4 National Policy Statement on Urban Development Capacity

The National Policy Statement on Urban Development Capacity 2016 (NPS on Urban Development Capacity) came into effect on 1 December 2016. It recognises the national significance of urban environments and provides direction to decision-makers on planning for urban environments. The NPS on Urban Development Capacity seeks to ensure there is sufficient development capacity for housing and business with a suite of objectives and policies to guide decision-making in urban areas. There is an emphasis on integrated planning of land use, development and infrastructure provision.

Policy PA1 sets out housing and business land development capacity that local authorities are required to provide in the short, medium and long-term.

This plan change proposes to rezone the Future Urban Zone in part of Whenuapai to a range of residential and business zones which will provide opportunities for a range of dwelling types as well as employment opportunities for the local population. This will assist in providing sufficient development capacity for housing and business by enabling the development of approximately 6000 dwellings and 124 hectares of business land.

4.2 Auckland Unitary Plan (Operative in Part)

The AUP (OP) is the primary statutory planning document for Auckland. It is comprised of the regional policy statement, regional coastal plan, regional plan and district plan. The AUP (OP) provides the regulatory framework for managing Auckland's natural and physical resources while enabling growth and development, and protecting matters of national importance.

Of particular relevance to this plan change are the provisions relating to urban growth and the Future Urban Zone. The plan change area is zoned Future Urban, with the exception of some existing Residential – Mixed Housing Urban along Hobsonville Road and Business – Light Industry south of State Highway 18 at the plan change boundary.

Chapter B2 of the regional policy statement contains provisions directing urban growth and form in Auckland. There is strong direction to provide for Auckland's growing population in an integrated manner within the metropolitan area as defined in Appendix 1A of the AUP (OP). There is an emphasis on the need to provide for integrated land use, development and the provision of infrastructure, along with direction to avoid urbanisation without carrying out a structure planning exercise first. Appendix 1 of the AUP (OP) sets out the structure planning guidelines which are to be followed when undertaking a structure planning exercise.

The Future Urban Zone is applied to greenfield land that has been identified as suitable for urbanisation. Chapter H18 of the AUP (OP) contains the Future Urban Zone provisions. There is direction to avoid urbanisation of Future Urban zoned land until the sites have been rezoned for urban use.

Specific provisions of the AUP (OP) are discussed in other parts of this report.

4.3 Auckland Plan 2012

The Auckland Plan is the council's key strategic document which sets the council's social, economic, environmental and cultural objectives. A key component of the Auckland Plan is the Development Strategy⁶ which sets out how future growth will be accommodated up to 2040. The Development Strategy aims to provide for up to 70 per cent of growth within existing urban areas and up to 40 per cent outside of urban areas including greenfield areas, satellite towns and rural and coastal towns. As outlined in section 2 of this report, Whenuapai was identified in the Development Strategy as a greenfield area for investigation. The Development Strategy also identifies that approximately 1400 hectares of Group 1 business land (land extensive industrial activities) will be required across Auckland in new greenfield areas over the next 30 years.

4.4 Future Urban Land Supply Strategy 2017

The council's Future Urban Land Supply Strategy, refreshed in July 2017, implements the Auckland Plan and gives effect to the NPS on Urban Development Capacity by identifying a programme to sequence future urban land over 30 years. The strategy relates to greenfield land only and ensures there is 20 years of supply of development capacity at all times and a seven year average of unconstrained and ready to go land supply. Ready to go land is land with operative zoning and bulk services in place such as the require transport and water infrastructure.

⁶ Chapter D, Auckland Plan

The Future Urban Land Supply Strategy informs the council's infrastructure funding priorities and feeds directly into the council's long-term plans, annual plans and other strategic documents.

The refresh of the Future Urban Land Supply Strategy took into consideration the AUP (OP) and amended the sequencing of some future urban areas. Whenuapai Stage 1 (the same area as the plan change area) is identified as being development-ready between 2018 and 2022, while the timing for Whenuapai Stage 2 was amended to be sequenced for 2028-2032.

5. Development of the proposed plan change

5.1 The structure planning process

The structure planning process started in January 2016. In early 2016 a series of technical reports were commissioned by council to help develop an understanding of the opportunities and constraints for development within Whenuapai. New and updated information gathered included:

- Biodiversity Assessment
- Business Land Assessment
- Community Facility Provision Report
- Cultural Values Assessment (Te Kawerau a Maki)
- Integrated Transport Assessment
- Natural Character, Landscape and Visual Assessment
- Neighbourhood Design Statement
- Noise Assessment
- Parks and Open Space Report
- Preliminary Aboricultural Assessment
- Preliminary Coastal Habitat Assessment
- Preliminary Geotechnical and Coastal Erosion Assessment Report
- Preliminary Historic Heritage Assessment
- Preliminary Lighting Assessment
- Draft Stormwater Management Plan
- Wastewater Servicing Strategy.

The reports and previous research that had been undertaken in the area over the past decade were analysed. Council engaged with relevant government departments, iwi, representatives from the development community and residents and ratepayer groups. A draft structure plan was produced based on the above technical assessments and the engagement that was undertaken.

Public engagement on the draft plan was held in June-July 2016. Feedback from 172 different parties was received during this period. This feedback was analysed and helped to inform the final Whenuapai Structure Plan which was adopted by the Auckland Development Committee in September 2016. The approved structure plan represents an integrated land use and infrastructure plan to guide the subsequent plan changes. It also identified the staging of development based on availability of infrastructure. Stage 1 (comprising 1A to 1F) was identified as 'development-ready' in the next two to 10 years. The remainder of land, identified as Stage 2, will require further investment in new infrastructure beyond the next decade.

The structure plan staging approved by council in September 2016 is shown in Figure 2 below.

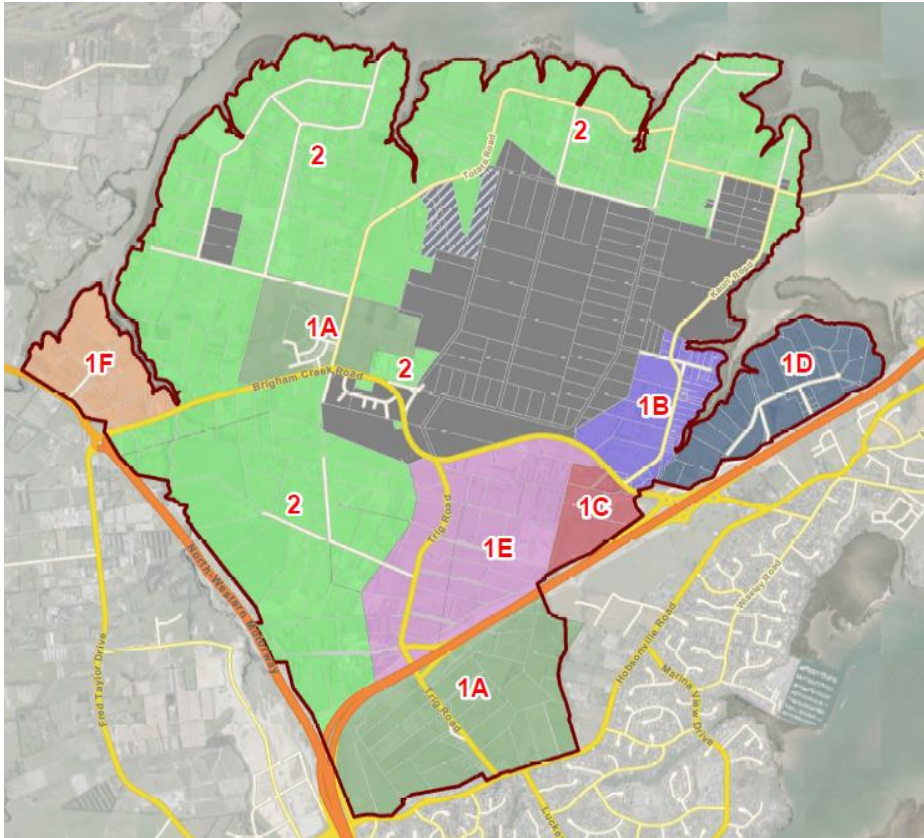


Figure 2: Whenuapai Structure Plan staging

The development of the structure plan followed the requirements of Appendix 1 of the AUP (OP).

5.2 The plan change process

A planning team led the development of the plan change supported by a Project Control Group which was made up of technical experts from the council and council controlled organisations. The planning team was guided by a Project Steering Group, comprising of managers from the different technical disciplines which met throughout the process.

A Political Reference Group comprising of elected members from the relevant wards, local boards and an Independent Maori Statutory Board Member provided oversight of the project. The Political Reference Group has continued to meet throughout the plan change development process and has provided guidance prior to Auckland Council Planning Committee meetings.

The structure of this is provided in Figure 3 below.

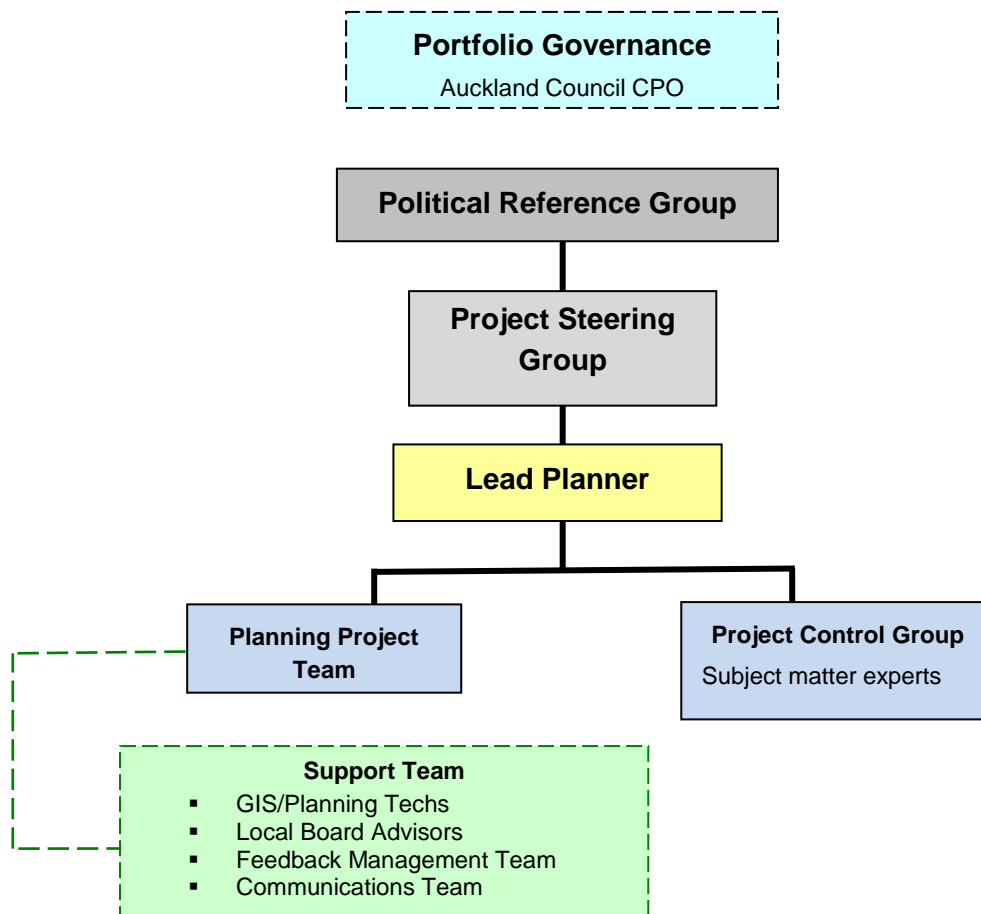


Figure 3: Whenuapai Plan Change Project Structure

The draft plan change was approved for public engagement at the Auckland Council Planning Committee meeting on 28 March 2017.

In addition to the Planning Committee, the relevant Local Boards have been involved in the plan change process. A memo was prepared for the Henderson Massey and Upper Harbour Local Boards in March 2017 to inform them of the report going to the Planning Committee on 28 March and update them on the plan change process.

5.3 Consultation and engagement

Continuing on from the structure plan process, from October 2016 to March 2017, meetings and workshops were held with key internal and external stakeholders including developers, New Zealand Defence Force, Ministry of Education and the New Zealand Transport Agency.

5.3.1 Community and stakeholder engagement

Information from these meetings and workshops informed the draft plan change that was put out for public engagement from 10 April to 14 May 2017.

During this five week period the following drop in sessions were held:

- Tuesday 11 April, 19:30-21:30, Whenuapai Village Hall
- Saturday 29 April, 10:00-14:00, Countdown Westgate Centre
- Sunday 30 April, 10:00-14:00, Countdown Hobsonville
- Tuesday 2 May, 7am-10:30, West Harbour Ferry Terminal
- Thursday 4 May, 19:30-21:30, Hobsonville Primary School
- Sunday 7 May, 9:00-13:00, Hobsonville Point Farmers Market.

There were also displays at Massey Library, an article in Our Auckland and an online presence at the council's consultation website, Shape Auckland.

Three-hundred and thirty people attended the drop in sessions and 41 pieces of feedback were received during the consultation period.

Key themes from the feedback as follows:

- Transport network – placement of indicative roads
- Open space – location of indicative parks
- Biodiversity – support for greater protection
- Extent of plan change area – some wanted Stage 1F and Stage 2 of the Whenuapai Structure Plan to be included in the plan change
- Zoning – there were some rezoning requests
- Whenuapai Airbase – people concerned about noise from the airbase and the New Zealand Defence Force concerned about reverse sensitivity effects.

A summary of the feedback received and council's response to it was placed on the Shape Auckland website and can be found in Appendix 1.

Changes have been made to the precinct provisions and the zoning map in response to the feedback received. There have also been changes made in response to additional technical work that was undertaken after the engagement period on the draft structure plan.

The consultation and engagement process is summarised in Figure 4 below.



Figure 4: Whenuapai Plan Change Consultation and Engagement Process

Full public notification of the plan change will take place on 21 September 2017. In addition to the general public notice and the letters to relevant government departments and iwi, letters will also be sent to all owners and occupiers of the land which is directly affected by the plan change. The letters will provide information about the plan change process and set out the location on the council's webpage where more information can be found about the plan change. The letters will provide contact details if the owners/occupiers have further questions or wish to discuss the process or plan changes further. It is considered appropriate and in accordance with Environment Court direction that all directly affected landowners are notified in writing about these plan changes.

5.3.2 Working in partnership with mana whenua

There are nine iwi groups with an interest in the area, Ngāti Paoa, Te Akitai Waiohua, Te Rūnanga o Ngāti Whātua, Ngāti Whātua o Kaipara, Te Kawerau a Maki, Ngāti Whātua o Ōrākei, Ngāti Manuhiri, Ngāti Te Ata Waiohua and Ngāti Maru.

All iwi listed above were contacted at the beginning of the structure plan process. Ngāti Whātua o Kaipara and Te Kawerau ā Maki worked in partnership with the council to develop the structure plan. The council's planning team met with representatives from both iwi during and at the end of the structure planning process to discuss the plan change process.

Te Kawerau a Maki provided a cultural values assessment for the area as part of the structure planning process and Ngāti Whātua o Kaipara have provided their cultural values assessment during the plan change process.

A site visit was held with Ngāti Whātua o Kaipara representatives, council planners and council staff from Healthy Waters in late 2016. During this site visit the proposed approach to storm water was explained and Ngāti Whātua o Kaipara supported the approach and the efforts to map the streams in the area. A further site visit was held with Ngāti Whātua o Kaipara representatives and council planners on 4 May 2017. During this site visit the general plan change approach and proposals were explained.

After Schedule 1 of the RMA was amended to insert clause 4A, the same nine iwi were contacted in early May 2017 to let them know the draft plan change was going out for consultation. They were also asked if they thought it was appropriate to have a commissioner on the hearings panel with an understanding of tikanga Māori and the perspectives of local iwi and hapū which is accordance with section 34A(1A).

The same iwi were again contacted in August and sent a copy of the proposed plan change and asked for their input. They were asked again if they thought it was appropriate to have a commissioner on the hearings panel with an understanding of tikanga Māori and the perspectives of local iwi and hapū.

A meeting was held with representatives from Ngāti Whātua o Kaipara on 21 August 2017 to discuss the proposed plan change. Feedback from iwi at the meeting was as follows:

- supportive of riparian planting and that the planting was encouraged to be eco-sourced (Sections 6.3 and 6.4)
- supportive of the emphasis on the degraded Upper Waitematā Harbour and the efforts to enhance it and improve water quality (Sections 6.4, 6.5, 7.3 and 7.4)
- supportive of the coastal setback to respond to concerns around sea level rise and recognised this could help protect middens being located along the coast (Section 7.5)
- supportive of stormwater approach and asked to see the Stormwater Management Plan (Section 6.4 and 7.3)
- concerned about stormwater run off from Light Industry Zone (Section 7.3)
- concerned there are no proposed scheduled trees (Section 7.8).

A meeting was held with a representative from Te Kawerau a Maki on 22 August 2017 to discuss the proposed plan change. Comments received in the meeting from iwi representatives were as follows:

- support for the riparian planting and that the planting was native (Sections 6.3 and 6.4)
- support for the recognition of the North-West Wildlink (Sections 6.5 and 8.4)
- support for protecting streams (Sections 6.4, 6.5, 7.3 and 7.4).

More information on the issues raised by iwi and the council's response to these issues is included in each topic section.

Our approach to working with iwi is consistent with the RMA requirements, including the legislative changes made through the Resource Legislation Amendment Act 2017.

5.4 Extent of plan change area

5.4.1 Rationale for Stage 1 of the structure plan area

The proposed plan change area comprises the areas identified as Stages 1A-1E in the Whenuapai Structure Plan with some minor amendments. The Regional Policy Statement provisions of the AUP (OP) require that land is developed in an integrated manner with the appropriate infrastructure. As this is a greenfield area, a significant amount of infrastructure is needed to enable development and mitigate effects on the environment of the future development. Infrastructure is needed both to support specific development proposed on the site and to contribute to the wider needs for the whole of Whenuapai. To allow development of the whole structure plan area would raise expectations about the ability to develop to an urban density in the short term, which is not possible without the provision of appropriate infrastructure.

The Environment Court's decision in *Foreworld Developments Ltd v Napier City Council W008/2005* suggests that the use of development triggers where infrastructure cannot be provided within the lifetime of a plan raises expectations and is contrary to the purpose of the RMA. The infrastructure required to support development in the whole of the structure plan area is not able to be provided within 10 years, which is the lifetime of the AUP (OP). Therefore, only the parts of the structure plan area that can be readily developed within the life of the AUP (OP) are being rezoned in this plan change.

The boundary of the plan change area was determined in consultation with Auckland Transport and Watercare. It is determined by the ability of existing bulk infrastructure to service the area. The infrastructure constraints for the remaining land, namely the Northern Interceptor project and the timing of the regional transport upgrades identified in the Supporting Growth Strategy, are significant and much of that infrastructure will not be available until at least 2026. This infrastructure will need to be programmed for future funding in the 2018-2028 Long-term Plan and subsequent long-term plans. A second plan change will occur closer to 2026 to rezone Stage 1F and Stage 2 of the structure plan area.

The land on the west side of Trig Road and north of Spedding Road was included in the plan change area to enable development along both sides of the road, and to facilitate the required upgrade of Trig Road. Only properties to the west of Trig Road that connect to Trig Road were included. The land bounded by Spedding Road, State Highway 16, State Highway 18 and Trig Road is not part of this plan change due to the uncertainty around the timing of when the Northside Drive bridge and eastern extension will be built.

Hobsonville Road forms the plan change boundary to the south of State Highway 18. The eastern boundary is where the Future Urban Zone meets the existing Light Industry Zone in the AUP (OP).

The rest of the plan change area is bounded by the Whenuapai Airbase, State Highway 18 and the coast.

5.5 Options analysis

In the preparation of this plan change, a number of options were identified. These are:

- **Option 1:** Status quo – retain Future Urban Zone for the plan change area.
- **Option 2:** Rezone plan change area from Future Urban Zone to residential zones only (no business land) and no precinct.
- **Option 3:** Rezone plan change area to a mix of business and residential zones with a new precinct.
- **Option 4:** Rezone plan change area to a mix of business and residential zones with no precinct.

An analysis of the options is provided in Table 2 following. Option 3 has been chosen as the preferred option as it will enable residential and business development by way of rezoning, while applying area specific provisions through the introduction of the Proposed Whenuapai 3 Precinct. The precinct allows area specific matters to be addressed while ensuring the area is developed in an integrated and coordinated manner.

Table 2: Options Analysis

Options	Costs	Benefits	Efficiency	Effectiveness
<p>Option 1: Status quo – retain Future Urban Zone for the plan change area.</p>	<p>This option does not add to Auckland’s housing and business land supply to accommodate growth.</p> <p>This option is contrary to the council’s Future Urban Land Supply Strategy.</p> <p>Landowners and developers within Stage 1 of the Whenuapai Structure Plan area cannot develop.</p> <p>Landowners and developers will need to submit non-complying resource consents or private plan changes to rezone Future Urban land.</p>	<p>Removes the cost of initiating a plan change for the council.</p> <p>Maintains Whenuapai’s existing semi-rural character which some residents consider beneficial.</p>	<p>The council may receive resource consent applications and/or private plan changes to develop or rezone future urban zoned land in the area. These will not be able to be considered in a co-ordinated and integrated manner.</p>	<p>Additional capacity anticipated by the Future Urban Land Supply Strategy for housing will not be enabled.</p> <p>Piecemeal and ad hoc land development may occur.</p> <p>This option is inconsistent with the Whenuapai Structure Plan 2016.</p> <p>Land is not released in a timely manner for residential and business development.</p> <p>This option is not an effective option for the reasons stated above.</p>
<p>Option 2: Rezone plan change area from Future Urban Zone to residential zones only (no business land) and no precinct.</p>	<p>Cost of preparing a plan change for the council, including technical work to support the rezoning.</p> <p>Loss of opportunity to provide business land within Stage 1 of the Whenuapai Structure Plan area. Future residents will have to commute further to work and</p>	<p>No additional changes or additions to the AUP (OP) required.</p> <p>Less time consuming and less costly than Option 3.</p> <p>Land released for residential development.</p>	<p>Further investigations may be required after the plan change is operative to ensure subdivision and development is coordinated with the timing of infrastructure provision.</p> <p>Development will rely on residential zones in the AUP (OP) without an additional layer</p>	<p>Rezoning the area does not ensure that the infrastructure required to service the area will be available at the time of development.</p> <p>Inconsistent with the Whenuapai Structure Plan 2016.</p>

Options	Costs	Benefits	Efficiency	Effectiveness
	<p>the new development will become a commuter suburb.</p> <p>Cost to developers, the council, Auckland Transport and Watercare to provide the necessary infrastructure to service the plan change area.</p>		<p>of management via a precinct.</p>	<p>Without the guidance of a precinct, the plan change area is unlikely to be developed in a comprehensive and coordinated manner.</p> <p>Existing AUP (OP) urban zone provisions may not be suitable for managing greenfield growth.</p> <p>Site-specific approaches are not considered.</p> <p>This option is not an effective option for the reasons stated above.</p>
<p>Options 3: Rezone plan change area to a mix of business and residential zones with a new precinct.</p>	<p>Cost of preparing a plan change for the council, including technical work to support the rezoning and precinct provisions.</p> <p>Cost to developers, the council, Auckland Transport and Watercare to provide the necessary infrastructure to service the plan change area.</p>	<p>Comprehensive approach to rezoning future urban land, in accordance with the direction of the RPS and NPS on Urban Development Capacity.</p> <p>Expectations and requirements of key stakeholders, land owners and land developers can be clearly set out within the proposed precinct.</p> <p>Enables the development of 217 hectares of residential land and 124 hectares of business land.</p>	<p>Provides greater certainty for the council, developers and landowners about the nature and extent of development in Whenuapai.</p> <p>The requirements for applicants are clearly set out in the precinct provisions.</p> <p>This is considered the most efficient option.</p>	<p>Land is rezoned for residential and business uses, contributing to residential capacity and providing business land in proximity to housing.</p> <p>This option is the most effective option as the precinct provisions ensure that development will occur in an integrated way.</p>

Options	Costs	Benefits	Efficiency	Effectiveness
<p>Option 4: Rezone plan change area to a mix of business and residential zones with no precinct.</p>	<p>Cost of preparing a plan change for the council, including technical work to support the rezoning.</p> <p>Cost to developers, the council, Auckland Transport and Watercare to provide the necessary infrastructure to service the plan change area.</p>	<p>No additional changes or additions to the AUP (OP) required.</p> <p>Enables the development of 217 hectares of residential land and 124 hectares of business land.</p>	<p>Further investigations may be required after the plan change is operative to ensure subdivision and development is coordinated with the timing of infrastructure provision.</p>	<p>Live-zoning does not ensure infrastructure required to service the area will be available at the time of development.</p> <p>Without the guidance of a precinct, the plan change area is unlikely to be developed in a comprehensive and coordinated manner.</p> <p>Existing AUP (OP) urban zone provisions may not be suitable for managing greenfield growth.</p> <p>Site-specific approaches are not considered.</p> <p>This option is not an effective option for the reasons stated above.</p>

6. Resource management issues and desired outcomes

6.1 Integrated subdivision, use and development

Issue: There is potential that subdivision, use and development occurs in an ad hoc and uncoordinated manner, without consideration of integrated infrastructure provision required within, and outside of, the plan change area.

Provision of residential land

As described in section 2 of this report, the population of Auckland is forecast to grow to 2.3 million by 2043. The rezoning of Future Urban land to enable its development into housing and business land will contribute to the developable capacity of land in Auckland's northwest.

Provision of business land

A business land assessment (May 2016) was provided to support the Whenuapai Structure Plan. The assessment identified business land requirements within the structure plan area and the retail floor space in centres that will serve the Whenuapai community.

In relation to retail, it concluded that the Whenuapai Local Centre along Brigham Creek Road is the appropriate location for retail and services floor space to cater for the retail goods and services demands of the future population. The sustainable level of retail floor space is projected to be 2700-3500m² by 2026, 5700-7200m² by 2036 and 9400-12,400m² by 2046.

As well as the retail floor space, the assessment concluded that between 240 and 350 hectares of light industry land (gross) is required in Whenuapai to accommodate around 6000 employees. The Whenuapai Structure Plan identified that this land is best located under the aircraft noise contours associated with the Whenuapai Airbase.

A neighbourhood centre on Trig Road was also identified in the structure plan. To serve residents within the plan change area, it was recommended by an urban design consultant that was procured by council⁷ that a 3000m² – 3500m² site able to accommodate 1000 m² – 1500m² of gross retail floor area be provided. It is important that the proposed centre is located to enable the optimal access from the proposed residential catchment and on a site that is economically viable. The neighbourhood centre site has been included in the plan change at the corner of Hobsonville Road and the proposed realigned Trig Rd.

Desired outcome: The plan change area is developed in a comprehensive way that is integrated with the provision of infrastructure and provides a mix of high quality residential and employment opportunities.

⁷ Letter on urban design matters from Ian Munro, independent urban planning and design consultant, dated 21 May 2017.

To achieve this vision the plan change area will be developed in a comprehensive and integrated way that is aligned with the provision of transport infrastructure and all other infrastructure. The economic, social and cultural wellbeing of existing and future communities will be enhanced through the provision of a compatible mix of residential and business uses. The adverse effects on the environment of developing a greenfield area will be mitigated by the requirements of the AUP (OP), site specific requirements and the timely provision of infrastructure. An important part of achieving this vision is to ensure that transport and all other infrastructure is provided to service the area, which is addressed in sections 6.1 and 6.2 of this report.

6.1.1 Current Planning Provisions

The majority of the plan change area is currently zoned Future Urban under the AUP (OP). There are properties on Hobsonville Road, at the southern boundary of the plan change area that are zoned Residential – Mixed Housing Urban Zone.

The Future Urban Zone is a zone for land identified within the Rural Urban Boundary as being suitable for development within the next 30 years. The zone generally provides for rural activities. Activities permitted in the Future Urban Zone include farming, greenhouses, forestry, animal breeding/boarding and onsite primary produce manufacturing. Only one dwelling is permitted per site, regardless of the size of the site. The policy framework seeks that further development does not occur until the land has been rezoned for urban purposes following a structure planning process carried out in accordance with Appendix 1 of the AUP (OP).

Subdivision in the Future Urban Zone is not supported by the AUP (OP) policies and is a non-complying activity under Chapter E39 Subdivision – Rural.

In accordance with Appendix 1, a structure planning exercise was undertaken by the council in 2016. The Whenuapai Structure Plan identified areas of residential and business land, along with an indicative road and open space network. Stage 1A to 1E in the Whenuapai Structure Plan area is in the Future Urban Land Supply Strategy as being development ready between 2018 and 2022. As such, there is a mandate and an expectation that this area will be rezoned to urban uses in the near future. Stages 1F and 2 are listed in the strategy in the first half of decade two, being 2028-2032.

6.1.2 Planning response to issue

This plan change seeks to rezone land identified as Stages 1A-1E in the Whenuapai Structure Plan from Future Urban to residential and business zones.

The structure plan identified suitable areas for residential and business development along with an indicative road and open space network to serve the area. For the plan change area, this has been translated into 217 hectares of residential zoned land and 124 hectares of light industry zoned land. There is also provision for a neighbourhood centre at the corner of Hobsonville Road and the proposed realigned Trig Road.

To supplement the rezoning, a new precinct is proposed as part of this plan change. The precinct seeks to ensure that subdivision, use and development is carried out in an integrated manner and is aligned with the provision of infrastructure. There is also an emphasis on quality urban design outcomes including emphasis on the public realm and provisions for the neighbourhood centre.

6.2 Transport

Issue: The transport network, both within Whenuapai and the wider network, needs to support residential and business land, and not impede the movement of people around the northwest region.

Whenuapai's current transport network is comprised of rural roads which were designed and constructed to serve the predominately agricultural and semi-rural residential uses in the area. It is car dominated with limited capacity in the network, and little to no provision for walking, cycling or public transport.

To support the urbanisation of this land, large scale urban transport infrastructure is required. This includes new roads and upgrades to existing roads and intersections, and regional projects such as busways. Land ownership in the plan change area is fragmented which means that the provision of infrastructure may not occur in a co-ordinated manner.

Desired outcome: The transport network is provided as development progresses. The transport network:

- prioritises residents of the plan change area's mobility and accessibility to places within Whenuapai and to the rest of Auckland, including employment areas
- does not impede mobility and accessibility of people living in the surrounding area
- provides people with transport choices (is multi modal)
- services the business land efficiently
- is resilient
- enables growth
- is developed in a way that avoids, remedies or mitigates adverse effects on the environment
- is safe.

The transport network, both within the plan change area and the wider network, supports additional people living and working in the area, and services the business land to make it an attractive business location.

6.2.1 Current planning provisions

Auckland Unitary Plan Operative in Part

Matters relating to transport and the provision of infrastructure have specific objectives, policies and methods to achieve transport networks that are integrated with the urban form and provide choices to residents.

Regional Policy Statement

The regional policy statement in the AUP (OP) provides guidance for transport infrastructure and systems in the context of urban growth and development. Relevant provisions include:

- B2 Urban Growth and Form – a quality compact urban form that enables improved and more effective public transport, reduces adverse environmental effects, maximises resource and infrastructure efficiency, achieves a high level of amenity and safety for pedestrians and cyclists, develops street network and block patterns that provide good access and enable a range of travel options.
- B3 Infrastructure, transport and energy – the transport network is effective, efficient and safe and transport infrastructure is managed and integrated with subdivision, use and development.

Chapter E Auckland-wide

There is strong high level policy direction in the Auckland-wide chapter on accessible street networks, amenity for pedestrians and cyclists, land uses integrating with all modes of transport, improved and more effective public transport. Relevant provisions include:

- E27 Transport – land use and all modes of transport are integrated and an integrated public transport network including public transport, walking, cycling, private vehicles and freight is provided for.
- E38 Subdivision – Urban – infrastructure supporting subdivision and development is planned and provided for in an integrated and comprehensive manner, and subdivision has a layout which is safe, efficient, convenient and accessible.

6.2.2 Other relevant documents/reports

Auckland Plan

The strategic directions and long term goals of the Auckland Plan which are relevant to this plan change, as set out in Chapters 9, 12 and 13 of the document, are as follows:

<i>Directive 9.5</i>	<i>Accessible and adequate active transport, public transport and roading between housing, services, employment and recreational areas.</i>
<i>Strategic Direction 12</i>	<i>Plan, deliver and maintain quality infrastructure to make Auckland liveable and resilient.</i>
<i>Strategic Direction 13</i>	<i>Create better connections and accessibility within Auckland, across New Zealand and the world.</i>
<i>Directive 13.2</i>	<i>Manage Auckland's transport system according to the following transport functions:</i> <ul style="list-style-type: none">• <i>International – seaports and airport</i>

- *National – inter-regional connections by road, rail, sea and air*
- *Auckland-wide – those parts of the transport system that provide safe and efficient movement of people and goods through all or parts of Auckland.*
- *Local – those parts of the transport system that provide safe, local access and connectivity, and that support communities.*

Auckland Transport Alignment Project 2016

The Auckland Transport Alignment Project (ATAP) is a joint project involving Auckland Council, the Ministry of Transport, Auckland Transport, the New Zealand Transport Agency, the Treasury and the State Services Commission. Through ATAP, Auckland's transport priorities have been agreed and a 30 year investment prioritisation programme has been agreed.

One of the critical transport challenges identified by ATAP is how to enable a faster rate of housing growth, particularly in new greenfield areas. The northwest is identified as a priority area.

The ATAP projects that are relevant to the plan change area and the timing of their delivery are identified below.

First decade (2018-28):

- Northwestern busway (Westgate to Te Atatu)
- complete State Highway 16 to State Highway 18 connection
- new or upgraded arterial roads in the northwest to enable greenfield growth.

Second decade (2028-38):

- new strategic road to Kumeu
- Northwestern busway extensions
- continued investment to enable greenfield growth.

Supporting Growth Strategy 2016

The Supporting Growth Strategy is an Auckland Transport, Auckland Council and the New Zealand Transport Agency project that seeks to develop transport networks to support Auckland's new housing and business areas over the next 30 years.

The Supporting Growth projects in the North West are:

- Rapid Transit Network from Kumeu to the city, and Kumeu to Albany
- A new park and ride near the Brigham Creek Road and State Highway 16 intersection
- safety improvements on State Highway 16 between Brigham Creek Rd and Waimauku
- improvements to Brigham Creek Road
- the cycling and walking network will be expanded to connect to local centres and link to public transport hubs
- Squadron Drive interchange movements.

These projects are shown in Figure 5.



Figure 5: Supporting Growth Strategy projects for the Whenuapai area

Regional Land Transport Plan 2015-2025

The Regional Land Transport Plan is jointly delivered by Auckland Transport, New Zealand Transport Agency and Kiwi Rail and sets out the funding programme for Auckland's transport and services. It forms part of the National Land Transport Programme and Auckland Council's Long-term Plan. It includes a 10-year prioritised delivery programme and it is a statutory requirement that the New Zealand Transport Agency and Auckland Transport revise this delivery programme every three years.

Growth in the northwest is anticipated and provided for in the Regional Land Transport Plan through the following projects:

- bus priority improvements and transit lanes (2015-2025)
- walking and cycling programme – Auckland Transport (2015-2025)
- walking and cycling programme – Transport Agency (2015-2025)
- safety programmes including safety and minor improvements, safety around schools, crash reduction implementation, regional safety programme and safety speed management (2015-2025)
- State Highway 16/State Highway 18 intersection
- Brigham Creek Road corridor road improvements (2018-2025).

Funding of additional transport initiatives identified through the Supporting Growth Strategy and the subsequent business case programmes to service the new Whenuapai urban area

will need to be considered as part of the next Regional Land Transport Plan and Long-term Plan.

Integrated Transport Programme 2012-2041

Auckland's Integrated Transport Programme (ITP) sets out the 30-year investment programme to meet the transport priorities outlined in the Auckland Plan. The ITP informs the detailed programming of activities in the Regional Land Transport Programme.

The ITP mentions Whenuapai as a greenfield area for further investigation. The rapid transit network along State Highway 16 and State Highway 18 are shown on a map of Auckland's Priority Transport Projects. Brigham Creek Road is also identified as needing improvements.

Regional Public Transport Plan 2015

This plan is prepared by Auckland Transport as required by the Land Transport Management Act 2003. The plan describes the public transport network that Auckland Transport proposes for the region, identifies the services that are integral to that network over the next 10 years, and sets out the objectives, policies and procedures that apply to those services.

Currently, none of the routes servicing the northwest meet the definition of a Rapid Transit Network (RTN) or Frequent Transit Network (FTN). A RTN is the highest level of public transport services, it has services at least every 10 minutes between 7am and 7pm. A FTN provides a service every 15 minutes between 7am and 7pm. The Regional Public Transport Plan provides for the upgrade of State Highway 16 services between Auckland's Central Business District and Westgate to FTN status by 2018, and services between Westgate and the North Shore and along Hobsonville Road to be upgraded to FTN status by 2022. These routes will be supported by all-day services through West Harbour and north to Kumeu and Huapai.

Routes along State Highway 16 (to Westgate initially and subsequently Kumeu and Huapai) and State Highway 18 will be upgraded to RTN status as dedicated bus rights-of-way are built. The Supporting Growth Strategy has made recommendations as to what form these RTN corridors will take in future and how they interact with Whenuapai. Consideration of the future public transport network was a key consideration when the zoning and land uses for the proposed plan change were determined.

Housing Infrastructure Fund

The Housing Infrastructure Fund is a central government loan for infrastructure that has to be repaid. There are two arterials in the Whenuapai Plan Change area are currently proposed to be covered by the Housing Infrastructure Fund, the Trig Road upgrade and the new crossing of State Highway 18 to Marina View Drive. A business case is being prepared for these monies.

6.2.3 Technical inputs

Whenuapai Structure Plan Integrated Transport Assessment

Auckland Transport commissioned consultants to undertake an Integrated Transport Assessment (ITA) for the Whenuapai Structure Plan. The ITA considered the transport effects of the proposed land use zoning and associated transport infrastructure. Staging and sensitivity tests were also undertaken as part of the ITA.

Transport infrastructure and service investments were recommended as necessary to support the urbanisation of the land to accommodate the travel demands associated with the structure plan land use. These include:

- Walking and cycling network as shown in Figure 6

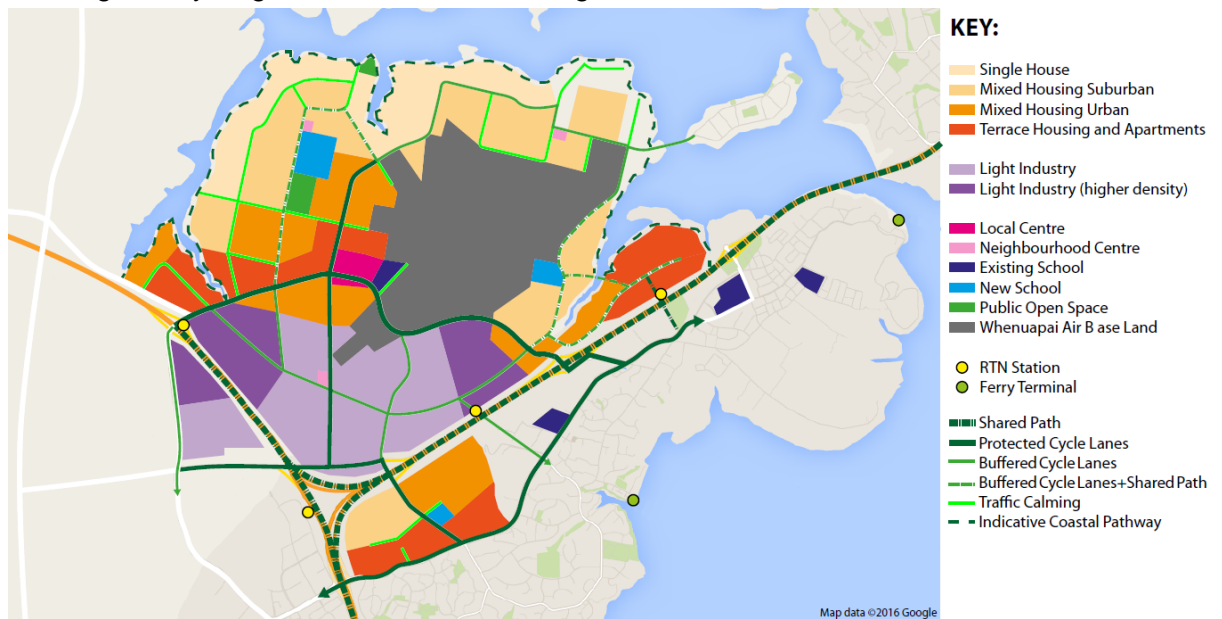


Figure 6: Proposed walking and cycling network

- Public transport network as shown in Figure 7

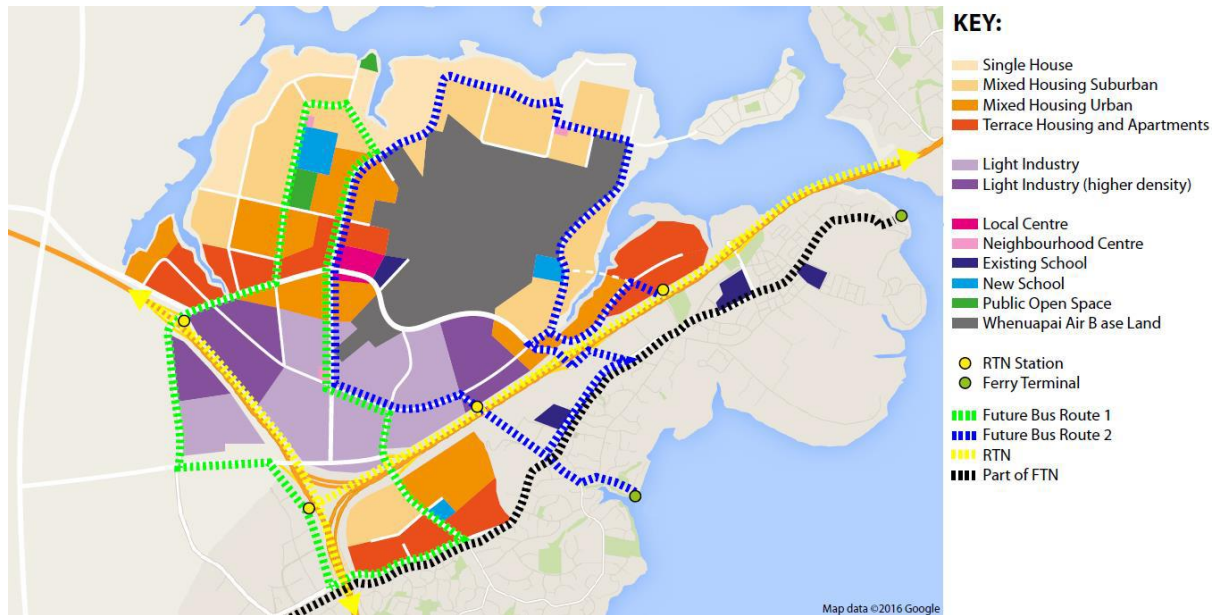


Figure 7: Proposed public transport network

- Regional transport network – investments proposed through planning programmes other than the Whenuapai Structure Plan but are considered necessary to support the structure plan
- Whenuapai transport and road network as shown in Figure 8

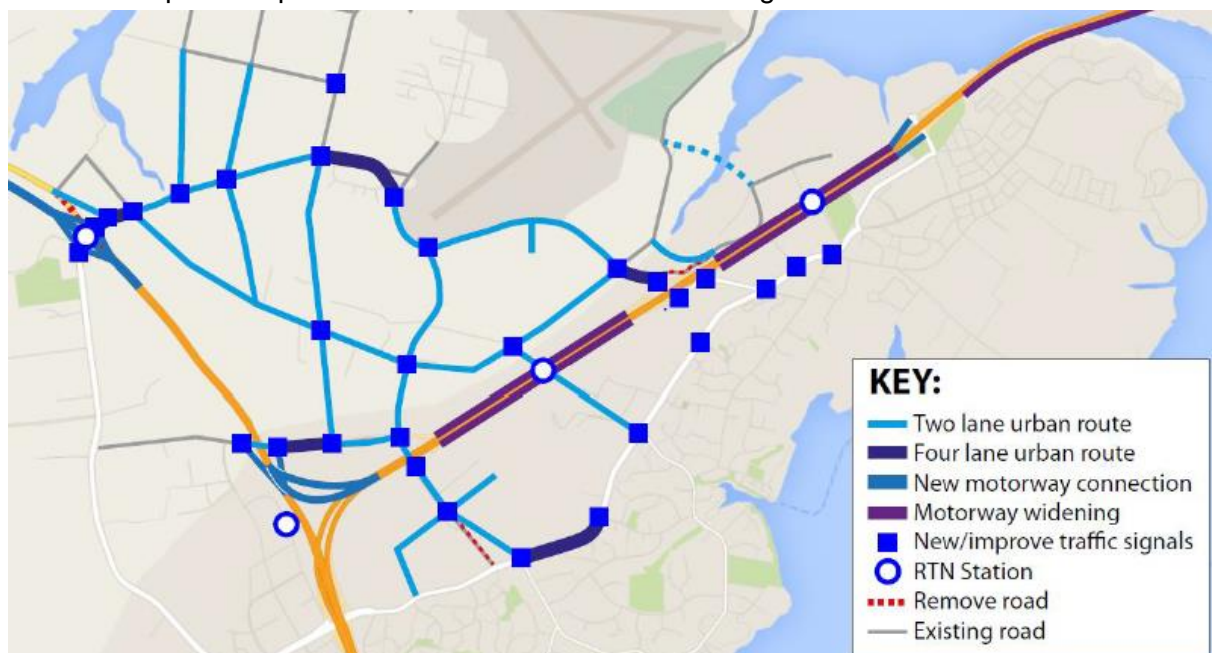


Figure 8: Proposed transport network in and around the plan change area

The ITA assessed interim development years broadly representing 2021, 2026, 2036 and 2046. The staging scenarios in the July 2016 ITA are notional only and further work was undertaken during the plan change process to refine the staging.

Technical Inputs June 2017

In this report, the proposed transport network associated with the Draft Whenuapai 3 Precinct Plan 1 was reviewed. Changes to the network were recommended, including to the collector roads within the Trig Road south residential development area not connecting through to the Hobsonville business area, the alignment of the Whenuapai to Marina View Drive link through to Spedding Road, and some minor changes to the alignment of other roads. The suggested arterial and collector road network plan that was subsequently agreed by Auckland Transport and council planners can be seen in Figure 9 below.

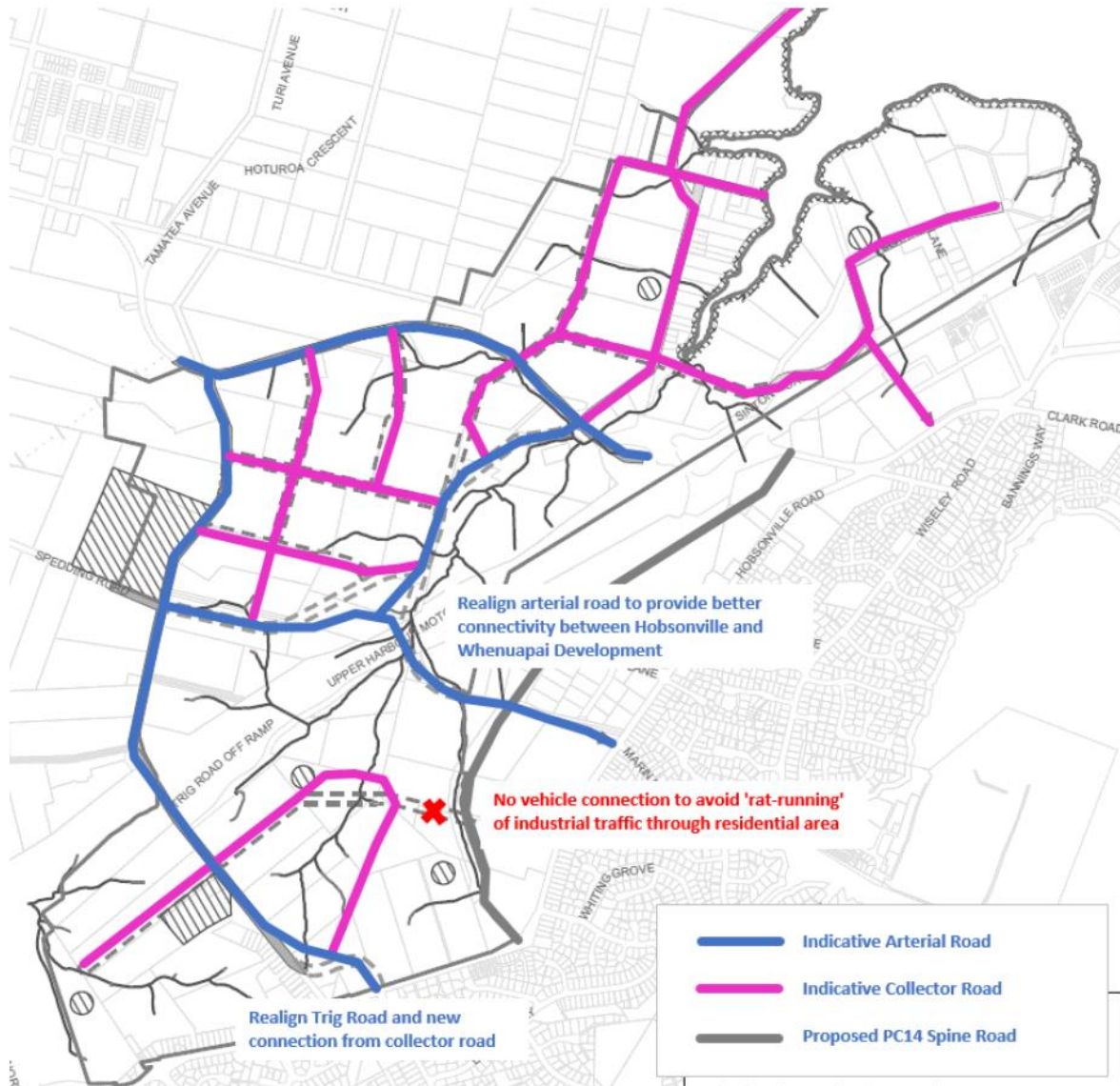


Figure 9

The transport infrastructure requirements and Stage 1 land use zoning were reviewed taking into account revised land use scenarios from Auckland Transport, including the Regional model (ART) Scenario I10. This model includes faster growth in land use than previously assumed and also includes different travel patterns. Transport provisions considered

necessary for a base scenario were identified, as well as those associated with six staged land use scenarios. A refined land use-transport investment trigger table was prepared and the types of improvements identified.

Sensitivity tests relating to yield assumptions and independence of stages were considered. These indicate that the proposed transport network has some flexibility to accommodate increased yields. Tests also indicated that the order of the staged release of land within the plan change area is not important if a Rapid Transit Network (RTN) is provided and results in lower vehicle trip rates for development. The risk of not implementing a RTN with suitable walking, cycling and local bus connections in place prior to development occurring is that developers may design neighbourhoods around a dominant car mode and residents will be accustomed to using their cars. This could prove difficult to change once a RTN is provided.

Information about the regional and local transport network investment required can be found in Appendix 2.

6.2.4 Planning response to issue

A precinct is needed to help deal with the fragmented land ownership in the plan change area. The main infrastructure issues to be addressed in a precinct, the identification of the location of indicative roads and clarifying the delineation of responsibility for provision of roading between Auckland Transport (AT) and land developers.

Indicative roads

There is policy direction in the Regional Policy Statement (RPS) that identifies the need to allow for the protection of routes for transport infrastructure (B3.3), and there are subdivision provisions that support roads with sufficient reserves being planned and provided for (E38.2-3). A number of provisions also set out the need for liveable, walkable and connected networks. However the E38 subdivision provisions only have assessment criteria to achieve these outcomes. Precinct provisions with at least indicative arterials shown are necessary to provide greater certainty and direction to land owners and developers of the roading network that is required in the greenfield plan change area.

Delineation of funding responsibility

There is policy direction in the RPS (B3.3(5)) requiring development to integrate with infrastructure funding, and a number of references to AT funding plans as a consideration. From these it is possible to determine what developer responsibilities are likely to be, that is projects that are not funded by AT, but this is not sufficiently clear for the development community. Precinct provisions can clearly set out developer responsibility.

Provision of infrastructure

Beyond the requirement for ITAs in the Auckland-wide transport provisions, and the need to provide staging plans for staged subdivisions, there is nothing in the Auckland-wide provisions to support how infrastructure is provided in greenfield areas. The structure plan guidelines require that ITAs are prepared for whole sub-regional areas, which imply support for a holistic understanding of the transport effects, mitigation and staging for large areas.

This supports a precinct where each of the areas associated with Stage 1 of Whenuapai trigger a number of transport upgrades. These have been identified as development areas in Precinct Plan 2 and the local transport projects that are required to support subdivision, use and development have also been identified.

Development in the plan change area will have cumulative effects on the transport network and this is addressed through the development areas shown in Precinct Plan 2 and provisions in the precinct.

6.3 Water supply and wastewater servicing

Issue: There are potential adverse environmental effects on open space, residential and business zoned land if water supply and wastewater infrastructure cannot be provided for plan change area.

The water supply network servicing the Whenuapai area has good capacity to service the growth in the short term but will require upgrading to meet long term growth. Three transmission bulk supply points (the three bulk water supply water mains), located at the Brigham Creek Road/Hobsonville Road intersection, Trig Road/Hobsonville intersection and the Fred Taylor Drive/Don Buck Road intersection feed the existing local network. These bulk supply points will continue to supply the area in the long term.

There are three existing wastewater pump stations at Hobsonville, Whenuapai and Massey North that are servicing growth in the southern part of Whenuapai, adjacent to State Highway 18. The pump stations currently pump wastewater to the Mangere Wastewater Treatment Plant via the Western Interceptor. Other parts of Whenuapai are currently serviced by private onsite disposal systems such as septic tanks.

Desired outcome: There will be a co-ordinated approach to the provision of water and wastewater infrastructure across the plan change area as development progresses.

As the plan change area develops, it is important new development can be serviced by a public wastewater system to ensure the health and safety of the community and minimise adverse effects on the environment.

6.3.1 Current planning provisions

Auckland Unitary Plan (Operative in Part)

Matters related to environmental protection, such as urban growth and form, a quality built environment, and infrastructure, have specific objectives, policies and methods to achieve sustainable and integrated management of major natural and physical resources in the region.

The relevant parts of the Regional Policy Statement (RPS) include:

- B2 Urban Growth and Form – a quality compact urban form that enables the efficient

provision of new infrastructure and reduces adverse environmental effects.

- B3 Infrastructure – infrastructure is resilient, efficient and effective, and infrastructure planning and land use planning are integrated to service growth efficiently.

6.3.2 Planning response to issue

The Regional Policy Statement objectives in the AUP (OP) would not be able to be met in the plan change area with the existing infrastructure. Within the plan change area the use of existing infrastructure, namely septic tanks, may create adverse effects on the environment. As such, upgrades to a public wastewater network are necessary as the plan change area develops into an urban environment.

Watercare have confirmed that there is capacity in the existing network to provide for development of the plan change area.

In relation to water supply, existing and proposed development will be served by three transmission bulk water supply points to the south of the Whenuapai area. Renewal and upsizing of this network will be required to meet future urban intensification yields and fire-fighting requirements. New water lines will follow the proposed indicative roading network. A second North Harbour water main, planned for completion in 2028, will provide the additional capacity necessary to service the northern part of Whenuapai.

In relation to wastewater, the plan change area will be initially serviced by the Mangere Wastewater Treatment Plant via the Western Interceptor. The Northern Interceptor, a new wastewater pipeline, will connect to the Rosedale Wastewater Treatment Plant to take up further capacity as the population in Whenuapai and other north-western areas grows. This will be constructed in stages with construction to be initiated in 2018 and completion of Stage 1 due in 2021. Stage 2, the final stage, is due to be completed in 2026. From 2017 – 2027 all of this plan change area will have the option of moving from a wastewater septic tank system to public wastewater infrastructure. A change to public infrastructure will assist in mitigating any adverse environmental effects caused by septic tank systems.

The existing AUP (OP) provisions and Watercare's cost recovery policy are sufficient to ensure water and wastewater infrastructure requirements in the plan change area are met.

6.4 Stormwater management

Issue: Greenfield development within the plan change area presents opportunities for an integrated stormwater management approach to be adopted and enhancement of water quality and ecosystems within the degraded Waiarohia catchment and estuary.

The plan change area is within a catchment that is predominantly rural at present. As a result of previous agricultural and horticultural activities, there is variable coverage of exotic and native vegetation and modified watercourses throughout the area. This has resulted in

degraded streams and negative impacts on the marine environment. The Upper Waitematā Harbour is identified as 'Degraded 1' under the AUP (OP)⁸, recognising the high level of degradation to marine water quality and ecosystem health.

New urban development has the potential to increase stormwater flows, which may lead to increased stress on streams and flood risk. If unmitigated, urban development can generate and discharge contaminants such as gross stormwater pollutants (litter), heavy metals and hydrocarbons. This is likely to increase the accumulation of metals such as copper and zinc in the narrow estuaries of the Waiarohia Inlet and Brigham Creek.

While development in the plan change area has the potential to increase flood risks and further degrade the receiving environment of the Upper Waitematā Harbour, it also creates opportunities to reduce existing adverse effects and enhance freshwater and coastal environments that are degraded. Through this plan change there are opportunities to maintain a sustainable hydrology, to minimise the generation and discharge of urban pollutants, and to enhance riparian margins to improve stream water quality and habitat. Keeping development out of floodplains and overland flow paths will ensure flood risk is not increased.

Flood hazards

The plan change area currently has low flood hazard risk with only two existing buildings within the catchment identified as being susceptible to habitable floor flooding in the 100-year average rain index (ARI) event.

Flood modelling carried out for future development indicated a small increase in flood risk and inundation of buildings. Therefore, flooding is not a constraint to development provided an appropriate approach is in place to ensure buildings are located outside of floodplains and overland flow paths, and to ensure the capacity of the flood plains and flow paths to safely store and convey stormwater during flood events is maintained.

Stream environments

The stream environment within the catchment is heavily-modified as a result of agricultural activities. Unrestricted stock access and the lack of riparian vegetation have resulted in stream bank erosion, contamination and sedimentation of the harbour. Artificial ponds created to support agricultural activities have negatively affected ecological values and reduced the base flow of streams during summer months. Modifications also restrict fish passage up the catchment.

Unless managed and mitigated, there is potential for streams in the catchment to be further degraded through increased urban stormwater runoff rates and volumes, vegetation removal, piping/culverting of watercourses and increase in urban-type contaminants.

The council commissioned specialists to carry out a watercourse assessment⁹ for the Whenuapai Structure Plan area. The assessment identified permanent and intermittent

⁸ Figure B7.4.2.1 in the AUP (OP)

⁹ Watercourse Assessment Report: Whenuapai Structure Plan Area dated September 2016.

streams within the structure plan area, which were confirmed by stream walks and surveys conducted in 2016. The assessment concluded that the Waiarohia Stream and its tributaries are degraded as a result of current land uses. However, it also identified enhancement opportunities and made recommendations to restore and enhance the stream environments as greenfield development progresses.

Coastal environment

The Upper Waitematā Harbour is the receiving environment of stormwater runoff from current and future development within the plan change area. The narrow and low energy estuaries are sensitive and susceptible to contaminant accumulation. If development is not managed appropriately, there is potential for the harbour to become further degraded. The Waiarohia and Brigham Creek estuaries are classified as 'Degraded 1' under the AUP (OP).

Aquifer systems

There are potential effects on the Kumeu-Waitematā aquifer, which is identified in the AUP (OP) as a 'high use aquifer management area', as a result of reduction in infiltration of stormwater runoff. However, this can be mitigated by maintaining a sustainable hydrology that includes infiltration of stormwater runoff to replace infiltration lost through the establishment of impervious surfaces. The aquifer is currently not fully allocated and the land use change from agriculture/horticulture to residential and business activities will likely reduce water demand from the aquifer. However, consideration will need to be given to maintaining sufficient infiltration to sustain the aquifer system.

Mana whenua values

Both Ngati Whatua o Kaipara and Te Kawerau a Maki have provided cultural values assessments (CVA) identifying values that are important to them. The CVA prepared by Ngati Whatua o Kaipara identified opportunities for water quality to be enhanced through development while Te Kawerau a Maki's CVA for the Whenuapai Structure Plan was focussed around the management of waterbodies, native flora and indigenous fauna.

Desired outcome: Stormwater runoff in Whenuapai is managed using an integrated management approach that minimises and mitigates adverse effects, and that there is an overall improvement in water quality and ecosystem health in streams and estuaries in the Upper Waitematā Harbour.

6.4.1 Current Planning Provisions

The plan change area currently has little existing public stormwater infrastructure. Stormwater is currently being managed by a combination of piped culverts, open drains, ponds, modified wetlands and road drainage. As discussed above, streams in the catchment and estuaries of the Upper Waitematā Harbour to which they discharge are degraded.

High-level statutory documents

The New Zealand Coastal Policy Statement 2010 (NZCPS), the National Policy Statement for Freshwater Management 2014 and the Hauraki Gulf Marine Park Act 2000 are relevant

considerations in relation to stormwater management within the plan change area. These national policy instruments generally seek to:

- Maintain water freshwater and coastal water quality where it is high
- Enhance water quality where it is degraded
- Maintain or sustain the life-supporting capacity of ecosystems
- Protect and enhance the natural, historic, cultural and physical resources of the Hauraki Gulf and its catchments.

With regard to stormwater, the NZCPS contains direction to avoid significant adverse effects on ecosystems when discharging stormwater into the coastal marine area by promoting the integrated management of stormwater and the reduction of contaminant loads and stormwater flows at-source. These outcomes are given effect to by the relevant parts of the AUP (OP) described in the following section.

Auckland Unitary Plan (Operative in Part)

Regional Policy Statement

The regional policy statement (RPS) in the AUP (OP) provides guidance for stormwater management in the context of urban growth and development. Relevant provisions include:

- B3.2 Infrastructure – recognition of the benefits and operational needs of infrastructure while minimising adverse effects related to its development and use. There is also an emphasis on urban growth and infrastructure provision being integrated.
- B7.3 Freshwater systems – direction to minimise permanent loss and significant modification of freshwater systems and enhancement where they are degraded. Freshwater systems have a broad definition in the AUP (OP) and include watercourses, riparian margins and floodplains. In relation to the management of subdivision, use and development, provisions in this chapter promote the enhancement of degraded freshwater systems; seek an integrated management approach; and aim to minimise erosion and avoid the unnecessary loss and modification of streams and the establishment of structures within stream beds.
- B7.4 Coastal water, freshwater and geothermal water – direction to maintain water quality where it is good and progressively improve water quality where it is degraded. Subdivision, use and development minimises the generation and discharge of contaminants and adverse effects on freshwater and coastal water, and to adopt the best practicable option for stormwater diversions and discharges. Mana whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for.

- B10.2 Natural hazards and climate change – a key direction in this chapter is that the creation of new risks is avoided in greenfield developments. There is also direction to protect the functions of natural systems, such as flood plains and overland flow paths, in flood management.

E1 Water quality and integrated management

An integrated stormwater management approach has been adopted in the AUP (OP), which seeks to integrate the management of land use, development, discharges, catchments and stormwater networks to improve the overall management of stormwater and improve water quality and ecosystem health. Chapter E1 is the guiding chapter for water quality and integrated management across Auckland. In particular, Policy E1.3.10 outlines the key elements of an integrated stormwater management approach:

- (10) In taking an integrated stormwater management approach have regard to all of the following:
- a) the nature and scale of the development and practical and cost considerations, recognising:
 - i. greenfield and comprehensive brownfield development generally offer greater opportunity than intensification and small-scale redevelopment of existing areas;
 - ii. intensive land uses such as high-intensity residential, business, industrial and roads generally have greater constraints; and
 - iii. site operational and use requirements may preclude the use of an integrated stormwater management approach.
 - b) the location, design, capacity, intensity and integration of sites/development and infrastructure, including roads and reserves, to protect significant site features and hydrology and minimise adverse effects on receiving environments;
 - c) the nature and sensitivity of receiving environments to the adverse effects of development, including fragmentation and loss of connectivity of rivers and streams, hydrological effects and contaminant discharges and how these can be minimised and mitigated, including opportunities to enhance degraded environments;
 - d) reducing stormwater flows and contaminants at source prior to the consideration of mitigation measures and the optimisation of on-site and larger communal devices where these are required; and
 - e) the use and enhancement of natural hydrological features and green infrastructure for stormwater management where practicable.

E36 Natural hazards and flooding

The provisions in E36 relating to flooding are focused on avoiding new development within floodplains in greenfield areas and managing subdivision and development to not increase flood risk. The AUP (OP) adopts the 1 per cent annual exceedance probability (AEP) floodplains for managing development and risk to human life and properties.

E38 Subdivision

Any subdivision will need to be designed to manage stormwater in accordance with any approved stormwater discharge consent or network discharge consent, and in a way that is consistent with the outcomes sought in E1 Water quality and integrated management.

Appendix 1 Structure plan guidelines

As a requirement for rezoning land zoned Future Urban, a structure planning process needs to be undertaken to address the matters listed in Appendix 1 of the AUP (OP). Of those and in respect of infrastructure provision, there is a requirement to identify, investigate and address the following matter:

- (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.

As part of the structure plan guidelines, Appendix 1 of the AUP (OP) includes the following matters to be addressed at the structure planning stage in relation to stormwater management:

- The application of an integrated stormwater management approach within developments to reduce impacts on the environment while enhancing urban amenity (1.4.5(1)(e))
- 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 (1.4.7(3))
- A stormwater management plan to support the process (1.5(2)(a)).

6.4.2 Planning response to issue

The plan change responds to this issue by introducing a suite of objectives, policies and rules within the Whenuapai 3 Precinct for managing stormwater in the plan change area. The provisions are supported by a precinct plan which identifies the permanent and intermittent stream network, as well as streams over three metres in width. The plan change also makes reference to the Whenuapai 3 Precinct Stormwater Management Plan 2017 in the proposed precinct and this document is proposed to be added into Appendix 17 Documents incorporated by reference in the AUP (OP). The SMP provides guidance in relation to stormwater outcomes sought for assessing development proposals within the area in accordance with the direction provided by national and regional planning instruments.

While it is possible to manage development and the associated stormwater discharge through the provisions of the AUP (OP), the integration of stormwater management provisions into the precinct enables stormwater management to be customised to the catchment and receiving environments, reflecting the approach of the Whenuapai 3 Precinct SMP. This is consistent with the integrated management approach promoted by the AUP

(OP). It also provides clear guidance to developers as to the specific stormwater management performance requirements and facilitates consistent and integrated stormwater management across multiple subdivisions and development within the precinct.

6.5 Biodiversity

Issue: Development of a rural environment can place pressure on the life-supporting capacity of land and water but can also be an opportunity to enhance existing values.

The Whenuapai plan change area has historically been used for agricultural and horticultural activities. As a result, the area is mainly grassed with little habitat or connective corridors for native fauna and birds¹⁰. This has also resulted in degraded freshwater habitats.

Despite this, the area plays an important role as a stepping stone in the North-West Wildlink, as it is located midway between Haruaki Gulf Islands / Whangaparaoa and the Waitakere Ranges. Key ecological features include the Upper Waitematā Harbour (part of the Hauraki Gulf Marine Park), Waiarohia Inlet, stream systems, and further ecological connections to the North-West Wildlink.

Inappropriate development has the potential to degrade terrestrial habitat by removing scarce vegetation and freshwater/coastal habitats through sediment runoff and contaminant discharges from increased impervious surfaces. However, there is also opportunity to reintroduce native vegetation and manage sediment runoff and discharges through new provisions that better manages these effects.

Freshwater habitats

Council consultants have carried out a watercourse assessment and conducted stream walks and surveys in 2016 (refer to section 6.4 which addresses stormwater management in the area). They found that wetlands and the stream environments in the plan change area are generally degraded due to heavy modification from bank erosion or barriers (dams/culverts).

Riparian planting and other at-source stormwater management techniques help protect or enhance water quality and ecological values of freshwater habitats.

Coast

Mangrove forests are evident around the coastal margin and are the dominant habitat type in the coastal environment. Isolated patches of oioi, glasswort and sea rush were observed on the shore of Wallace and Waiarohia Inlets indicating that isolated salt marsh habitats are present along the coastline¹¹. These habitats are of high ecological value despite the modified landscape and potential contamination from existing land uses. The vegetation

¹⁰ Whenuapai Structure Plan Biodiversity Assessment (2016) and Whenuapai Structure Plan Preliminary Coastal Habitat Assessment (2016)

¹¹ Whenuapai Structure Plan Preliminary Coastal Habitat Assessment (2016)

surrounding the Waiarohia Inlet is identified as a Significant Ecological Area under the AUP (OP).

Desired outcomes:

1. Development and use does not adversely affect biodiversity.
2. Ecological and biodiversity values are restored when possible.

6.5.1 Current planning provisions

National planning documents

New Zealand Coastal Policy Statement 2010 (NZCPS)

The NZCPS provides guidance on national priorities in relation to the coastal environment. Policy 11 provides direction that any adverse effects on particularly threatened species and their supporting habitats are avoided, and to avoid significant adverse effects on indigenous ecosystems and habitats. No threatened species have been identified along the coast in the plan change area. Therefore, Policy 11(b) applies. The direction of Policy 11(b) is to avoid significant adverse effects.

National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM sets out the objectives and policies for freshwater management under the RMA. It recognises the national significance of fresh water and Te Mana o te Wai (the mana of the water). The key directive is to protect the life-supporting capacity of fresh water and any associated ecosystems by managing the use of fresh water.

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Chapter B: Regional Policy Statement

The following Regional Policy Statement (RPS) provisions are relevant to biodiversity:

- B7.2 Indigenous biodiversity – management approach to indigenous biodiversity is to identify areas with significant values for protection via overlays and controls.
- B7.3 Freshwater systems - direction to minimise permanent loss and significant modification of freshwater systems and enhancement where they are degraded. There are no biodiversity specific provisions beyond ensuring the health of freshwater systems, and by extension, its life-supporting capacity.
- B8.5 Managing the Hauraki Gulf/Te Moana Nui o Toi/Tikapa Moana – direction to manage the use and development of catchments of the Hauraki Gulf to ensure ecological values and life-supporting capacity of the Hauraki Gulf and protect and enhanced.

Chapter D: Overlays

The AUP (OP) takes an 'identify and protect' approach to managing biodiversity. Chapter D9 Significant Ecological Area, Chapter E1 Water quality and integrated management, Chapter E3 Lakes, rivers, streams, and Chapter E15 Vegetation management and biodiversity provide the main policy guidance on biodiversity.

The AUP (OP) spatially identifies areas of significant biodiversity value and ensures that those values are properly protected through Chapter D9 Significant Ecological Areas Overlay. There is one SEA – terrestrial surrounding the Waiarohia Inlet. This is the only SEA within the plan change area.

Rules that apply to SEAs are contained in Chapters E3 Lakes, rivers, streams and wetlands; E15 Vegetation management and biodiversity; E11 Land disturbance – Regional; E26 Infrastructure.

The SEA overlay is under appeal (CIV-2016-404-002343) by the Royal Forest and Bird Protection Society of NZ in the High Court. This appeal does not impact on the objectives and rules of the overlay.

Chapter E: Auckland-wide

E1 Water quality and integrated management

The AUP (OP) takes an integrated stormwater management approach. It seeks to improve water quality and ecosystem health. For further details, see section 6.4 of this report.

E3 Lakes, rivers, streams and wetlands

The AUP (OP) recognises the importance of the beds of lakes, rivers, streams and wetlands in the protection of ecological and biodiversity values. The AUP (OP) approach is to minimise permanent loss and avoid significant modification or diversion of lakes, rivers, streams and wetlands. There is also a direction to enhance lakes, rivers, streams and wetlands.

E15 Vegetation management and biodiversity

Chapter E15 Vegetation management and biodiversity manages terrestrial and coastal vegetation and biodiversity values outside of areas identified by specific overlays. The AUP (OP) approach is to recognise the role that vegetation plays in maintaining biodiversity values while enabling development that avoids, remedies or mitigates effects on those values to occur.

Provisions in E15 generally seek to control the circumstance and the amount of vegetation that can be cleared annually.

6.5.2 Planning response to issue

The plan change responds to the issue by focusing on the stream environment as an opportunity to restore biodiversity values in the area. The Whenuapai 3 Precinct will introduce provisions to encourage the restoration of the stream network to create an ecological corridor within the area. This will include the reintroduction of native vegetation along the riparian margin. The Whenuapai 3 Precinct will also introduce stormwater management provisions to enhance the life-supporting capacity of freshwater habitats.

6.6 Coastal management – coastal erosion risk

Issue: Development along the coast can potentially expose people to natural hazards and cause adverse effects on the coastal environment.

The coastal environment is a finite resource with high environmental, social, economic, and cultural values. Inappropriate development along the coast can threaten the life-supporting capacity of the marine environment, the amenity value it provides to future communities, as well as potentially threaten people and property by exposing them to coastal hazard risks.

The Whenuapai plan change area contains approximately 4.5 km of cliffed coastline. The coastline is unique in its estuarine, low-energy characteristics, and proximity to the sensitive receiving environments of the upper Waitematā Harbour.

Coastal biodiversity

Council consultants conducted field investigations in November 2016 to determine the ecological values of the wider Whenuapai area. Their report found that invasive weed species accounts for 90 percent of the flora composition and concluded that the area is heavily modified and degraded. There are, however, also coastal habitats of high ecological value despite modification and degradation resulting from historic patterns of land use.

Coastal erosion hazards

Council commissioned a localised coastal erosion assessment in July 2017¹². The assessment identifies a one hundred year erosion hazard area extending between 26m to 41m landward of the current cliff toe.

Coastal protection structures and stormwater outfalls

The management of coastal erosion risks can create additional issues. They include¹³:

- Stormwater outfalls that do not integrate with the coastal environment.
- Hard protection structures becoming the default coastal hazard management approach.

¹² Tonkin & Taylor. 2017. Coastal Hazard Assessment: Whenuapai Plan Change Stage 1.

¹³ Memo from Coastal and Geotechnical Services, Auckland Council dated 2 May 2017 and memo from Healthy Waters, Auckland dated 23 February 2017

The result is adverse effects on coastal amenity, coastal processes and biodiversity values. Hard protection structures can also introduce ongoing maintenance costs to council.

Desired outcomes:

1. Avoid increasing the exposure of people or property to risks from natural hazards.
2. Development and land use do not cause adverse effects on the coastal environment, including to species, habitats and ecosystems.

6.6.1 Current planning provisions

High-level statutory documents

The New Zealand Coastal Policy Statement and the Hauraki Gulf Marine Park Act 2000 (HGMPA) provide high-level direction for managing the complexities of the coastal environment. Section 10 of the HGMPA requires section 7 and 8 to be treated as a New Zealand coastal policy statement for the Hauraki Gulf. These documents generally seek to:

- recognise the national significance of the Hauraki Gulf
- protect the integrity of the coastal environment and ecosystems
- maintain and enhance features that contribute to the natural character of the coastal environment and landscape values
- maintain and enhances public use of, and access along, the coastal environment
- manage the risks associated with coastal hazards and climate change
- enable appropriate use and development, noting that the protection of the values of the coastal environment does not preclude development done sympathetically and within limits.

The relevant sections of AUP (OP) give effect to the objectives and policies of the NZCPS. They are outlined below.

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The AUP (OP) gives effect to the requirements of the NZCPS by adopting a risk based approach to manage natural hazards, and by integrating the management of land use, development and subdivision, to recognise the unique amenity and biodiversity values of the coastal environment.

Chapter B: Regional Policy Statement

The following regional policies are relevant to the coastal environment:

- B2.2 Urban Growth and Form – recognises the risks from coastal hazard by directing intensification to avoid areas subject to significant natural hazard risks and areas prone to coastal hazards where practicable.
- B3.2 Infrastructure – requires the development and operation of infrastructure to be done in a way that manages adverse effects on the coastal environment.

- B4.3 Viewshafts – recognises the importance of the natural character of the coastal environment in contributing towards high amenity values. In particular, identifies and protects significant views from public places to the coastal environment.
- B6.3 Recognising Mana Whenua values – enhance the mauri of and relationship of Mana Whenua with coastal resources.
- B7.2 Indigenous biodiversity – management approach to indigenous biodiversity in the coastal marine area is to identify areas with significant values for protection via overlays and controls.
- B7.4 Coastal water, freshwater and geothermal water – the AUP (OP) takes an integrated approach to managing land use and water quality, acknowledging the complex relationship between the two. Refer to section 6.4 of this report (stormwater issues).
- B8.2 Natural character – direction to protect areas of outstanding and high natural character. Subdivision, use, and development should be done in a way to preserve qualities that contribute to the natural character of the coastal environment, and where practicable, restore areas of degraded natural character.
- B8.3 Subdivision, use and development – directs subdivision, use and development in the coastal environment to recognise the range of coastal values. Requires subdivision, use and development to avoid increasing risk in areas potentially affected by coastal hazard.
- B8.4 Public access and open space – direction to maintain and enhance public access to, and recreation and amenity values of the coast. Recognises that in some circumstances access could be restricted on safety grounds.
- B10.2 Natural hazards and climate change – directs new development to not increase risks from natural hazards. Requires any assessment of coastal hazards to be done at a minimum of a 100-year timeframe.

Chapter D: Overlays

Chapter D9 Significant Ecological Areas (SEA) Overlay identifies areas of significant ecological values and protects them from adverse effects of development by limiting the scope of development. An SEA – terrestrial applies to the areas surrounding the Waiarohia Inlet.

There are no coastal character values scheduled under the Outstanding Natural Features, Outstanding Natural Landscapes, Outstanding Natural Character or the High Natural Character overlays within the plan change area.

Chapter E: Auckland-wide

E15 Vegetation management and biodiversity

The AUP (OP) seeks to manage vegetation and biodiversity outside of scheduled significant ecological areas by limiting the scale and circumstances for vegetation removal.

E18 Natural character of the coastal environment

This chapter provides policy guidance for activities in areas of the coastal environment not scheduled by the AUP (OP). It generally directs development to maintain natural characteristics and restore or rehabilitate natural character values when practical. There are no rules associated with this chapter.

E19 Natural features and natural landscapes in the coastal environment

This chapter provides policy guidance for activities in the areas of the coastal environment not scheduled by the AUP (OP) and directs development to maintain the landscape, and amenity values of the coastal environment. There are no rules associated with this chapter.

E26 Infrastructure

The AUP (OP) allows for the construction and maintenance of infrastructure in the coastal environment while managing its effects. Provisions control activities within identified overlays such as SEAs. Effects on the coastal environment are considered as part of an assessment criteria.

E36 Natural hazards and flooding

The AUP (OP) takes a risk-based approach towards managing coastal hazard risks. The chapter requires that development to only proceed if risks from natural hazards are not increased. Risks should be reduced when practicable, and natural features should not be used (where appropriate) in preference to hard protection structures when managing natural hazards.

E38 Subdivision – Urban

This chapter reinforces Chapter E36 Natural hazards and flooding. It directs subdivision to provide for a safe and stable building platform and vehicle access, and esplanade reserves and/or strips.

6.6.2 Planning response to issue

Coastal management provisions within the plan change area will address the issue of coastal erosion hazards. Biodiversity values in the coastal environment will be assessed through the biodiversity provision sections of this report. It is considered that the existing AUP (OP) approach is sufficient in addressing public access to the coastal environment.

Coastal Erosion

The plan change responds to the coastal erosion hazards identified in the coastal hazard assessment. The localised assessment provides greater precision and certainty than the AUP (OP)'s region-wide approach. The plan change introduces a planning framework, including objective, policies, and standards, to avoid any development that increases the exposure of people and property to risk from coastal erosion. The plan change also introduces a planning framework to limit the use of hard protection structures in areas of identified coastal erosion risk.

Stormwater outfalls

The plan change will apply a resource consent requirement for stormwater outfalls within the coastal hazard area to ensure the designs are appropriate and do not exacerbate coastal erosion or impact inappropriately on amenity. This will include matters of discretion enabling the council to ensure appropriate consideration is given to managing adverse effects associated with the design and placement of coastal outfalls.

6.7 Reverse sensitivity effects on Whenuapai Airbase

Issue: Potential reverse sensitivity effects of subdivision, use and development in the plan change area on the ongoing operation of Whenuapai Airbase.

The plan change area is located immediately south and west of Whenuapai Airbase. While the airbase is outside the plan change area, it contributes to the area's existing environment and character. The airbase is a defence facility operated by the New Zealand Defence Force (NZDF). It is of national and strategic importance and operates in accordance with its defence obligations under the Defence Act 1990. Its operations include maritime patrol, search and rescue, transport of personnel and equipment, and the provision of assistance in times of emergency in New Zealand and overseas.

It is important to address potential reverse sensitivity effects on the airbase as the area changes from rural to urban. The airbase is likely to remain in Whenuapai for the foreseeable future. Therefore any planning for Whenuapai will need to ensure potential adverse effects on the airbase are appropriately managed.

In their submission on the draft plan change, the NZDF highlighted a number of matters relating to reverse sensitivity effects including noise effects, building heights, lighting and bird strike hazards. Noise effects from Whenuapai Airbase are addressed separately in section 6.8 of this report.

With respect to building heights, the NZDF were concerned with new buildings and structures penetrating the obstacle limitation surfaces (OLS) within Designation 4311 (Whenuapai Airfield Approach and Departure Path Protection), particularly in parts of the plan change area where the ground level is close to the OLS. Construction cranes in the

vicinity of the airbase have been an issue in recent years. These incidents have the potential to force the closure of runways and disrupt airbase operations.

The key issue in relation to lighting is the potential for outdoor lighting to imitate or mask runway lighting and result in glare for approaching and departing pilots.

The NZDF feedback on the draft plan change also highlighted the issue of bird strike risk as an operational safety issue. There is potential for increased bird strike risks from new development in the area. Since the draft plan change, the NZDF have provided a specialist wildlife hazards report¹⁴ focusing on bird strike risk within 13 kilometres of Whenuapai Airbase. There is potential that new and existing land uses in the vicinity of the airbase could create an attractive environment for birds. This poses risks for aircrafts flying in and out of the airbase and could impact on the NZDF's capability and operational readiness.

The wildlife hazards report was reviewed by the council.¹⁵ The review acknowledges the consequences of wildlife collisions with aircraft can be very serious. However, it notes that the report was heavily focussed on overseas studies. While the issue cannot be dismissed, the threats and activities identified by the report are generally outside the control of the council. The review also noted that many of the activities listed are permitted or controlled activities under the AUP (OP). On that basis, no new provisions are proposed to address bird strike risk in this plan change.

Desired outcome: Subdivision, use and development within the plan change area occurs in a way that enables operations at Whenuapai Airbase to continue in a safe and efficient manner.

6.7.1 Current Planning Provisions

Auckland Unitary Plan (Operative in Part)

There is direction in the Regional Policy Statement (RPS) to manage reverse sensitivity effects from urban intensification on land with existing incompatible activities.¹⁶ The RPS also seeks to protect infrastructure, which includes the airbase, from reverse sensitivity effects caused by incompatible subdivision, use and development.¹⁷ Additionally, Policy B3.2.2(5) seeks to “ensure subdivision, use and development do not occur in a location or form that constrains the development, operation, maintenance and upgrading of existing and planned infrastructure”. This is recognised throughout the AUP (OP), including in Chapters D24 Aircraft Noise Overlay, E25 Noise and vibration, E26 Infrastructure, E38 Subdivision – Urban and E39 Subdivision – Rural.

¹⁴ Avisure. 2017. RNZAF Base Auckland (Whenuapai Aerodrome): Landuse Planning for Wildlife Hazards Report.

¹⁵ Memo from Rue Statham, Ecologist, Auckland Council dated 2 August 2017.

¹⁶ Chapter B2 Urban growth and form, Policy B2.4.2(7)

¹⁷ Objective B3.2.1(6)

Designation 4311 includes conditions relating to the protection of the approach and departure paths at Whenuapai Airbase. In relation to lighting, Chapter E24 Lighting in the AUP (OP) contains provisions for managing light spill and glare. However, there are no specific provisions for managing effects of lighting on the safe operation of airports. There are also no provisions in the AUP (OP) that address bird strike risk.

6.7.2 Planning response to issue

While Chapter E24 of the AUP (OP) contains provisions for artificial lighting, there are currently no specific provisions to address the effects of lighting on airport operations. The plan change incorporates an objective and a policy addressing reverse sensitivity effects of subdivision, use and development on the airbase. The objective and policy are supported by a lighting standard and assessment criteria.

Noise from aircraft operations is addressed in NZDF's Designation 4310 as well as in Chapter D24 Aircraft Noise Overlay in the AUP (OP). Aircraft operations are defined in the AUP (OP) as including:

- the landing and take-off of any aircraft at an airport or airfield;
- the taxiing of aircraft associated with landing and take-off and other surface movements of aircraft for the purpose of taking an aircraft from one part of the airport to another; and
- aircraft flying along any flight path.

Aircraft engine testing noise is addressed in section 6.8 of this report.

Structures that penetrate the approach and departure path obstacle limitation surfaces are managed under Designation 4311. As such, it is not considered appropriate or necessary to include another layer of management within the Whenuapai 3 Precinct to address that issue.

In regards to bird strike risk, based on the wildlife hazards report, it is not appropriate to incorporate planning provisions in this plan change. However, it may be helpful to promote the recommendations of the wildlife hazards report to all who are developing in the area, as a voluntary measure. This could be further discussed between the NZDF, the council and developers.

6.8 Aircraft engine testing noise

Issue: Adverse effects of aircraft and engine testing noise from Whenuapai Airbase on the health and wellbeing of existing and future residents in the plan change area.

The Whenuapai Airbase is used for military operations and related military activities by the New Zealand Defence Force (NZDF). The airbase has two runways servicing the No.6 Squadron, No.5 Squadron (Orion), No.40 Squadron (Hercules and Boeing 757) and RNZAF Parachute Training Support Unit. The NZDF has advised that the airbase will remain a

military airbase and continue to operate at a similar scale and intensity for the foreseeable future. Engine testing is an essential part of the NZDF's operations at Whenuapai Airbase.

Noise from aircraft operations, which excludes engine testing noise, is managed under Designation 4310 and the Aircraft Noise Overlay in the AUP (OP).

The structure plan identified noise from engine testing on the airbase and helicopter flights as a potential issue. The issue was also highlighted in the NZDF's feedback on the draft plan change. The majority of the complaints that the airbase receive relate to engine testing noise due to its intensity and duration. As Future Urban land becomes rezoned to urban zones and development occurs, more people will be exposed to noise from the airbase. Appropriate planning responses are required to ensure any adverse effects of noise from the operation of the airbase on the health and wellbeing of residents are managed.

The NZDF commissioned consultants to provide an assessment of engine testing noise on the plan change area. A noise assessment report was produced¹⁸ which uses aircraft engine noise data to model noise levels in the plan change area. It does not take into account noise from aircraft operations which are managed by Designation 4310 and the Aircraft Noise Overlay provisions in the AUP (OP). NZDF's noise assessment report was reviewed by council noise consultants, which confirmed the approach undertaken was appropriate for determining the effects of aircraft engine testing noise on the plan change area.

The purpose of the noise assessment was to quantify aircraft engine testing noise within the plan change area. A desktop assessment was undertaken to predict the extent of areas affected by engine testing noise using existing aircraft engine noise data and information on the procedures adopted at the airbase.

Engine testing noise emitted by the largest aircrafts at Whenuapai Airbase, being the Boeing B757, Hercules C130H and P-3K2 Orion, were used in the assessment. A survey of engine testing conducted at Whenuapai Airbase was undertaken over a 60-day period in May and July 2016. The survey included engine testing data on the aircraft type, time and date of test, power levels, duration, test location, and wind direction and speed. The survey showed there were 96 engine tests conducted within the 60-day period and 37 of those were 'high power' tests. High power tests are tests where the engine is using greater than 85 per cent of its full power.

Most engine testing occurs during the day. Testing after 10 pm only occurs in exceptional circumstances and must be authorised by the base commander. Within the surveyed period, only two tests were carried out after 10 pm.

While high power engine testing happens less frequently, usually every 2.5 days, the average duration of high power testing is around 75 minutes compared to 27 minutes for low power testing occurring every 1.5 days. Combining tests from both power levels over the 60 days gives an average of one 34-minute test per day.

¹⁸ Malcolm Hunt Associates. 2017. Airbase Auckland: Whenuapai, Noise from Aircraft Engine Testing.

In terms of test locations, over 95 per cent of engine testing occurs at six key locations on the base. These locations are shown on Figure 10 following.

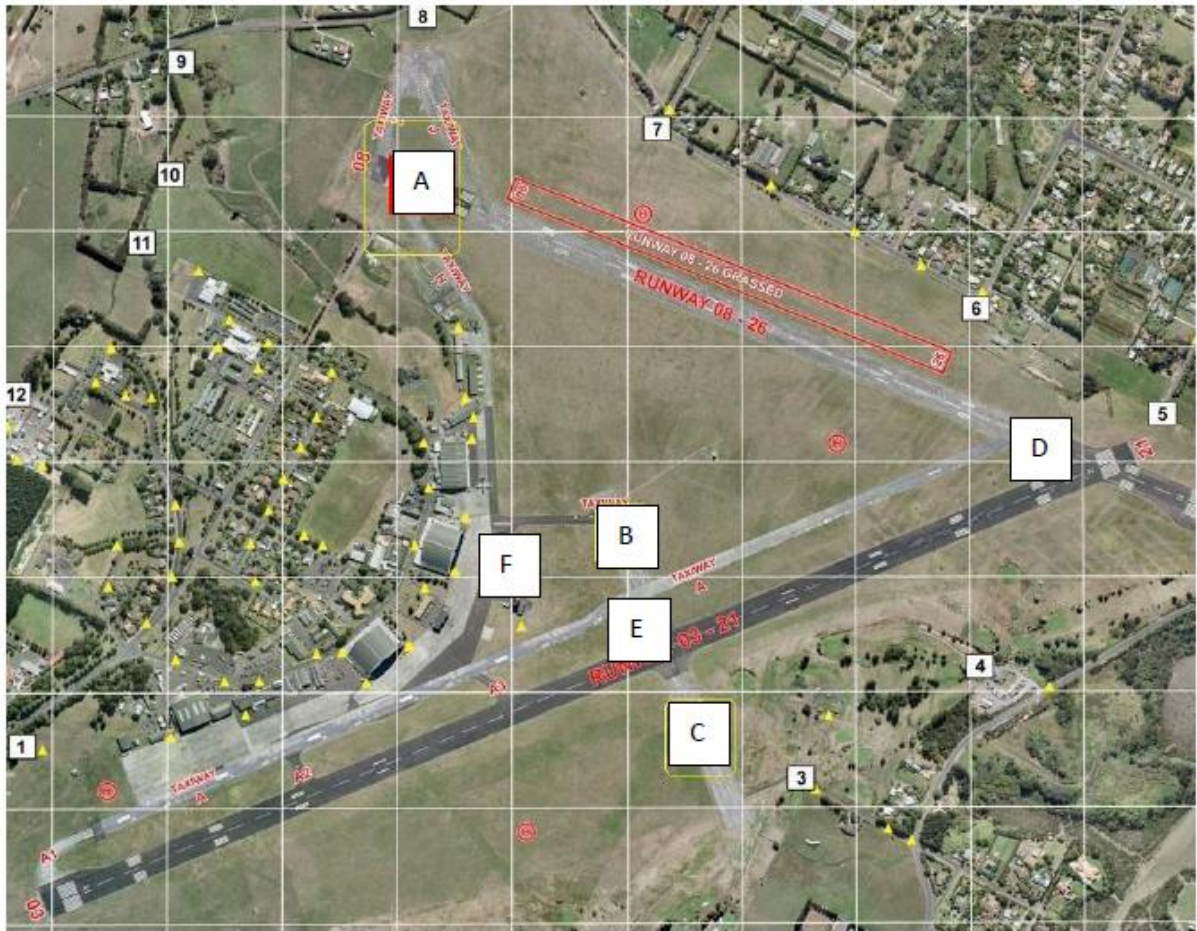


Figure 10: Key sites for aircraft engine testing at Whenuapai Airbase¹⁹

Three representative receiver locations (A, B and C) were identified within the plan change area, as shown in Figure 11 following.

¹⁹ Source: Malcolm Hunt Associates 2017

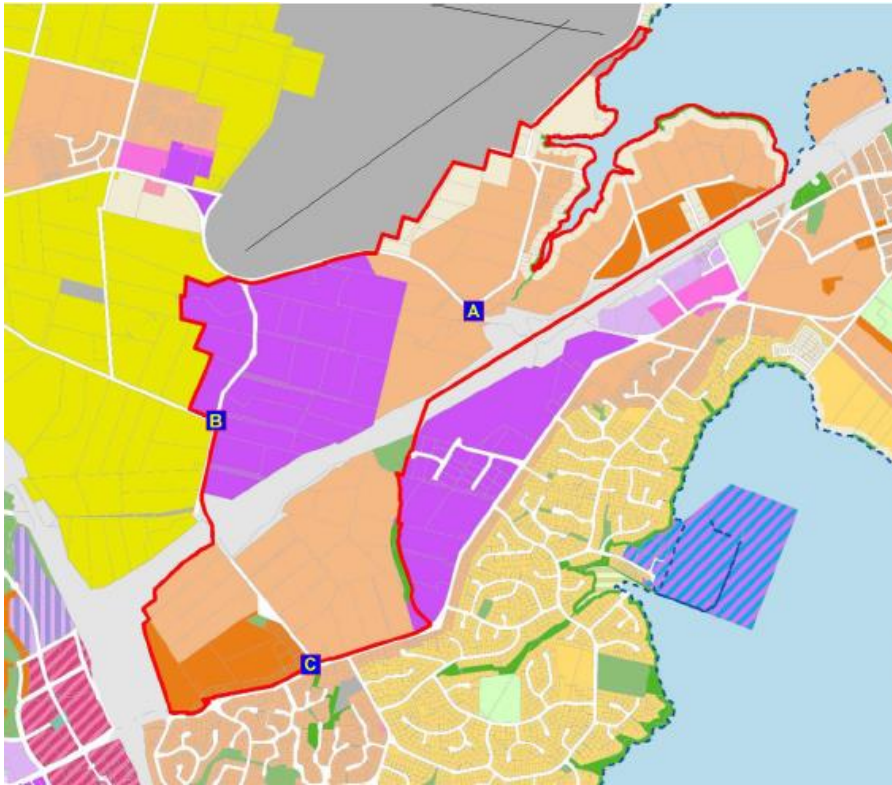


Figure 11: Representative receiver locations identified as A, B and C within the plan change area.

A worst case scenario was predicted for the identified receiver locations, based on a seven-day rolling average with both high and low powered tests conducted for all three aircraft types. The predictions were based on a receiver height of 4.2 metres which equates to the upper storey of a two-storey dwelling and the noise levels are mapped as 57 dB L_{dn} and 65 dB L_{dn} contours within the plan change area.

The report concluded that areas within the 65 dB L_{dn} are not suitable for new residential or noise sensitive activities. For the area between the 57 dB L_{dn} and 65 dB L_{dn} contours, noise effects are predicted to be significant without any additional acoustic treatment of habitable rooms. Outside of the 57 dB L_{dn} contour, engine testing noise levels are considered to be acceptable for noise sensitive activities without any mitigation measures.

The council's review of NZDF's noise assessment report concluded that the noise contours in the report were reasonable, would allow land affected by aircraft engine testing to be appropriately zoned and plan provisions to address the issue to be incorporated into a precinct. The review noted that the worst case scenario may be exceeded on occasion and that there will be many instances when the engine testing noise will be less than the seven-day rolling average. As engine testing generally occurs before 10pm, significant sleep interference issues are avoided.

Desired outcome: The existing and future community of Whenuapai is adequately protected from the adverse effects of noise from the ongoing operations at Whenuapai Airbase.

6.8.1 Current planning provisions

Auckland Unitary Plan (Operative in Part)

Whenuapai Airbase has a Special Purpose Airports and Airfields Zone under the AUP (OP). Chapter H23 refers to Chapter I Precincts for provisions applicable to each airport or airfield. There are no specific provisions relating to Whenuapai Airbase as there is no precinct over the airbase.

However, the Aircraft Noise Overlay (Chapter D24) applies across a part of the plan change area and its provisions are relevant. The description (D24.1) states:

The purpose of the Aircraft Noise Overlay is to manage the subdivision of land and location of activities sensitive to aircraft noise in areas of high cumulative noise around the region's airports and airfields, so that the continued operation of the airports and airfields is not compromised and reverse sensitivity issues are addressed.

The extent of the Aircraft Noise Overlay in Whenuapai is shown in Figure 12.

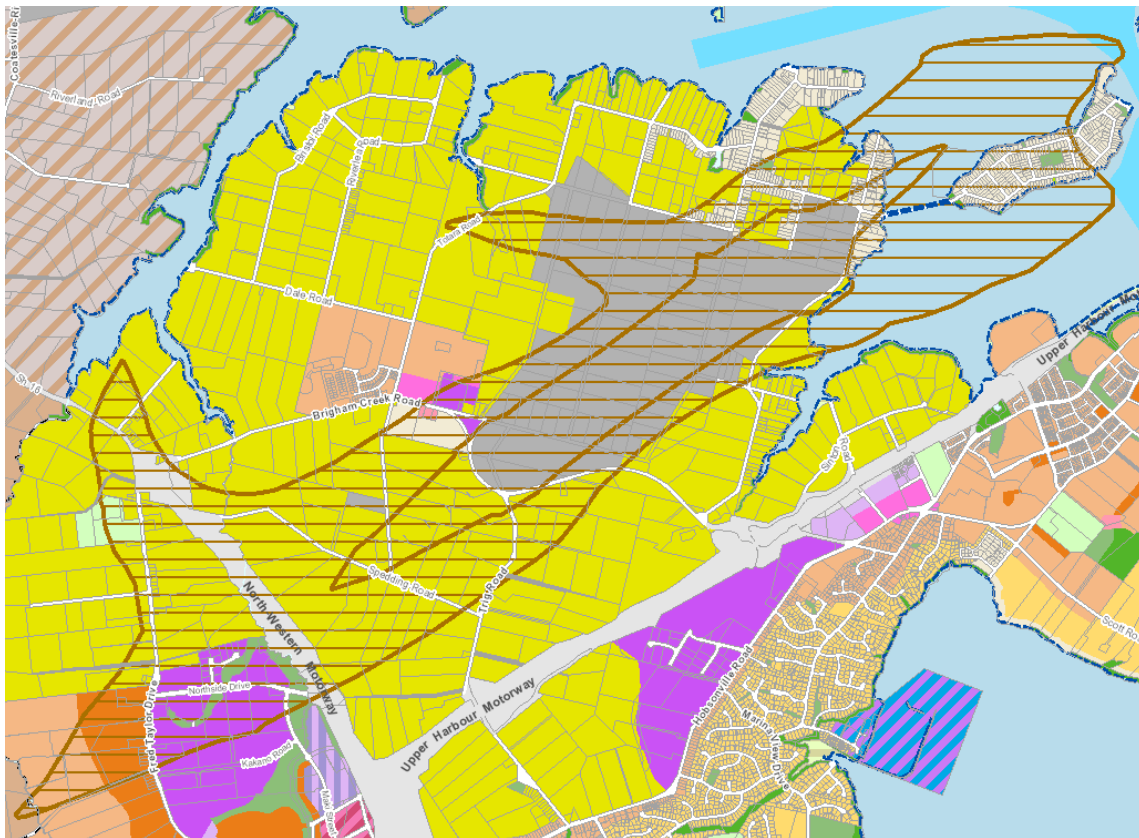


Figure 12: The Aircraft Noise Overlay (in brown) in Whenuapai.

The inner contour in Figure 12 represents the 65 dB L_{dn} noise boundary while the outer contour represents the 55 dB L_{dn} noise boundary.

There is strong direction to protect airports and airfields from reverse sensitivity effects and address adverse effects of aircraft noise on activities sensitive to aircraft noise (including residential). Policy D24.3.1 seeks to avoid the establishment of new activities sensitive to aircraft noise within the 65 dB L_{dn} noise contour in the overlay (the inner contour for Whenuapai Airbase). Between the 55 dB L_{dn} and 65 dB L_{dn} noise contours, new residential and other activities sensitive to aircraft noise should be avoided unless the effects can be “adequately remedied or mitigated through restrictions on the numbers of people to be accommodated through zoning and density mechanisms and the acoustic treatment (including mechanical ventilation) of buildings containing activities sensitive to aircraft noise excluding land designated for defence purposes” (Policy D24.3.3(a)).

Policy 24.3.5 is also relevant:

Manage residential intensification and activities sensitive to aircraft noise within (5) areas identified for accommodating urban growth in a way that avoids reverse sensitivity effects as far as practicable, including reverse sensitivity effects between those land uses and such effects on Auckland International Airport, Ardmore Airport, Whenuapai Airbase and North Shore Airport, and that avoids, remedies or mitigates adverse aircraft noise effects on people and communities.

Between the 55 dB L_{dn} and 65 dB L_{dn} noise boundaries, new activities sensitive to aircraft noise and alterations/additions to existing buildings accommodating activities sensitive to aircraft noise are a restricted discretionary activity (Rule D24.4.1(A1) and (A3)), provided they comply with Standard D24.6.1(1). The standard specifies sound attenuation and ventilation requirements. However subdivision of land for activities sensitive to aircraft noise to create a new site between the 55 dB L_{dn} and 65 dB L_{dn} noise boundaries is non-complying.

Within the 65 dB L_{dn} noise boundary, new activities sensitive to aircraft noise are prohibited as is any subdivision of land for activities sensitive to aircraft noise. Alterations and additions to existing buildings accommodating activities sensitive to aircraft noise are a non-complying activity.

The AUP (OP) only manages the effects of aircraft noise under the Aircraft Noise Overlay with no other controls for noise effects such as engine testing noise outside of the noise contours.

6.8.2 Planning response to issue

No response is proposed in respect of managing the effects of aircraft noise from Whenuapai Airbase as the issue is adequately addressed by way of the Aircraft Noise Overlay, the associated provisions in Chapter D24 and the conditions of Designation 4310.

However, as the Aircraft Noise Overlay and Designation 4310 do not include noise from aircraft engine testing, this plan change proposes to incorporate the 57 dB and 65 dB L_{dn} contours identified in NZDF's noise assessment report as part of the Whenuapai 3 Precinct. Specific rules are proposed to ensure adverse effects from aircraft engine testing noise on activities sensitive to noise are appropriately managed. This includes zoning sites within the 65 dB L_{dn} contour as Business – Light Industry and between the 57 dB L_{dn} and 65 dB L_{dn} contours as Residential – Single House to limit the number of people exposed to the noise. Additionally, Standard I616.6.19 require sound attenuation and related ventilation to the noise environment of habitable rooms does not exceed 40 dB L_{dn} . This approach is consistent with the existing measures for managing activities affected by operational aircraft noise.

6.9 Historic heritage and trees

Issue: Urban development within the plan change area may adversely affect heritage and / or archaeological sites and areas, leading to their modification such that the heritage or archaeological values are compromised or lost.

The plan change area has only a few heritage sites and these are already listed in the AUP (OP). The existing sites have protection and the plan change does not seek to amend those provisions.

As part of the structure plan and plan change processes, further investigations were carried out for the Clarks Lane workers' residences and for an anti-aircraft battery site located at 4 Spedding Road and 92 Trig Road.

The group of workers' residences on Clarks Lane have considerable historical value as they reflect an important aspect of local and regional history, the private construction of accommodation for pottery and brickworks industry employees. The remaining cottages and foreman's villa represent some of the first privately established workers' accommodation still extant in the region. The cottages are also some of the earliest remaining examples of their type in the locality, representing an early period of development in the area. Clarks Lane has further significance for its association with the Clark family, specifically R.O. Clark II, R.O. Clark III and his brother, T.E. Clark. The Clark family were some of the first European settlers to the area and made a significant contribution to the history of the locality.

The five structures that make up the Whenuapai anti-aircraft battery are mainly filled with earth so their condition is not fully known. They are constructed of thick reinforced concrete

and are considered to be in fair condition based upon the two emplacements that were able to be accessed. Protection of these two sites will add to the heritage fabric in this part of Whenuapai and provide tangible links to the past as the new community locates into these areas.

An arboriculture assessment undertaken in April 2017²⁰ found that no trees in the plan change area met the requirements in the AUP (OP) to be added to the Notable Trees Schedule.

Desired outcome: Archaeological and heritage items and sites are appropriately managed in the plan change area.

6.9.1 Current planning provisions

Auckland Unitary Plan (Operative in Part)

The AUP (OP) has provisions that manage heritage sites and items at both Regional Policy Statement and district plan levels.

Regional Policy Statement

Chapter B5 contains objectives and policies that guide the management of historic heritage and special character. The recognition, protection, conservation and appropriate management of historic heritage places will help future generations appreciate what these places mean to the development of the region. Historic heritage places are a finite resource that cannot be duplicated or replaced.

Special character areas include older established areas and places which may be whole settlements or parts of suburbs or a particular rural, institutional, maritime, commercial or industrial area. They are areas and places of special architectural or other built character value, exemplifying a collective and cohesive importance, relevance and interest to a locality or to the region.

Chapter D Overlays

Chapter D17 Historic Heritage Overlay provides for scheduled historic heritage places that can be an individual feature, or encompass multiple features and/or properties, and may include public land, land covered by water and any body of water. A historic heritage place may include cultural landscapes, buildings, structures, monuments, gardens and plantings, archaeological sites and features, traditional sites, sacred places, townscapes, streetscapes and settlements. The provisions within Chapter D17 manage the protection, conservation, maintenance, modification, relocation, use and development of scheduled historic heritage places.

²⁰ Memo from Greenscene NZ to council dated 3 April 2017

Clarks Lane

There are six dwellings in Clarks Lane in the eastern part of the plan change area that have the AUP (OP)'s Historic Heritage Overlay Extent of Place over them. This overlay provides protection to the dwellings numbered 4, 5, 6, 7, 9, and 10 Clarks Lane. Number 3 Clarks Lane is not included, but will be included as part of the Plan Change.

The council engaged consultants to undertake a preliminary historical assessment of the Whenuapai Structure Plan area which was completed in June 2016. The report identified approximately 35 historic heritage sites in the plan change area, the majority being located in the vicinity of Clarks Lane.

A similar pattern was identified for recorded archaeological sites although there may be a number of unrecorded archaeological sites. The consultants concluded that most archaeological and heritage sites are located around the coastal edge. These are protected by accidental discovery protocols.

Anti-Aircraft Battery at 4 Spedding and 92 Trig Road

The AUP (OP) currently provides no protection for this site.

6.9.2 Planning response to heritage issue

The AUP (OP) has a policy and rule framework to manage development that affects the heritage and archaeological values associated with development sites. These provisions mean that no new provisions are required to be included in this plan change to manage the heritage areas that are being included in the AUP (OP).

The new Clarks Lane Historic Heritage Area (HHA) is proposed to be included in the AUP (OP) Schedule 14.1 Historic Heritage and Schedule 14.2. This HHA is supported by a map that identifies contributing and non-contributing sites and features in Clarks Lane, and by the inclusion of a Historic Heritage Extent of Place notation in the AUP (OP) Overlay Maps. Individual notations for 4, 5, 6, 9, and 10 Clarks Lane are deleted from Schedule 14.1 and the AUP (OP) Overlay Maps.

As part of this plan change, the anti-aircraft battery is proposed to be included in the AUP (OP) Schedule 14.1 Historic Heritage and is supported by the inclusion of a Historic Heritage Extent of Place notation in the AUP (OP) Overlay Maps.

The proposed amendments to Schedule 14.1 and the Historic Heritage overlay protect historic heritage and therefore have immediate legal effect in accordance with section 86B(3) of the RMA. More information about section 86B of the RMA can be found in section 8 of this report.

6.10 Provision of open space

Issue: Existing open spaces in Whenuapai are inadequate to meet the social and recreational needs of the future community of the area.

The existing network of open space in the plan change area comprises one neighbourhood park on Ryans Road off Trig Road, and pieces of disjointed esplanade reserves along the coast.

As part of enabling the development of 351 hectares of land, it is important to ensure there is adequate provision of open space to meet the diverse needs of the future community and that this open space is integrated with the social, cultural and physical environments. The council's Parks and Recreation Policy team prepared the Whenuapai Structure Plan: Parks and Open Space Report (2016). This report applied the council's Open Space Provision Guidelines 2016 to determine the appropriate amount of open spaces for the Whenuapai area as well as the spatial arrangement of this open space. The structure plan identified the preferred network of open space comprising of five neighbourhood parks, one suburb park and one 10 hectare sports park which will be a regional facility.

There are a number of streams within the plan change area. There are opportunities to integrate the open space network with the stream network and the coastal environment, to increase public access along the coast and the stream edge.

The council is also in the process of acquiring land for the Rawiri Stream restoration and reserve project. The Rawiri Stream runs along the plan change boundary between Hobsonville Road and State Highway 18. The plan change proposes to rezone properties that have been acquired as part of this project to an open space zone under the AUP (OP).

Desired outcome: A functional and attractive open space network that meets the diverse needs of the community and is an integral part of Whenuapai's social, cultural and physical environment.

6.10.1 Current planning provisions

Auckland Unitary Plan (Operative in Part)

The regulatory framework within the AUP (OP) deals with the management of existing open spaces. The structure planning process identified the amount and location of open space needed to meet the needs of future communities consistent with the requirements of Appendix 1: Structure plan guideline of the AUP (OP).

There are small areas of existing Open Space Zones and Coastal Transition Zone in the plan change area.

Appendix 1 Structure plan guidelines

Appendix 1 requires the following matters to be addressed in the structure planning stage:

- Auckland Council's Parks and Open Space Strategy Action Plan
- Integration of green networks with open space and transport networks, and opportunities for environmental restoration and biodiversity
- Mix and distribution of land use which include providing open spaces
- Urban form which includes provision of open spaces highly visible from streets and meets identified community needs
- Location, scale, function and provision of open space.

Relevant council plans

Parks and Open Spaces Strategic Action Plan 2013

Appendix 1 of the AUP (OP) requires consideration of the Parks and Open Spaces Strategic Action Plan when a structure plan is prepared. The action plan provides strategic guidance for planning and developing parks and open spaces. There are four areas of focus:

- opportunities to learn about the special features (including protecting significant ecological, natural, cultural and historic heritage values as well as the coast) of the open space network
- expand the network to include more uses and activities
- visually and physically connecting the open space network to create opportunities for people to move around the city and to enhance biodiversity
- recognise the role of the open space network in improving quality of life, particularly, the synergy between open spaces and creating a green, resilient and prosperous city.

Open Space Provision Guidelines 2016

The provision guidelines provide quantity, distribution and configurations of parks in both greenfield and urban developments. The provision guidelines give effect to the objectives of the Parks and Open Spaces Strategic Action Plan and the AUP (OP).

The Open Space Provision Guideline 2016 has informed the extent of open space necessary in the plan change area.

Parks and Open Spaces Acquisition Policy 2013

While the provision guidelines dictate the quantum necessary, the acquisition policy sets out council's method and process for acquiring parks and open spaces.

6.10.2 Planning response to issue

The plan change will give effect to the identified open space network identified in the Whenuapai Structure Plan: Parks and Open Space Report (2017). This will be done through

a planning framework to ensure development does not preclude the open space outcomes identified, while allowing for some flexibility for developers to determine the exact location of open space.

7. Evaluation of objectives

7.1 Integrated subdivision, use and development

7.1.1 Objectives

Objective I616.2(1)	Subdivision, use and development in the Whenuapai 3 Precinct is undertaken in a comprehensive and integrated way to provide for a compatible mix of residential living and employment opportunities while recognising the strategic importance of Whenuapai Airbase.
Objective I616.2(2)	Subdivision, use and development achieves a well-connected, safe and healthy environment for living and working with an emphasis on the public realm including parks, roads, walkways and the natural environment.
Objective I616.2(7)	Development in the Neighbourhood Centre Zone: (a) is coordinated and comprehensive; (b) has active frontages facing the street; and (c) promotes pedestrian linkages.

The implementation of this plan change will see Whenuapai change from a mainly rural environment to an urban environment over time. However, with fragmented land ownership, there is uncertainty where development will occur, at what times and how quickly the area will develop after the plan change becomes operative.

Objectives I616.2(1) and I616.2(2) are the overarching objectives to guide subdivision, use and development within the plan change area. The application of these objectives within the Whenuapai 3 Precinct and the proposed zoning approach recognises the importance of ensuring that development occurs in an integrated way that will sustainably manage both development and the environment. They also recognise the importance of a high quality urban environment with an emphasis on the public realm.

As shown on the proposed zoning map for this plan change, approximately 4000m² of land is proposed to be zoned Neighbourhood Centre on Hobsonville Road. The Neighbourhood Centre Zone provides for the convenience retail needs of local residents and passers-by and is considered to be integral to an accessible and liveable urban environment. The plan provides direction for how development within the Neighbourhood Centre Zone is envisaged to occur through Objective I616.2(7).

7.1.2 Evaluation

The current planning provisions described in section 6.1 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.1 provides the reasons why a planning response is needed to address the identified issue.

Relevance

Objectives I616.2(1) and (2) relate to the key issue that the plan change seeks to address – to provide for integrated subdivision, use and development in Whenuapai. It is important that subdivision, use and development are integrated with the provision of infrastructure to mitigate adverse effects of urbanising a greenfield area.

The objectives are the most appropriate way to achieve the purpose of the RMA. In particular, Objective I616.2(2) gives effect to section 5(2) of the Act by enabling development in Whenuapai in a manner which safeguards the life-supporting capacity of ecosystems. The objectives also recognise and provide for section 6 matters such as the preservation of the natural character of the coastal environment, the maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers, and the protection of historic heritage from inappropriate subdivision, use and development. They also have regard to section 7 matters, including: the efficient use and development of natural and physical resources, the maintenance and enhancement of amenity values, intrinsic values of ecosystems, maintenance and enhancement of the quality of the environment and the effects of climate change.

The Whenuapai Airbase is an important asset at the edge of the plan change area and any development will need to consider its potential effects on existing airbase operations. Objective I616.2(7) relates to the provision of a functional neighbourhood centre.

The objectives assist the council with giving effect to the National Policy Statement on Urban Development Capacity 2016. Through rezoning land and area specific precinct provisions, the plan change will, when applied in conjunction with the AUP (OP), provide opportunities to develop land in Whenuapai for residential and business uses in a coordinated and integrated manner.

The AUP (OP) Regional Policy Statement contains a number of provisions that are relevant for this plan change. These are outlined in section 4.2 of this document. The plan change objectives align with the strategic outcomes sought in the Regional Policy Statement of the AUP (OP), particularly those in Chapter B2 Urban growth.

The plan change objectives are also within the scope of the council's functions under sections 30 and 31 of the RMA. The Resource Legislation Amendment Act 2017 included “the establishment, implementation and review of objectives, policies and methods to ensure there is sufficient development capacity in relation to housing and business land to meet the expected demands of the region” into sections 30 and 31 of the RMA. The plan change aligns with this statutory requirement.

Achievability

The council has the ability to deliver on these objectives through the application of the AUP (OP), the district plan provisions proposed in this plan change, and through Watercare and

Auckland Transport as council controlled organisations and infrastructure providers. The provisions fall within the council's functions under section 31 of the RMA.

The provisions of the Whenuapai 3 Precinct provide direction and certainty to landowners and developers within the plan change area about what the planning outcomes for the area are.

Acceptability

The objectives are consistent with the direction provided by the Whenuapai Structure Plan and identified community outcomes. As outlined in section 5.1 of this report, the structure planning process was the subject of a public consultation period in April-May 2016.

Comments received during public consultation were used to create the vision for Whenuapai. The vision is as follows:

Whenuapai is a liveable, compact and accessible place with a mix of high quality residential and employment opportunities. It makes the most of its extensive coastline, is well connected to the wider Auckland Region, and respects the cultural and heritage values integral to its distinctive character.

This structure plan vision was supported in the structure plan by seven key objectives. They are translated into Objectives I616.2(1), (2) and (7) in this plan change.

Both Te Kawerau a Maki and Ngati Whatua o Kaipara have been involved throughout the development of the structure plan and the drafting of the plan change. They have expressed their general support for development within Whenuapai as long as land is developed in a way whereby infrastructure provision is integrated with protection of the streams, archaeological sites and the Upper Waitematā Harbour.

7.2 Transport and other infrastructure

7.2.1 Objectives

Objective I616.2(3)	Subdivision and development does not occur in advance of the availability of transport infrastructure, including regional and local transport infrastructure.
Objective I616.2(4)	The adverse effects, including cumulative effects, of subdivision and development on existing and future infrastructure are managed to meet the foreseeable needs of the Whenuapai 3 Precinct area.
Objective I616.2(5)	Subdivision and development does not occur in a way that compromises the ability to provide efficient and effective infrastructure networks for the wider Whenuapai 3 Precinct area.
Objective I616.2(6)	Subdivision and development implements the transport network connections and elements as shown on Whenuapai 3 Precinct Plan 2 and takes into account the regional and local transport network.

Proposed Objectives I616.2(3) to (6) seek to ensure that development does not occur without the necessary infrastructure to support it, including transport, wastewater and water supply infrastructure required within the plan change area and beyond.

For transport infrastructure, the Technical Inputs report dated June 2017 proposes arterial and collector roads as shown on Whenuapai 3 Precinct Plan 2. The report also assessed the infrastructure investments required in areas within the precinct to ensure the transport network supports development. Five development areas were determined, identified as areas 1A to 1E on Whenuapai 3 Precinct Plan 2, and the infrastructure identified within each area that needs to be provided as development progresses. This infrastructure is required to mitigate adverse effects of subdivision and development.

7.2.2 Evaluation of the objectives

The current planning provisions described in section 6.2 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.2 provides the reasons why a planning response is needed to address the identified issue.

Relevance

The objectives are the most appropriate way to achieve the purpose of the RMA as it enables subdivision, use and development while ensuring the necessary infrastructure is provided to mitigate any adverse effects of the development of the precinct, including cumulative effects, on the wider transport network as the area is developed.

Cumulative effects of developing the greenfield area need to be considered in the context of the future environment which will be considerably changed once it is urbanised, and impacts of development on this future environment need to be managed through these objectives. Likewise the economic impacts on other developers and ratepayers and future residents of not contributing to infrastructure need to be addressed.

The objectives ensure that development within the plan change area is managed in a way that is consistent with the Regional Policy Statement (RPS) (B2 Urban Growth and Form and B3 Infrastructure), Chapter E27 Transport and Chapter E38 Subdivision - Urban of the AUP (OP).

The objectives give effect to the RPS and are consistent with the provisions of Chapter E38 Subdivision – Urban.

Achievability

These objectives are implemented through precinct provisions and standards that are based on the technical work by council consultants. There is a level of risk as the transport infrastructure is not yet costed or funded and as such proportional shares cannot be calculated. This does not give developers certainty. However, the transport costs for the plan change area are being determined and it is expected the projects will be in the 2018-2022

Long-term plan or future annual plans. The standards and rules in the precinct are the most appropriate way to meet the objectives and align with the AUP (OP).

For wastewater and water supply infrastructure, this objective is achieved through existing AUP (OP) provisions and Watercare's Waste Water Servicing Strategy²¹.

Acceptability

The objectives are consistent with identified community outcomes as stated in the Whenuapai Structure Plan. Throughout the structure plan and plan change process the community expressed a desire for an efficient transport network, including public transport. These objectives aim to provide that network through a combination of public and developer funding so ratepayers and the community are not bearing the total cost of the works necessary to enable development.

Te Kawerau Iwi Tribal Authority stated in their Cultural Values Assessment that they advocate for transport options and road infrastructure needed to accommodate growth while protecting the environment and improving pedestrian access and safety. These objectives are consistent with these outcomes.

Ngati Whatua o Kaipara's Cultural Values Assessment does not raise any concerns about the transport network or wider infrastructure provision.

7.3 Stormwater management

7.3.1 Objective

Objective I616.2(8)	Through subdivision, use and development, implement a stormwater management approach that: (a) is integrated across developments; (b) avoids new flood risk; (c) mitigates existing flood risk; (d) protects the ecological values of the receiving environment; (e) seeks to mimic and protect natural processes; and (f) integrates with, but does not compromise the operation of, the public open space network.
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Objective I616.2(8) seeks to implement an integrated stormwater management approach across the plan change area that is consistent with the outcomes sought in the Whenuapai 3 Precinct Stormwater Management Plan 2017 (SMP). It also aligns with the objectives and policies of B7.3, B7.4, B10.2 and the framework in E1 Water quality and integrated management of the AUP (OP).

The SMP was prepared to support the proposed plan change and to provide an appropriate stormwater management response in the context of the catchment's receiving environment

²¹ North West Transformation Area (NwTA) Wastewater Servicing Strategy 2015

and existing stormwater management issues and opportunities. The SMP provides overarching guidance for stormwater management across the plan change area and outlines the outcomes sought and sets out minimum requirements for developers.

7.3.2 Evaluation of the objective

The current planning provisions described in section 6.4 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.4 provides the reasons why a planning response is needed to address the identified issue

Relevance

The objective ensures that greenfield development within the plan change area is managed in a way that is consistent with the SMP and Chapter E1 Water quality and integrated management of the AUP (OP).

The objective is the most appropriate way to achieve the purpose of the RMA as it enables subdivision, use and development while maintaining ecosystem health and protecting the receiving environment. It also relates to the provision of public access to rivers (section 6(d) of the Act) and the maintenance and enhancement of the quality of the environment (section 7(f)).

The proposed objective is also consistent with the outcomes sought in the National Policy Statement for Freshwater Management. It does this by managing the adverse effects of stormwater runoff from subdivision, use and development on streams, rivers and the Waitematā Harbour.

The outcomes sought in Regional Policy Statement Chapters B7 Natural resources, B8 Coastal environment and B10 Environmental risk are also recognised through the proposed objective. In particular, provisions in Chapter B7 recognise the pressure of urban growth on water resources and there is direction to integrate the management of land use and freshwater systems to enhance degraded freshwater and coastal systems, and to minimise the loss of freshwater systems through the objectives and policies.

The proposed objective is within the scope of the council's functions under section 31 of the RMA, in particular the integrated management of resources and the avoidance or mitigation of natural hazards. The objective will also influence the management of water quality, discharges and ecosystems in waterbodies and coastal waters.

Achievability

This objective seeks to implement the provisions of Chapter E1 Water quality and integrated management in the AUP (OP) and sits alongside existing stormwater management provisions in Chapters E1 and E10. It provides direction and sets an expectation for the level of stormwater management required across all developments within the plan change area. The objective is implemented through precinct provisions that are guided by, and refer to, the SMP.

Acceptability

Objective I616.2(8) is consistent with identified iwi outcomes. Te Kawerau a Maki and Ngati Whatua o Kaipara have been involved in the structure planning and plan change processes. Through their cultural values assessments and meetings with council staff, the iwi have expressed their support for improving water quality within the catchment, protecting streams and managing stormwater in an integrated manner. The objective is consistent with the requirements of Chapter E1 in the AUP (OP).

7.4 Biodiversity

7.4.1 Objective

Topic:	Biodiversity
Objective I616.2(10)	Subdivision, use and development enhance the coastal environment, biodiversity, water quality, and ecosystem services of the precinct, the Waiarohia and the Wallace Inlets, and their tributaries.

Objective I616.2(10) responds to the existing low biodiversity values in Whenuapai as well as the unique ecological features in the area. The objective seeks to require development to enhance biodiversity values, including coastal environment, biodiversity, water quality, and ecosystem services. This is consistent with chapter B7 Natural resources of the AUP (OP).

7.4.2 Evaluation of the objective

The current planning provisions described in section 6.5 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.5 provides the reasons why a planning response is needed to address the identified issue.

Relevance

Section 5(2) of the RMA defines sustainable management to include safeguarding the life-supporting capacity of air, water, soil and ecosystems. Section 7 requires particular regard to be given to the intrinsic values of ecosystems, and the maintenance and enhancement of the quality of the environment.

Policy 11(b) of the New Zealand Coastal Policy Statement (NZCPS) seeks to limit significant adverse effects or mitigate adverse effects on biodiversity values of the coast.

Regional Policy Statement (RPS) Chapter B7 Natural resources addresses the pressure of urban growth on land and water resources including habitats and biodiversity. In particular, objective B7.2.1(2) directs development to restore indigenous biodiversity while objective B7.3.1 seeks to protect freshwater systems.

Objective I616.2(10) achieves the purpose of the RMA and is consistent with the outcomes sought in the NZCPS and RPS of the AUP (OP) because it recognises the ecosystem functions and directs development to enhance the quality of, the local environment – particularly the unique features of the Waiarohia and the Wallace Inlets.

Objective I616.2(10) gives effect to the council’s functions under section 31(a) and (b)(iii) of the RMA. The objective manages the effects of development on the natural and physical resources of the district and maintains indigenous biological diversity.

Achievability

The biodiversity provisions are based on further information prepared for the Whenuapai Structure Plan and are consistent with the directive of the NZCPS and the AUP (OP). The objective gives effect to the council’s functions under section 31 of the RMA.

The objective is also given effect to through precinct provisions rules, and standards. Non-statutory methods include council initiatives such as its Biodiversity Strategy and its participation in the North-West Wild Link project. Similarly, community planting and other private initiatives can contribute to enhancing biodiversity values of the area.

Acceptability

Objective I616.2(10) is consistent with outcomes sought by Te Kawerau a Maki and Ngati Whatua o Kaipara as expressed through their cultural values assessments. In particular, the objective addresses their advocacy for protecting existing native species and enhancing ecosystems – especially native flora associated with waterways.

7.5 Coastal management – coastal erosion risk

7.5.1 Objective

Topic:	Coastal erosion risk
Objective I616.2(9)	New development does not occur in areas identified as subject to coastal erosion, taking into account the likely long-term effects of climate change.

Objective I616.2(9) seeks to avoid development on land subject to coastal erosion hazards and to ensure outcomes consistent with the risk based approach outlined in E36 Flooding and Natural Hazards of the AUP (OP).The objective give effect to the coastal hazards assessment which identifies the likely extent of coastal erosion hazard in the local area, taking into account the likely long-term effects of climate change.

7.5.2 Evaluation of the objective

The current planning provisions described in section 6.6 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.6 provides the reasons why a planning response is needed to address the identified issue.

Relevance

Section 5(2) of the RMA defines sustainable management to include enabling people and communities to provide for their social, economic, and cultural well-being and for their health and safety. Section 6 of the RMA identifies the management of significant risks from natural hazards as a matter of national importance.

The New Zealand Coastal Policy Statement (NZCPS) provides clear direction on how to manage coastal hazards: the identification of hazard areas (Policy 24) and to avoid increasing the risk of harm in these areas (Policy 25). The AUP (OP) reinforces this approach. The direction of Regional Policy Statement Chapter B10 Environmental risk is to ensure resilience to natural hazards (and climate change) and to progressively reduce risks from such hazards, while Chapter E36 manages subdivision, use and development to not increase such risks.

Objective I616.2(9) is consistent with the risk-based approach to planning for coastal hazards as it is based on the findings of a localised coastal hazards assessment. It reinforces the risk-based approach by clearly directing that no development should occur in identified coastal erosion hazard area, thereby avoiding the creation of new risks.

Objective I616.2(9) is the most appropriate way to achieve the purpose of the RMA as it is consistent with, and gives effect to the coastal hazard outcomes sought in the AUP (OP), and the NZCPS.

The objective gives effect to the function of Council under section 31(b)(i) of the RMA by avoiding or mitigating the effects of natural hazards.

Achievability

The objective is consistent with the purpose of the RMA and gives effect to the functions of the council. The outcomes of the objective are achievable through precinct provisions, rules, standards, and zoning.

Acceptability

Te Kawerau a Maki and Ngati Whatua o Kaipara did not identify specific coastal hazard outcomes in their cultural values assessments. Though the objective focuses on managing risk from coastal erosion, the zoning provision will give effect to the outcome of protecting heritage sites/wahi tapu which are predominately located on the coast.

As noted above, the objective gives effect to the AUP (OP) which was prepared with significant community input in 2015-2016.

7.6 Reverse sensitivity effects on Whenuapai Airbase – lighting

7.6.1 Objective

Objective I616.2(12)	The lighting effects of subdivision, use and development on the operation and activities of Whenuapai Airbase are avoided, remedied or mitigated.
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Objective I616.2(12) seeks to manage lighting effects within the plan change area to ensure activities do not adversely affect the safe operation of Whenuapai Airbase. It is important for new landowners and developers within the area to be aware of the presence of the airbase and the importance of not having lighting that imitates or masks runway light.

7.6.2 Evaluation of the objective

The current planning provisions described in section 6.7 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.7 provides the reasons why a planning response is needed to address the identified issue.

Relevance

This objective addresses reverse sensitivity effects, related to lighting associated with development, on Whenuapai Airbase. While there are other reverse sensitivity effects associated with new greenfield development, such as bird strike risk, noise and building height, lighting effects are manageable through this plan change.

Although bird strike risk has been identified as a potential issue by the New Zealand Defence Force (NZDF), the recommendations provided in their wildlife hazards report are generally outside the scope of the council's functions.

In regards to aircraft noise, the existing AUP (OP) provisions within Chapter D24 Aircraft Noise Overlay address reverse sensitivity effects associated with aircraft movements from Whenuapai Airbase. The effects of aircraft engine testing noise are addressed separately. This is discussed further in section 6.8 of this report.

There is direction in the Regional Policy Statement (RPS) Chapter B3 Infrastructure, transport and energy to recognise the functional and operational needs of infrastructure and that infrastructure is protected from reverse sensitivity effects from incompatible subdivision, use and development. In that regard, the proposed objective seeks to give effect to the RPS by ensuring lighting from new development does not adversely affect operational activities on the airbase. Objective I616.2(12) is the most appropriate way to achieve the purpose of the Act.

Objective I616.2(12) aligns with the council's district council functions under section 31 of the RMA. In particular, section 31(1)(a) which includes provisions to achieve integrated

management of effects of the use, development, or protection of land and associated natural and physical resources of the district.

Achievability

As noted above, Objective I616.2(12) is consistent with the RPS provisions within Chapter B3 of the AUP (OP). This objective is achieved through a lighting standard within the Whenuapai 3 Precinct. Non-statutory methods such as public education and working with the NZDF may also assist with achieving this objective.

Acceptability

The proposed objective has the potential to affect the NZDF, being the operators of Whenuapai Airbase, and landowners and developers wishing to develop their site(s) within the plan change area. In their feedback on the draft plan change, the NZDF noted their concerns regarding the potential for lighting within the plan change area to create safety hazards for aircrafts. They also requested standards that are consistent with the existing provisions of the Whenuapai 1 and 2 Precincts.

Objective I616.2(12) is considered to be acceptable, given the strategic and national importance of the airbase. It is in the interests of the NZDF as well as the surrounding communities that lighting effects do not adversely affect aircraft operations.

7.7 Aircraft engine testing noise

7.7.1 Objective

Objective I616.2(13)	The adverse effects of aircraft engine testing noise on activities sensitive to noise are avoided, remedied or mitigated at the receiving environment.
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Objective I616.2(13) sets out to address the issue of noise from aircraft engine testing carried out at Whenuapai Airbase on activities sensitive to noise in the receiving environment. In particular, it seeks to protect the health and amenity of residents, including new residents, within the plan change area.

7.7.2 Evaluation of the objective

The current planning provisions described in section 6.8 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.8 provides the reasons why a planning response is needed to address the identified issue.

Relevance

This objective recognises the potential for significant noise effects from aircraft engine testing on residents and other noise sensitive activities within parts of the plan change area, and seeks to avoid, remedy or mitigate those effects at the receiving environment.

Objective I616.2(13) contributes to sustainable management under section 5(2) of the RMA by providing for the health and safety of people and their communities, and is consistent with section 7(c) which requires particular regard to be had to the maintenance and enhancement of amenity values.

Objective B3.2(6) in the Regional Policy Statement (RPS) seeks to protect infrastructure from reverse sensitivity effects resulting from incompatible subdivision, use and development. The objective is supported by Policies B3.2.2(4) and (5) which direct that adverse effects on infrastructure are avoided, remedied or mitigated and that subdivision, use and development do not constrain the development, operation, maintenance and upgrading of existing and planned infrastructure. In addition, Policy B2.4.2(7) in the RPS addresses reverse sensitivity effects from urban intensification on land with existing incompatible activities.

It is therefore important that the council, in seeking to rezone land around Whenuapai Airbase for residential uses, ensures that the adverse effects of aircraft engine testing noise from the airbase on existing and future residents can be avoided, remedied or mitigated at the receiving environment.

Objective B3.2(6) aligns with the council's functions under section 31 of the RMA, particularly in regards to the management and mitigation of noise effects.

Achievability

The council has the ability to deliver on this objective through the application of area-specific provisions and standards within the Whenuapai 3 Precinct. The inclusion of provisions to address aircraft engine noise effects at the receiving environment also signals the presence of an operational airbase next to the plan change area.

Acceptability

The proposed objective is reasonable as it addresses reverse sensitivity effects on Whenuapai Airbase as well as adverse noise effects on residents under the 57 dB L_{dn} and 65 dB L_{dn} aircraft engine testing noise boundaries. Engine testing noise has been an issue raised by the NZDF and members of the public throughout the structure plan and draft plan change processes. As such, it is important to ensure that new residents have an acceptable level of indoor amenity when engine testing is happening at the airbase.

7.8 Historic heritage

There are no new objectives for historic heritage, archaeology and notable trees being introduced into the AUP (OP) via the plan change. The plan change relies upon the existing objectives that manage these built and natural resources. Consequently there is no requirement to assess the existing objectives, as they are supported by the section 32 report prepared for the Proposed Auckland Unitary Plan.

The plan change includes additions to Schedule 14.1 Schedule of Historic Heritage and 14.2 Schedule of Historic Heritage Area – Maps and Statements of Significance, which are methods by which the objectives of AUP (OP) are met. These additions are assessed in section 6.9 of this report. There are no archaeological sites added to these Schedules.

7.9 Provision of open space

7.9.1 Objective

Topic:	Provision of open space
Objective I616.2(11)	Subdivision, use and development enable the provision of a high quality and safe public open space network that integrates stormwater management, ecological, amenity, and recreation values.

Objective I616.2(11) ensures the development of a network of public open space that is integrated with natural values, is safe and has on-site development that is of a high quality. Indicative open spaces are shown on Whenuapai 3 Precinct Plan 1.

7.9.2 Evaluation of the objective

The current planning provisions described in section 6.10 represents the do-nothing option (status quo) for the objectives assessed in this section. Section 6.10 provides the reasons why a planning response is needed to address the identified issue.

Relevance

The proposed objective seeks to ensure a high-quality network of open space throughout the plan change area, recognising its importance in contributing to a liveable and healthy community.

It also contributes to achieving the purpose of the RMA by providing for the social, economic and cultural wellbeing of the future community and to meet the foreseeable needs of future generations. Section 7(c) of the Act is also relevant, as the provision of open space will enhance the amenity values of an area.

Regional Policy Statement Chapter B2 Urban growth and form in the AUP (OP) contains objectives and policies that seek to provide for the recreational needs of people and communities through the provision of quality open spaces and recreational facilities.

Objective I616.2(11) is within the scope of the council's functions under section 31 of the RMA and in particular section 31(1)(a) relating to integrated management of effects of use and development.

Achievability

The objective is within the council's powers, skills and resources and can be realistically achieved. The preferred locations of open space throughout the plan change area have

been identified through the structure planning process and in accordance with the council's policies and guidelines in respect of parks acquisition. Those locations have been identified in this plan change in the Whenuapai 3 Precinct (Precinct Plan 1).

Parks acquisition is outside the framework of the RMA. Land for suburb and larger sports parks will be purchased by the council while neighbourhood parks will generally be acquired by the council through subdivision.

Acceptability

The provision of open space through subdivision and development in a new growth area is acceptable and anticipated by the community.

Te Kawerau Iwi Tribal Authority stated in their Cultural Values Assessment that they advocate for using esplanade reserves or similar open spaces as part of subdivision. Ngati Whatua o Kaipara's Cultural Values Assessment does not raise any concerns about open space.

8. Assessment of provisions

8.1 Integrated subdivision, use and development

Topic:	Integrated subdivision, use and development
Relevant objectives:	Objectives I616.2(1), (2), (7), (11)

8.1.1 Risk assessment

It is considered there is sufficient information to support the proposed provisions relating to integrated subdivision, use and development. The Whenuapai Structure Plan and the supporting technical reports have formed the basis for this plan change. This is considered to be sufficient information such that an assessment under section 32(2)(c) is not required.

8.1.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 3 below. Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- Costs of loss of rural amenity are not quantified as it is difficult to quantify amenity values.
- Costs of displacing communities are not quantified as it is not possible to quantify these costs.
- Possible loss of cultural values has not been costed because it is difficult to quantify cultural values.
- Costs associated with complying with the neighbourhood centre standards are not quantified because to the costs of collecting the data would not be appropriate to the significance of the impacts, this cost is a small cost in the plan change.

Table 3: Assessment of proposed policies, rules and other methods for integrated subdivision, use and development

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Proposed zoning</u> Properties within the plan change area are proposed to be rezoned from Future Urban (and small areas of Residential – Mixed Housing Urban and Business – Light Industry) to a mix of Residential – Terrace Housing and Apartment Buildings, Residential – Mixed Housing Urban, Residential – Single House, Business – Light Industry, Business – Neighbourhood Centre, Open Space – Conservation, Open Space – Informal Recreation and Special Purpose – Airports and Airfields.</p> <p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(1) Require subdivision, use and development to be integrated, coordinated and in general accordance with the Whenuapai 3 Precinct Plans 1 and 2.</p> <p>Policy I616.3(2) Encourage roads that provide for pedestrian and cycle connectivity alongside riparian margins and open spaces.</p> <p>Policy I616.3(3) Encourage high quality urban design outcomes by considering the location and orientation of buildings in relation to roads and public open space.</p>	<p>Environment</p> <ul style="list-style-type: none"> ▪ The loss of rural land in favour of development into urban residential and business uses. ▪ Loss of rural amenity from development. <p>Social</p> <ul style="list-style-type: none"> ▪ Existing communities may be displaced over time as the rural environments are replaced by urban development. <p>Cultural</p> <ul style="list-style-type: none"> ▪ Potential loss of cultural values if development is not managed properly in terms of protecting those values. <p>Economic</p> <ul style="list-style-type: none"> ▪ Costs associated with the provision of infrastructure as identified in Whenuapai 3 Precinct. ▪ Costs associated with the 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Through Policy I616.3(1), subdivision, use and development is expected to be carried out in an integrated manner. ▪ High amenity values associated with the development of the Neighbourhood Centre. <p>Social</p> <ul style="list-style-type: none"> ▪ Having a mix of employment, residential, open space and other services means residents have easy access to these different types of land uses. ▪ Placing an emphasis on the public realm improves the wellbeing of communities. <p>Cultural</p> <ul style="list-style-type: none"> ▪ Opportunities through development to improve water quality throughout 	<p>Efficiency and Effectiveness</p> <p>The proposed provisions seek to ensure that any subdivision, use and development within a greenfield area are undertaken in a comprehensive and integrated way. This means that the provisions provide effective urban development outcomes and deliver efficient use of the natural and physical resources in the plan change area.</p> <p>An integrated mix of residential and business land is an efficient outcome for future residents.</p> <p>The expectations of the outcomes for the area are effectively articulated in the plan change provisions.</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table Activities listed within the respective activity tables in Chapters E38 Subdivision – Urban, H3 Residential – Single House Zone, H5 Residential – Mixed Housing Urban, H6 Residential – Terrace Housing and Apartment Buildings and H12 Business – Neighbourhood Centre, H17 Business – Light Industry continue to apply to activities within the plan change area.</p> <p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.1 Compliance with Whenuapai 3 Precinct Plans</p> <p>(1) Activities must comply with Whenuapai 3 Precinct Plan 1 and Whenuapai 3 Precinct Plan 2.</p> <p>(2) Activities not meeting Standard I616.6.1(1) must provide an alternative measure that will generally align with, and not compromise, the outcomes sought in Whenuapai 3 Precinct Plans 1 and 2.</p> <p>I616.6.9. Development in the Neighbourhood Centre Zone</p> <p>I616.6.9.1. Access</p> <p>(1) Vehicle accesses must be located at least 30m from the intersection of Hobsonville Road and the realigned Trig Road.</p> <p>(2) All development must provide pedestrian access</p>	<p>standards applying to the Neighbourhood Centre for example the costs of verandas.</p>	<p>the plan change area.</p> <ul style="list-style-type: none"> ▪ Opportunities through development to protect and enhance items of cultural interest. <p>Economic</p> <ul style="list-style-type: none"> ▪ Increased land values and development opportunities through to rezoning of future urban land to live zones under the AUP (OP). The uplift in land values will have a margin to compensate for the development costs of the provisions outlined in the following sections, for example the cost of riparian planting. ▪ Employment opportunities generated from the proposed zoning of approximately 124ha of light industrial land and 4500m² for the retail based neighbourhood centre. ▪ Increased opportunities to develop an attractive centre to serve the local 	

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>that connects to the intersection of Hobsonville Road and the realigned Trig Road.</p> <p>I616.6.9.2. Building frontage</p> <p>(1) Any new building must:</p> <ul style="list-style-type: none"> (a) front onto Hobsonville Road or the realigned Trig Road identified in Precinct Plan 2; and (b) have a building frontage along the entire length of the site excluding vehicle and pedestrian access. <p>I616.6.9.3. Verandas</p> <p>(1) The ground floor of any building fronting Hobsonville Road and the realigned Trig Road must provide a veranda along the full extent of the frontage, excluding vehicle access.</p> <p>(2) The veranda must:</p> <ul style="list-style-type: none"> (a) be contiguous with any adjoining building; (b) have a minimum height of 3m and a maximum height of 4.5m above the footpath; (c) have a minimum width of 2.5m; and (d) be set back at least 600mm from the kerb. <p><u>Other methods in the Whenuapai 3 Precinct</u></p> <p>I616.8.1 Matters of discretion</p> <p>(1) Subdivision and development:</p> <ul style="list-style-type: none"> (a) safety, connectivity, walkability, public access to the coast and a sense of place; (b) location of roads and connections with neighbouring sites; 		community.	

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>(c) functional requirements of the transport network, roads and different transport modes;</p> <p>(d) site and vehicle access, including roads, rights of way and vehicle crossings;</p> <p>(e) location of buildings and structures;</p> <p>(f) provision of open space; and</p> <p>(g) provision of the required local transport infrastructure or an appropriate alternative measure.</p> <p>(2) Use and development in the Neighbourhood Centre Zone:</p> <p>(a) the design and location of onsite parking and loading bays; and</p> <p>(b) building setbacks from Hobsonville Road and the realigned Trig Road.</p> <p>1616.8.2 Assessment criteria</p> <p>(1) Subdivision and development:</p> <p>(a) the extent to which any subdivision or development layout is consistent with and provides for the upgraded roads and new indicative roads shown on the Whenuapai 3 Precinct Plan 2;</p> <p>(b) the extent to which any subdivision or development provides for public access to the coast;</p> <p>(c) the extent to which any subdivision or development layout achieves a safe, connected and walkable urban form with a sense of place;</p> <p>(d) the extent to which any subdivision or</p>			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>development layout is consistent with and provides for the indicative open space shown within Whenuapai 3 Precinct Plan 1;</p> <p>(e) the extent to which any subdivision or development layout complies with the Auckland Transport Code of Practice or any equivalent standard that replaces it;</p> <p>(f) the extent to which any subdivision or development layout provides for the functional requirements of the existing or proposed transport network, roads and relevant transport modes;</p> <p>(g) the extent to which access to an existing or planned arterial road, or road with bus or cycle lane, minimises vehicle crossings by providing access from a side road, rear lane, or slip lane;</p> <p>(h) the extent to which subdivision and development provides for roads to the site boundaries to enable connections with neighbouring sites; and</p> <p>(i) whether an appropriate public funding mechanism is in place to ensure the provision of all required infrastructure.</p> <p>(2) Use and development in the Neighbourhood Centre Zone:</p> <p>(a) the extent to which staff car parking, loading spaces and any parking associated with residential uses is:</p> <p>(i) located to the rear of the building; and</p> <p>(ii) maximises the opportunity for provision</p>			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>of communal parking areas.</p> <p>(b) the extent to which building setbacks are minimised to ensure buildings relate to Hobsonville Road and the realigned Trig Road.</p>			

8.2 Transport

Topic:	Transport and other infrastructure
Relevant objectives:	Objectives I616.2(3), (4), (5), (6)

8.2.1 Risk assessment

The Technical Inputs report from June 2017 defines the interdependencies in each development area, the boundaries of the development areas, as well as the corresponding transport infrastructure required in each area as shown on Whenuapai 3 Precinct Plan 2.

High-level cost estimates have been obtained for the collector and arterial roads shown on Precinct Plan 2. These costs are estimates only and do not take into account streams or the topography of the area. Estimates of the length of the roads were used to calculate the costs rather than detailed measurements. At the time of notification more detailed costings were not available and the proportional share to be paid by applicants for subdivision and development within each development area has not been calculated. The projects are not yet confirmed to be in the 2018-2028 Long-term Plan (LTP). The council will be unable to confirm funding for the arterial roads and may not be able to enter into Infrastructure Funding Agreements with developers until they are in the 2018-2028 LTP.

The Technical Inputs report identifies risks if the Rapid Transit Network (RTN) is not built as development progresses. The modelling shows the RTN is needed to reduce vehicle trip rates and the network will be at capacity with little flexibility if the RTN is not in place. Another risk is that developers may design neighbourhoods around a dominant car mode and it will be hard to change residents' travel behaviour once they are used to travelling by car. At the time of notification the timing of delivery of the RTN is unknown.

Watercare operate a cost recovery system and all development has to pay to connect from their sites to the bulk supply. There is no foreseeable risk associated with the provision of waste water and water supply infrastructure.

8.2.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 4 below. Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- Approximate costs of providing the indicative roads on Precinct Plan 2 have been quantified because these are a significant issue for the plan change (costs are approximate only at this stage)
- The costs to land owners and cost to council to acquire land for roads are not quantified because the value of land should be determined by a qualified valuer and is dependent on the specific characteristics of the site.

Table 4: Assessment of proposed policies, rules and other methods for transport and other infrastructure

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Policies in the Whenuapai 3 Precinct</p> <p>Policy I616.3(4) Require subdivision and development to be managed and designed to align with the coordinated provision and upgrading of the transport infrastructure network within the precinct, and the wider transport network.</p> <p>Policy I616.3(5) Avoid, remedy or mitigate the adverse effects, including cumulative effects, of subdivision and development on the existing and future infrastructure required to support the Whenuapai 3 Precinct.</p> <p>Policy I616.3(6) Require the provision of infrastructure to be proportionally shared across the precinct.</p>	<p>Economic</p> <ul style="list-style-type: none"> ▪ A very high level assessment of roading costs estimates it will cost approximately \$315m-\$421m for the arterial and collector roads in the plan change area to be built. Note, this figure does not take into account topography of the area and the distances used for the roads is approximate. ▪ There is a cost to council and ratepayers if the collector roads are not 	<p>Environment</p> <ul style="list-style-type: none"> ▪ An efficient transport network in the precinct and wider area ensures adverse effects on the environment, e.g. air quality, are reduced. ▪ A quality public transport system reduces the reliance on private vehicles, and with fewer emissions from cars, there will be reduced adverse effects on the environment. <p>Social</p> <ul style="list-style-type: none"> ▪ Improve residents' quality 	<p>Efficiency</p> <p>The application of the policies, rules and standards through the Whenuapai 3 Precinct are consistent with Objectives I616.2(3)-(6).</p> <p>The provisions recognise that infrastructure needs to be provided in a coordinated manner to ensure adverse effects of subdivision and development are mitigated. Standards I616.6.1 and I616.6.8 ensure applicants have to consider neighbouring sites and the transport network</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Policy I616.3(7) Require subdivision and development to provide the local transport network infrastructure necessary to support development of the areas 1A-1E shown in Whenuapai 3 Precinct Plan 2.</p> <p>Policy I616.3(8) Require the provision of new roads and upgrades of existing roads as shown on Whenuapai 3 Precinct Plan 2 through subdivision and development, with amendments to the location and alignment of collector roads only allowed where the realigned road will provide an equivalent transport function.</p> <p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table (A2) Subdivision that does not comply with Standard I616.6.2 Transport infrastructure requirements – NC</p> <p>(A3) Subdivision that complies with Standard I616.6.2 Transport infrastructure requirements, but not complying with one or more of the other standards contained in Standards I616.6 – D</p> <p>(A14) Any structure located on or abutting an indicative road identified in the Whenuapai 3 Precinct Plan 2, unless an alternative road alignment has been approved by resource consent – RD</p>	<p>provided by the developers.</p> <ul style="list-style-type: none"> ▪ There is a cost to council and ratepayers if the arterial road projects are not in the long-term plan and council is unable to charge contributions for them. ▪ Potential loss of developable land where some of the land is used for roads. ▪ There are costs to landowners to provide the collector roads as shown on Whenuapai 3 Precinct Plan 2. ▪ Without detailed costings and the proportional share calculated there is no certainty to applicants about how much the infrastructure costs associated with their subdivision and development proposals will be. ▪ The economic impact (on other developers and ratepayers and future 	<p>of life by ensuring they have an efficient transport network, easy access to services (including business land) and a choice of modes of transport.</p> <ul style="list-style-type: none"> ▪ Improved social cohesion, character and services in the community by being able to travel efficiently. <p>Economic</p> <ul style="list-style-type: none"> ▪ An integrated transport network provides choices for people and access to the local business land. This reduces travel times and is beneficial for employees and employers. ▪ An efficient transport network benefits local retailers as people can more easily access local shops for their convenience retail needs. 	<p>across the precinct.</p> <p>Effectiveness There are risks associated with Standard I616.2 because as the proportional cost share is not yet identified, there is uncertainty for developers.</p> <p>It was not appropriate for the transport infrastructure to be funded through financial contributions as the recent RMA amendments signal the end of that mechanism. The recent case of <i>Norsho Bulc Limited v Auckland Council</i> ENV-2016-AKL-000168 states that there are no provisions in the AUP (OP) which enable any condition of consent requiring a financial contribution to be imposed, and a plan change to the AUP (OP) would be required before council could charge financial contributions. Therefore, the rules and standards in this precinct are deemed the most effective method of ensuring the necessary infrastructure is</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>(A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; <p>But do not comply with any one or more of the other standards contained in Standards I616.6 – D</p> <p>(A15) Activities that do not comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries – NC <p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.1 Compliance with Whenuapai 3 Precinct Plans</p> <p>(1) Activities must comply with Whenuapai 3 Precinct Plan 1 and Whenuapai 3 Precinct Plan 2.</p> <p>(2) Activities not meeting Standard I616.6.1(1) must</p>	<p>residents) of not contributing to infrastructure need to be addressed.</p>		<p>provided across the precinct.</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>provide an alternative measure that will generally align with, and not compromise, the outcomes sought in Whenuapai 3 Precinct Plans 1 and 2.</p> <p>Standard I616.6.2 Transport infrastructure requirements</p> <p>(1) All subdivision and development must meet its proportional share of local infrastructure works as identified in Table I616.6.2.1 below.</p> <p>(2) Where the applicant cannot achieve or provide the required local infrastructure works as identified in Table I616.6.2.1 below, alternative measure(s) to achieve the outcome required are to be provided.</p> <p>(3) The applicant and the council must agree the alternative measure(s) to be provided as part of the application.</p> <p>Standard I616.6.8 Roads</p> <p>(1) Development and subdivision occurring adjacent to an existing road must upgrade the entire width of the road adjacent to the site where subdivision and development is to occur.</p> <p>(2) Development and subdivision involving the establishment of new roads must:</p> <p>(a) provide the internal road network within the site where subdivision and development is to occur: and</p> <p>(b) be built through to the site boundaries to enable existing or future connections to be made with, and through, neighbouring sites.</p>			

8.3 Stormwater management

Topic:	Stormwater management
Relevant objective:	Objective I616.2(8)

8.3.1 Risk assessment

Additional work was carried out during the Whenuapai Structure Plan process to identify the locations of all permanent and intermittent streams and a stormwater management plan for the entire Whenuapai area was provided as part of that process. With that previous work and the current Whenuapai 3 Precinct SMP which supports this proposed plan change, it is considered that there is sufficient information to act.

8.3.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 5 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- Benefits associated with improved water quality are not quantified however improvements can be quantified through monitoring.
- The extent of riparian planting and esplanade reserves anticipated if the plan change area was fully developed are quantified below.
- Compliance costs are not quantified because it is linked to the complexity and scale of the specific development proposals.
- Benefits associated with cultural, aesthetic and biodiversity values are not quantified because of their intrinsic nature.

Table 5: Assessment of proposed policies, rules and other methods for stormwater management

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Application of an existing control in the AUP (OP)</u> Application of the Stormwater Management Area Control – Flow 1 to the plan change area.</p> <p><u>Policies in the Whenuapai 3 Precinct</u></p>	<p>Economic</p> <ul style="list-style-type: none"> ▪ The requirement, through Policy I616.3(13) to avoid locating new buildings in the 1 per cent AEP floodplain potentially reduces the developable 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Protection of streams through the identification of permanent and intermittent streams within Whenuapai 3 Precinct Plan 1 and the special information 	<p>Efficiency</p> <p>The application of the policies, standards and special information requirements through the Whenuapai 3 Precinct along with introducing the SMAF-1 control for the</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Policy I616.3(12) Require subdivision and development within the Whenuapai 3 Precinct to:</p> <ul style="list-style-type: none"> (a) apply an integrated stormwater management approach; (b) manage stormwater diversions and discharges to enhance the quality of freshwater systems and coastal waters; and (c) be consistent with the requirements of the Whenuapai 3 Precinct Stormwater Management Plan (2017) and any relevant stormwater discharge consent. <p>Policy I616.3(13) Require development to:</p> <ul style="list-style-type: none"> (a) avoid locating new buildings in the 1 per cent annual exceedance probability (AEP) floodplain; (b) avoid increasing flood risk; and (c) mitigate existing flood risk where practicable. <p>Policy I616.3(19) 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:</p> <ul style="list-style-type: none"> (a) provide for and encourage establishment and maintenance of ecological corridors through the Whenuapai area; (b) maintain and enhance water quality and aquatic habitats; 	<p>area for sites with floodplains. This is likely to be minor as floodplains in the plan change area are not extensive and are associated with stream channels.</p> <ul style="list-style-type: none"> ▪ The requirement for 10m of riparian planting along all intermittent and permanent streams upon subdivision and development (through Policy I616.3(19) and Standard I616.6.4) will increase costs to those wishing to develop on sites with streams. ▪ Costs associated with the requirements of Standard I616.6.3(3) for those undertaking developments with impervious areas over 1000m². ▪ Additional development costs associated with the requirement to treat stormwater runoff onsite from waste handling and disposal areas (Standard I616.6.3(4)). ▪ Potential costs associated 	<p>requirement for all streams and wetlands to be identified for all applications for land modification, development and subdivision.</p> <ul style="list-style-type: none"> ▪ Reduced adverse effects on streams, the coastal environment and underlying 'high use' groundwater aquifer. ▪ Through subdivision and development, the proposed provisions provide opportunities to enhance and restore the degraded stream environment and improve coastal water quality to meet environmental outcomes under the NPSFM and NZCPS. ▪ Policy I616.3(13) and Standards I616.6.3(1) and (2) require new flood risks to be avoided, consistent with Objective B10.2.1 of the AUP (OP). ▪ Riparian planting requirements provide bank stability and filtration of 	<p>whole plan change area are consistent with Objective I616.2(8). The provisions recognise that the Waiarohia Stream, its tributaries and the Waiarohia Inlet are degraded. While subdivision and development within the plan change area has the potential to increase degradation, it also provides opportunities for enhancing the stream environment, while protecting floodplains and overland flow paths.</p> <p>Overall, it is considered efficient to include stormwater management requirements and guidance through the precinct provisions at the same time as rezoning greenfield land for urban development.</p> <p>Effectiveness The stormwater provisions within the Whenuapai 3 Precinct seek to integrate land use and water quality outcomes. They apply to any subdivision and development undertaken within</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>(c) enhance existing native vegetation and wetland areas within the catchment; and (d) reduce stream bank erosion.</p> <p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table (A3) Subdivision that complies with Standard I616.6.2 Transport infrastructure requirements, but not complying with any one or more of the other standards contained in Standards I616.6 – D (A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; <p>but do not comply with any one or more of the other standards contained in Standards I616.6 – D</p> <p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.1. Compliance with Whenuapai 3 Precinct Plans (1) Activities must comply with Whenuapai 3</p>	<p>with the implementation of the hydrology mitigation requirements in existing AUP (OP) Chapter E10 Stormwater management area – Flow 1 and Flow 2.</p>	<p>surface runoff to assist with the reduction of contaminants and sediment entering streams. It also provides improved shading and assists in improving stream habitat.</p> <ul style="list-style-type: none"> ▪ Aesthetic and amenity values associated with riparian planting for communities within the plan change area. ▪ 15.8km of riparian planting and 3.6km of esplanade reserves along streams (through Standard E38.7.3.2 in the AUP (OP) for streams over 3m). <p>Social</p> <ul style="list-style-type: none"> ▪ The Whenuapai 3 Precinct Stormwater Management Plan 2017 sets out the expected outcomes in relation to the management of stormwater for the area. This provides certainty for the community and developers. <p>Cultural</p>	<p>the plan change area, in addition to other relevant provisions in AUP (OP) Chapters E1 Water quality and integrated management, E9 Stormwater quality – High contaminant generating car parks and high use roads, E36 Natural hazards and flooding and E38 Subdivision. All of these provisions are consistent with the direction provided by the NPSFM, NZCPS and RPS.</p> <p>The provisions are therefore effective in achieving the outcomes sought in Objective I616.2(8).</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Precinct Plan 1 and Whenuapai 3 Precinct Plan 2.</p> <p>(2) Activities not meeting Standard I616.6.1(1) must provide an alternative measure that will generally align with, and not compromise, the outcomes sought in Whenuapai 3 Precinct Plans 1 and 2.</p> <p>Standard I616.6.3. Stormwater management</p> <p>(1) Stormwater runoff from new development must not cause the 1 per cent annual exceedance probability (AEP) floodplain to rise above the floor level of an existing habitable room or increase flooding of an existing habitable room on any property.</p> <p>(2) All new buildings must be located outside of the 1 per cent AEP floodplain and overland flow path.</p> <p>(3) Stormwater runoff from impervious areas totalling more than 1,000m² associated with any subdivision or development proposal must be:</p> <p>(a) treated by a device or system that is sized and designed in accordance with Technical Publication 10: Design Guideline Manual for Stormwater Treatment Devices (2003); or</p> <p>(b) where alternative devices are proposed,</p>		<ul style="list-style-type: none"> ▪ An integrated stormwater management approach that improves water quality throughout the catchment is consistent with Ngati Whātua o Kaipara’s long-term objective to protect and restore the mauri of the Upper Waitematā Harbour²² and ensures stormwater is managed to enhance the receiving environment as requested by Te Kawerau a Maki.²³ <p>Economic</p> <ul style="list-style-type: none"> ▪ An integrated approach to stormwater management provides an opportunity to consider costs, practicality and benefits on a catchment wide basis. ▪ The suite of provisions within the precinct provides certainty for developers at the design stage. ▪ At-source management of contaminants is a cost- 	

²² Ngati Whātua o Kaipara (May 2017), Cultural Values Assessment: Whenuapai Stage 3

²³ Te Kawerau a Maki (June 2016), Cultural Values Assessment for Whenuapai Structure Plan

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance.</p> <p>(4) All stormwater runoff from:</p> <p>(a) commercial and industrial waste storage areas including loading and unloading areas; and</p> <p>(b) communal waste storage areas in apartments and multi-unit developments must be directed to a device that removes gross stormwater pollutants prior to entry to the stormwater network or discharge to water.</p> <p>Standard I616.6.4. Riparian planting</p> <p>(1) The riparian margins of a permanent or intermittent stream or a wetland must be planted to a minimum width of 10m measured from the top of the stream bank and/or the wetland's fullest extent.</p> <p>(2) Riparian margins must be offered to the council for vesting.</p> <p>(3) The riparian planting proposal must:</p> <p>(a) include a plan identifying the location, species, planting bag size and density of the plants;</p> <p>(b) use eco-sourced native vegetation where available;</p> <p>(c) be consistent with local biodiversity;</p> <p>(d) be planted at a density of 10,000 plants per hectare, unless a different density has</p>		<p>effective way of addressing the water and sediment quality in streams and the Upper Waitematā Harbour, and is consistent with the direction provided by the NZCPS.</p>	

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>been approved on the basis of plant requirements.</p> <p>(4) Where pedestrian and/or cycle paths are proposed, they must be located adjacent to, and not within, the 10m planted riparian area.</p> <p>(5) The riparian planting required in Standard I616.6.4(1) above must be incorporated into a landscape plan. This plan must be prepared by a suitably qualified and experienced person and be approved by the council.</p> <p>(6) The riparian planting required by Standard I616.6.4(1) cannot form part of any environmental compensation or offset mitigation package where such mitigation is required in relation to works and/or structures within a stream.</p> <p><u>Other methods in the Whenuapai 3 Precinct</u></p> <p>I616.9 Special information requirements</p> <p>(1) Riparian planting plan An application for land modification, development and subdivision which adjoins a permanent or intermittent stream must be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants.</p> <p>(2) Permanent and intermittent streams and wetlands All applications for land modification, development and subdivision must include a</p>			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>plan identifying all permanent and intermittent streams and wetlands on the application site.</p> <p>(3) Stormwater management All applications for development and subdivision must include a plan demonstrating how stormwater management requirements will be met including:</p> <ul style="list-style-type: none"> (a) areas where stormwater management requirements are to be met on-site and where they will be met through communal infrastructure; (b) the type and location of all public stormwater network assets that are proposed to be vested in council; (c) consideration of the interface with, and cumulative effects of, stormwater infrastructure in the precinct. 			

8.4 Biodiversity

Topic:	Biodiversity and ecology
Relevant objective:	Objective I616.2(10)

8.4.1 Risk assessment

A preliminary coastal habitat assessment was carried out during the structure planning process. The assessment included a desktop study and a limited site visit. The assessment was further supported by a Biodiversity Assessment undertaken by council's Natural Environment Strategy and Environmental Services teams. The council led assessment contains a review of all council-held biodiversity records. The Watercourse Assessment Report provided during the structure planning process identified all permanent and intermittent streams in the plan change area. Therefore, it is considered that there is sufficient information to act.

8.4.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 6 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- Adverse effects on freshwater habitats are not quantified because of the complexity and scale of the cost.
- Compliance costs are not quantified because it is linked to the complexity and scale of the specific development proposals.
- Benefits associated with cultural, aesthetic and biodiversity values are not quantified because of their intrinsic nature as well as the complex relationship between economic measures and those values, that is, premiums on property close to amenity values and ecosystem functions.
- Where possible, spatial costs and benefits are quantified.

Table 6: Assessment of proposed policies, rules and other methods for biodiversity

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(17) Recognise the role of riparian planting in the precinct to support the ecosystem functions of the North-West Wildlink.</p> <p>Policy I616.3(18) Avoid stream and wetland crossings where practicable, and if avoidance is not practicable, ensure crossings take the shortest route to minimise or mitigate freshwater habitat loss.</p> <p>Policy I616.3(19) 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:</p> <ol style="list-style-type: none"> a) provide for and encourage establishment and maintenance of ecological corridors through the Whenuapai area; b) maintain and enhance water quality and aquatic habitats; c) enhance existing native vegetation and wetland areas within the catchment; and d) reduce stream bank erosion. 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Adverse effects on freshwater habitats for when it is not practicable to avoid stream and wetland crossings. <p>Economic</p> <ul style="list-style-type: none"> ▪ Costs associated with designing crossings to minimise effect on streams and wetland. ▪ Costs associated with Standard I616.6.4 which requires 10m of riparian planting along either side of all permanent and intermittent streams. ▪ Costs associated with designing stormwater outfalls in the Whenuapai 3 coastal erosion setback yard as assessed by standards I616.8.1(4) and I616.8.2(4). ▪ Compliance costs associated with providing the information required in 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Improved biodiversity values through the creation of an ecological corridor. ▪ Improve terrestrial habitats through requiring riparian planting. ▪ Protection of approximately 14km of streams and wetlands as freshwater habitats. ▪ Improved aesthetic and amenity values associated with riparian planting for existing and future communities. ▪ Protect aesthetic and amenity values of the coast from improperly designed stormwater outfalls. <p>Social</p> <ul style="list-style-type: none"> ▪ Protect public health and safety along the coast by ensuring properly designed stormwater 	<p>Efficiency</p> <p>Application of the policies, rules, standards and special information requirements in the Whenuapai 3 Precinct is consistent with Objective I616.2(10).</p> <p>The provisions will enable restoration of biodiversity values in an area largely denuded by historic horticultural uses. It could be argued that expanding the riparian planting requirements beyond what is required, can provide better environmental outcomes. However this needs to be weighed against the improvements the provisions will make to the current degraded environment and the associated economic costs. The level of riparian planting required is considered appropriate for meeting the outcomes of the objective.</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table</p> <p>(A3) Subdivision that complies with Standard I616.6.2 Transport infrastructure requirements, but not complying with any one or more of the other standards contained in Standards I616.6 – D</p> <p>(A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; but do not comply with any one or more of the other standards contained in Standards I616.6 – D <p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.4. Riparian planting</p> <p>(1) The riparian margins of a permanent or intermittent stream or a wetland must be planted to a minimum width of 10m measured from the top of the stream bank and/or the wetland's fullest extent.</p> <p>(2) Riparian margins must be offered to the council for vesting.</p> <p>(3) The riparian planting proposal must:</p> <p>(a) include a plan identifying the location,</p>	<p>standard I616.9 Special information requirements.</p>	<p>outfalls.</p> <ul style="list-style-type: none"> ▪ Improve recreation values and amenity along the riparian margin by requiring cycle and pedestrian to be located in appropriate locations as required by standard I616.6.4(4). <p>Cultural</p> <ul style="list-style-type: none"> ▪ Standard I616.6.4 is consistent with Māori cultural values – specifically, the mauri of water – as outlined in the stormwater provisions assessment (section 7.3). ▪ Restoration of damaged ecosystem, particularly through reintroducing native vegetation (and habitat for native species) as required by I616.6.4 is consistent with the Māori principle of kaitiaki. <p>Economic</p> <ul style="list-style-type: none"> ▪ At-source treatment of contaminants is the most cost-effective way of 	<p>Overall, it is considered efficient to include riparian planting, coastal outfall requirements and biodiversity guidance through the precinct provisions at the same time as rezoning greenfield land for urban development.</p> <p>Effectiveness</p> <p>The biodiversity provisions within the Whenuapai 3 Precinct seek to recognise the importance of the stream network as well as the role of Whenuapai in the North-West Wildlink.</p> <p>Policies I616.3(17) and (19) and their associated rules and standards require any subdivision and development to provide native planting and to protect freshwater habitat in streams and wetlands.</p> <p>Standards I616.8.1(4) and I616.8.2(4) ensure any stormwater outfalls that need to be located on the coast will not adversely affect the biodiversity</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>species, planting bag size and density of the plants;</p> <p>(b) use eco-sourced native vegetation where available;</p> <p>(c) be consistent with local biodiversity;</p> <p>(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.</p> <p>(4) Where pedestrian and/or cycle paths are proposed, they must be located adjacent to, and not within, the 10m planted riparian area.</p> <p>(5) The riparian planting required in Standard I616.6.4(1) above must be incorporated into a landscape plan. This plan must be prepared by a suitably qualified and experienced person and be approved by the council.</p> <p>(6) The riparian planting required by Standard I616.6.4(1) cannot form part of any environmental compensation or offset mitigation package where such mitigation is required in relation to works and/or structures within a stream.</p> <p>Standard I616.8.1 Matters of discretion</p> <p>(4) Stormwater outfalls and associated erosion and protection structures within the Whenuapai 3 coastal erosion setback yard:</p> <p>(a) the effects on landscape values, ecosystem values, coastal processes, associated earthworks and landform modifications;</p> <p>(b) the effects on land stability including any exacerbation of an existing natural hazard, or</p>		<p>addressing water quality, and thus, freshwater habitats.</p>	<p>values of the coast. This reinforces the coastal management provisions of the Whenuapai 3 precinct.</p> <p>Overall, it is considered that the provisions are effective in achieving the outcomes sought in Objective I616.2(10).</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>creation of a new natural hazard, as a result of the structure;</p> <p>(c) the resilience of the structure to natural hazard events;</p> <p>(d) the use of green infrastructure instead of hard engineering solutions;</p> <p>(e) the effects on public access and amenity, including nuisance from odour;</p> <p>(f) the ability to maintain or enhance fish passage; and</p> <p>(g) risk to public health and safety.</p> <p>Standard I616.8.2 Assessment Criteria</p> <p>(4) Stormwater outfalls and associated erosion and protection structures within the Whenuapai 3 coastal erosion setback yard:</p> <p>(a) the extent to which landscape values, ecological values and coastal processes are affected or enhanced by any works proposed in association with the structure(s);</p> <p>(b) the extent to which site specific analysis, such as engineering, stability or flooding reports have been undertaken and any other information about the site, the surrounding land and the coastal marine area;</p> <p>(c) the extent to which the structure(s) is located and designed to be resilient to natural hazards;</p> <p>(d) the extent to which the proposal includes green infrastructure and solutions instead of hard engineering solutions;</p>			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>(e) the extent to which public access and / or amenity values, including nuisance from odour, are affected by the proposed structure(s);</p> <p>(f) the extent to which fish passage is maintained or enhanced by the proposed structure(s); and</p> <p>(g) the extent to which adverse effects on people, property and the environment are avoided, remedied or mitigated by the proposal.</p> <p><u>Other methods in the Whenuapai 3 Precinct</u></p> <p>1616.9 Special information requirements</p> <p>(1) Riparian planting plan An application for land modification, development and subdivision which adjoins a permanent or intermittent stream must be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants.</p> <p>(2) Permanent and intermittent streams and wetlands All applications for land modification, development and subdivision must include a plan identifying all permanent and intermittent streams and wetlands on the application site.</p>			

8.5 Coastal management – coastal erosion risk

Topic:	Coastal erosion risk
Relevant objective:	Objective I616.2(9)

8.5.1 Risk assessment

The coastal hazards assessment applied a probabilistic approach to hazard assessment. The assessment provides a P_{5%} extent of erosion landward of the cliff toe (that is, a five per cent probability of it being exceeded) based on a range of Representative Concentration Pathways scenarios (greenhouse gas concentration trajectories used when determining the effects of climate change). As such, the council has sufficient information to act.

8.5.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 7 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- Adverse effects on freshwater habitats are not quantified because of the complexity and scale of the cost.
- Compliance costs are not quantified because it is linked to the complexity and scale of the development proposal.
- Costs and benefits associated with development potential is quantified based on high level yield calculations.
- Costs to people and property from coastal erosion hazards are not quantified because it is dependent on the specific development proposals in the coastal erosion setback yard.
- Benefits associated with cultural, aesthetic/coastal character and biodiversity values are not quantified because of their intrinsic nature as well as the complex relationship between economic measures and said values, that is, premiums on property close to amenity values and ecosystem functions.
- Costs to ratepayers are not quantified as it is dependent on the scale and type of hard protection structure.
- Where possible, spatial costs and benefits are quantified.

Table 7: Assessment of proposed policies, rules and other methods for coastal erosion risk

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Proposed zoning</u> The plan change proposes to rezone sites zoned Future Urban adjacent to the coast to Single House.</p> <p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(14) Ensure stormwater outfalls are appropriately designed, located and managed to avoid or mitigate adverse effects on the environment, including: (a) coastal or stream bank erosion; (b) constraints on public access; (c) amenity values; and (d) constraints on fish passage into and along river tributaries.</p> <p>Policy I616.3(15) Avoid locating new buildings on land within the Whenuapai 3 coastal erosion setback yard.</p> <p>Policy I616.3(16) Avoid the use of hard protection structures to manage coastal erosion risk in the Whenuapai 3 coastal erosion setback yard.</p>	<p>Environment</p> <ul style="list-style-type: none"> ▪ Adverse effects on environmental values from enabling development. <p>Economic</p> <ul style="list-style-type: none"> ▪ Single House zoning along the coast reduces amount of developable land for housing. ▪ Cost of lost development potential. The direction of Policy I616.3(15) , and requirement of Standards I616.6.5 and I616.6.7 to avoid subdivision and development within the Whenuapai 3 coastal erosion setback yard reduces the amount of developable lots. The yard applies to approximately 15ha of land. This means a reduction of approximately 130 developable lots based on replacing the Mixed Housing Urban Zone in the draft plan change with the proposed Single House zoning. ▪ Costs of standard I616.6.6 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Protection of coastal process from the adverse effects from development. ▪ Reduces adverse effects on the character of the coast. ▪ Amenity values are protected and enhanced for new and existing residents associated with maintaining coastal character. ▪ Adverse effects on the sensitive receiving environment of the Upper Waitematā Harbour are reduced by limiting the amount of surface runoff near the coast and through well designed coastal outfalls. ▪ Protection of coastal processes and biodiversity values from hard protection structures. <p>Social</p>	<p>Efficiency</p> <p>The application of policy I616.3(15), and associated rules and standards within the Whenuapai 3 precinct will give effect to Objective I616.2(9). The provisions identify the coastal erosion hazard areas and manage development and subdivision to avoid locating new buildings in the Whenuapai coastal area. This avoids the creation of new risks from coastal erosion hazards.</p> <p>The application of policy I616.3(16) and associated rules and standards is consistent with Objective I616.2(9), and gives effect to Objectives I616.2(8), and I616.2(10). This approach puts in place a more onerous assessment for the use of hard protection structures when managing coastal erosion risks.</p> <p>Overall, it is considered</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Rules in the Whenuapai 3 Precinct</p> <p>I616.4. Activity table</p> <p>(A3) Subdivision that complies with Standard I616.6.2 Transport infrastructure requirements, but not complying with any one or more of the other standards contained in Standards I616.6 – D</p> <p>(A5) Hard protection structures located within the Whenuapai 3 coastal erosion setback yard – NC</p> <p>(A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; <p>but do not comply with any one or more of the other standards contained in Standards I616.6 – D</p> <p>(A17) Activities that do not comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within 	<p>which requires external alterations to buildings within the Whenuapai 3 coastal erosion setback yard to not increase the existing gross floor area.</p> <ul style="list-style-type: none"> ▪ Costs associated with consenting to expand existing buildings in the Whenuapai 3 coastal protection yard. ▪ Cost associated with standard I616.6.7 requiring proposed sites to locate specific features outside of the Whenuapai 3 coastal erosion setback yard. This reduces the flexibility for landowners to develop their lots. ▪ Costs associated with consents to develop stormwater outfalls in the Whenuapai 3 coastal erosion setback yard. ▪ Costs associated with split-zoning along the coast. Development will have to subdivide along zoning boundary. ▪ Costs associated with consenting and design to 	<ul style="list-style-type: none"> ▪ Avoids exposing people to new and existing risks in coastal erosion hazard areas. ▪ Provides certainty to developers and the future community with the expected outcomes in the coastal environment. <p>Cultural</p> <ul style="list-style-type: none"> ▪ Avoids exposing people to new risks in coastal erosion hazard areas. ▪ Ensures public access to the coast by allowing council to manage access as the cliff toe retreats. ▪ Protects unidentified middens and wahi tapu associated with historic Māori occupation of the area from inappropriate development. <p>Economic</p> <ul style="list-style-type: none"> ▪ Avoids creating new risks in coastal erosion hazard areas. ▪ Avoids costs to ratepayers as hard protection 	<p>efficient to include a risk-based management approach to avoid locating new buildings in areas of known coastal erosion hazard. Likewise, it is considered efficient to include rules to limit the use of hard protection structures.</p> <p>Effectiveness</p> <p>The Whenuapai 3 coastal hazard provisions seek to avoid locating new buildings within areas of coastal erosion hazard. The provision will apply to all buildings within the Whenuapai 3 coastal erosion setback yard.</p> <p>The application of policy I616.3(16) and associated rules and standards discourage the use of hard protection structure by making such structures a more restrictive activity.</p> <p>The provisions are therefore effective in achieving the outcomes sought by Objective I616.2(9)</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness										
<p>the aircraft engine testing noise boundaries – NC</p> <p><u>Standards within the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.5. New buildings within the Whenuapai 3 coastal erosion setback yard</p> <p>(1) New buildings must not be located within the Whenuapai 3 coastal erosion setback yard shown in Whenuapai 3 Precinct Plan 1. The widths of the yard are specified in Table I616.6.5.1 and is to be measured from mean high water springs. This is to be determined when the topographical survey of the site is completed.</p> <p>(2) Alterations to existing buildings within the Whenuapai 3 coastal erosion setback yard must not increase the existing gross floor area.</p> <p>Table I616.6.5.1 Whenuapai 3 coastal erosion setback yard</p> <table border="1" data-bbox="282 975 757 1145"> <thead> <tr> <th>Area</th> <th>Coastal erosion setback yard</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>41m</td> </tr> <tr> <td>B</td> <td>40m</td> </tr> <tr> <td>C</td> <td>26m</td> </tr> <tr> <td>D</td> <td>35m</td> </tr> </tbody> </table> <p>Standard I616.6.6. External alterations to buildings within the Whenuapai 3 coastal erosion setback yard</p> <p>(1) External alterations to buildings within the</p>	Area	Coastal erosion setback yard	A	41m	B	40m	C	26m	D	35m	<p>take into account more restrictive application for hard protection structures rule I616.4.1 (A4), and (A5).</p>	<p>structures located on an esplanade reserve to enable landward development will have to be maintained and operated by council.</p> <ul style="list-style-type: none"> ▪ Avoids costs to ratepayers when council has to provide assistance when properties are damaged/destroyed. ▪ Zoning clearly signals the development potential of coastal land in light of the known coastal erosion hazard risks. ▪ Single House zoning along the coast allows for some appropriate development. More developable lots are enabled than if Residential - Large Lot Zone was applied to this land. 	
Area	Coastal erosion setback yard												
A	41m												
B	40m												
C	26m												
D	35m												

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Whenuapai 3 coastal erosion setback yard identified in Standard I616.6.5 and Whenuapai 3 Precinct Plan 1 must not increase the existing gross floor area.</p> <p>Standard I616.6.7. Subdivision of land in the Whenuapai 3 coastal erosion setback yard</p> <p>(1) Each proposed site on land in the Whenuapai 3 coastal erosion setback yard must demonstrate that all of the relevant areas/features below are located outside of the Whenuapai 3 coastal erosion setback yard:</p> <ul style="list-style-type: none"> (a) in residential zones and business zones - a shape factor that meets the requirements of Standard E38.8.1.1 Site shape factor in residential zones or Standard E38.9.1.1 Site shape factor in business zones; (b) access to all proposed building platforms or areas; and (c) on-site private infrastructure required to service the intended use of the site. <p><u>Other methods in the Whenuapai 3 Precinct</u></p> <p>I616.8.1 Matters of discretion</p> <p>(3) Subdivision of land in the Whenuapai 3 coastal erosion setback yard:</p> <ul style="list-style-type: none"> (a) the effects of the erosion on the intended use of the sites created by the subdivision and the vulnerability of these uses to 			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>coastal erosion.</p> <p>(4) Stormwater outfalls and associated erosion and protection structures within the Whenuapai 3 coastal erosion setback yard:</p> <ul style="list-style-type: none"> (a) the effects on landscape values, ecosystem values, coastal processes, associated earthworks and landform modifications; (b) the effects on land stability including any exacerbation of an existing natural hazard, or creation of a new natural hazard, as a result of the structure; (c) the resilience of the structure to natural hazard events; (d) the use of green infrastructure instead of hard engineering solutions; (e) the effects on public access and amenity, including nuisance from odour; (f) the ability to maintain or enhance fish passage; and (g) risk to public health and safety. <p>I616.8.2 Assessment criteria</p> <p>(3) Subdivision of land in the Whenuapai 3 coastal erosion setback yard:</p> <ul style="list-style-type: none"> (a) the effects of the hazard on the intended use of the sites created by the subdivision and the vulnerability of these uses to coastal erosion: <ul style="list-style-type: none"> (i) whether public access to the coast is affected; 			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>(ii) the extent to which the installation of hard protection structures to be utilised to protect the site or its uses from coastal erosion hazards over at least a 100 year timeframe are necessary; and</p> <p>(iii) refer to Policy E38.3(2).</p> <p>(4) Stormwater outfalls and associated erosion and protection structures within the Whenuapai 3 coastal erosion setback yard:</p> <p>(a) the extent to which landscape values, ecological values and coastal processes are affected or enhanced by any works proposed in association with the structure(s);</p> <p>(b) the extent to which site specific analysis, such as engineering, stability or flooding reports have been undertaken and any other information about the site, the surrounding land and the coastal marine area;</p> <p>(c) the extent to which the structure(s) is located and designed to be resilient to natural hazards;</p> <p>(d) the extent to which the proposal includes green infrastructure and solutions instead of hard engineering solutions;</p> <p>(e) the extent to which public access and / or amenity values, including nuisance from odour, are affected by the proposed</p>			

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
structure(s); (f) the extent to which fish passage is maintained or enhanced by the proposed structure(s); and (g) the extent to which adverse effects on people, property and the environment are avoided, remedied or mitigated by the proposal.			

8.6 Reverse sensitivity effects on Whenuapai Airbase – lighting

Topic:	Reverse sensitivity effect on Whenuapai Airbase – lighting
Relevant objective:	Objective I616.2(12)

8.6.1 Risk assessment

As part of the Whenuapai Structure Plan process, a Preliminary Lighting Assessment for the Whenuapai Structure Plan area was carried out to determine outdoor lighting requirements for the area. However, that assessment was carried out before the AUP (OP) became operative in part, and with the view to provide high-level recommendations for the structure plan.

Further details regarding this issue were included in the New Zealand Defence Force’s feedback on the draft plan change. There are also lighting restrictions set out in Part 77.7 of the Civil Aviation Authority Rules, along with information in the CAA Advisory Circular AC139-6.

There are also existing provisions within the Whenuapai 1 and 2 Precincts that address the effects of lighting on aircraft operations.

Therefore, it is considered there is sufficient information to proceed with introducing provisions relating to lighting in this plan change.

8.6.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 8 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable. However, there are no quantifiable costs and benefits relating to lighting. The cost to landowners and developers will be dependent on the overall design of roads, buildings and structures.

Table 8: Assessment of proposed policies, rules and other methods for reverse sensitivity effects on Whenuapai Airbase – lighting

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(22) Require subdivision, use and development within the Whenuapai 3 Precinct to avoid, remedy or mitigate any adverse effects, including reverse sensitivity effects and safety risks relating to lighting, glare and reflection, on the operation and activities of Whenuapai Airbase.</p> <p>Policy I616.3(23) Require the design of roads and associated lighting to be clearly differentiated from runway lights at Whenuapai Airbase to provide for the ongoing safe operation of the airbase.</p> <p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table (A3) Subdivision that complies with Standard I616.6.2 Transport infrastructure requirements, but not complying with any one or more of the other standards contained in Standards I616.6 – D (A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; <p>but do not comply with any one or more of the other standards contained in Standards I616.6 – D</p>	<p>Social</p> <ul style="list-style-type: none"> ▪ Reduced operational hours of parks that require floodlighting. ▪ Lighting associated with events may also be affected by these proposed requirements. <p>Economic</p> <ul style="list-style-type: none"> ▪ Potential increase in construction costs for roads built to avoid being aligned parallel to the runways. 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Light spill is minimised throughout the plan change area. ▪ Adverse effects on the aircraft operations are avoided. <p>Social</p> <ul style="list-style-type: none"> ▪ The implementation of the proposed lighting provisions will minimise safety risks associated with aircraft incidents on communities. 	<p>Efficiency</p> <p>The risks associated with not having specific lighting provisions within the precinct are low but potentially significant. As expressed in their feedback on the draft plan change, lighting is a significant safety concern for the NZDF.</p> <p>Effectiveness</p> <p>The proposed provisions seek to achieve Objective I616.2(12). They provide direction for developers and landowners when designing road layouts and proposing outdoor lighting, particularly floodlights.</p> <p>The provisions are the most appropriate way to achieve Objective I616.2(12).</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>I616.6.11. Lighting</p> <p>(1) No person may illuminate or display the following outdoor lighting between 11:00pm and 6:30am:</p> <ul style="list-style-type: none"> (a) searchlights; or (b) outside illumination of any structure or feature by floodlight. <p><u>Other methods in the Whenuapai 3 Precinct</u></p> <p>Matter of discretion I616.8.1(5) Lighting associated with development, structures, infrastructure and construction.</p> <p>Assessment criteria I616.8.2(5)</p> <p>(5) Lighting associated with development, structures, infrastructure and construction:</p> <ul style="list-style-type: none"> (a) The effects of lighting on the safe and efficient operation of Whenuapai Airbase, to the extent that the lighting: <ul style="list-style-type: none"> (i) avoids simulating approach and departure path runway lighting; (ii) ensures that clear visibility of approach and departure path runway lighting is maintained; and (iii) avoids glare or light spill that could affect aircraft operations. 			

8.7 Aircraft engine testing noise

Topic:	Aircraft engine testing noise
Relevant objective:	Objective I616.2(13)

8.7.1 Risk assessment

The New Zealand Defence Force have provided a noise assessment of the noise from aircraft engine testing. That noise assessment used available noise data of aircraft engines that were representative of aircrafts at Whenuapai Airbase and a survey of the airbase engine testing practices over a 60-day period in 2016. The noise assessment was reviewed by the council's acoustic specialist who generally agreed with the approach taken and results of the assessment. It is considered there is sufficient information to include provisions to address the issue of aircraft engine testing noise within the plan change area.

8.7.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 9 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable. The assessment quantifies the increase in business land and the decrease in residential land resulting from the proposed zoning to address the issue of aircraft engine testing noise.

Table 9: Assessment of proposed policies, rules and other methods for aircraft engine testing noise

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Proposed zoning</u> All land within the 65 dB L_{dn} contour is zoned Light Industry and most land between the 57 dB L_{dn} and 65 dB L_{dn} noise boundaries is zoned Single House.</p> <p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(24) Avoid the establishment of new activities sensitive to noise within the 65 dB L_{dn} aircraft engine testing noise boundary shown on Whenuapai 3 Precinct Plan 3.</p> <p>Policy I616.3(25) Avoid establishing residential and other activities sensitive to noise within the area between the 57 dB L_{dn} and 65 dB L_{dn} aircraft engine testing noise boundaries as shown on Whenuapai 3 Precinct Plan 3, unless the noise effects can be adequately remedied or mitigated at the receiving site through the acoustic treatment, including mechanical ventilation, of buildings containing activities sensitive to noise.</p> <p><u>Rules in the Whenuapai 3 Precinct</u></p> <p>I616.4. Activity table (A16) Activities that comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; 	<p>Social</p> <ul style="list-style-type: none"> ▪ Potential effect on the ability of residents to enjoy the outdoors while engine testing is being carried out. <p>Economic</p> <ul style="list-style-type: none"> ▪ Dwelling yields for the plan change area reduced (from draft plan change) from 8233 to 6182 as a result of extending the Light Industry Zone to the area south of the airbase. ▪ Presence of known noise issues within the noise boundaries may negatively impact on property values. ▪ Reduced development opportunities as a result of Single House zoning between the 57 dB L_{dn} and 65 dB L_{dn} noise boundaries. ▪ Potential increase in cost 	<p>Environment</p> <ul style="list-style-type: none"> ▪ Adverse noise effects on new residents from aircraft engine testing are mitigated through the requirements in Standard I616.6.10. ▪ Reverse sensitivity effects on Whenuapai Airbase from aircraft engine testing noise are minimised. ▪ The proposed zoning provides a buffer between residential activities and the airbase. <p>Social</p> <ul style="list-style-type: none"> ▪ The provisions seek to provide some certainty to new residents that dwellings built to standard will provide sufficient protection against engine testing noise when indoors. <p>Economic</p>	<p>Efficiency While there are associated costs to landowners and developers, the proposed provisions are the most efficient way to achieve Objective I616.2(13). It is not considered appropriate for a council-initiated plan change to rezone land most affected by aircraft engine testing noise to higher residential densities. It is also inappropriate to rezone land within the aircraft engine testing noise boundaries without any protection measures for new residents.</p> <p>Effectiveness The proposed provisions and zoning are the most effective way to achieve Objective I616.2(13). Given the airbase is a defence facility, and aircraft engine testing is an essential part of its operation, the proposed</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<ul style="list-style-type: none"> • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries; but do not comply with any one or more of the other standards contained in Standards I616.6 – D <p>(A17) Activities that do not comply with:</p> <ul style="list-style-type: none"> • Standard I616.6.2 Transport infrastructure requirements; • Standard I616.6.5 New buildings within the Whenuapai 3 coastal erosion setback yard; and • Standard I616.6.10 Development within the aircraft engine testing noise boundaries – NC <p>(A18) New activities sensitive to noise within the 65 dB Ldn noise boundary shown on Whenuapai 3 Precinct Plan 3 – Pr</p> <p><u>Standards in the Whenuapai 3 Precinct</u></p> <p>Standard I616.6.10 Development within the aircraft engine testing noise boundaries</p> <p>(1) Activities sensitive to noise must not be located within the 65 dB L_{dn} noise boundary as shown on Whenuapai 3 Precinct Plan 3.</p> <p>(2) Between the 57 dB L_{dn} and 65 dB L_{dn} noise boundaries as shown on Whenuapai 3 Precinct Plan 3, new activities sensitive to noise and alterations and additions to existing buildings accommodating activities sensitive to noise must</p>	<p>of building dwellings due to need for sound attenuation and ventilation/insulation requirements.</p> <ul style="list-style-type: none"> ▪ Increased consenting costs for those who do not comply with Standard I616.6.10 being classified as a non-complying activity. 	<ul style="list-style-type: none"> ▪ Increased business land resulting from a greater area within the plan change zoned as Light Industry (from 95 ha in the draft plan change to 124 ha in the proposed). 	<p>provisions seek to mitigate known noise effects on surrounding land uses.</p> <p>The area under the 65 dB Ldn aircraft engine testing contour is zoned Light Industry, with activities sensitive to noise (term is defined in the AUP (OP)) classified as a prohibited activity. This clearly signals to the plan users that sites most affected by engine testing noise are not suitable for residential development.</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>provide sound attenuation and related ventilation and/or air conditioning measures:</p> <ul style="list-style-type: none"> (a) to ensure the internal environment of habitable rooms does not exceed a maximum noise level of 40 dB L_{dn}; and (b) that are certified to the council's satisfaction as being able to meet Standard I616.6.9(2)(a) by a person suitably qualified and experienced in acoustics prior to its construction; and (c) so that the related ventilation and/or air conditioning system(s) satisfies the requirements of New Zealand Building Code Rule G4, or any equivalent standard which replaces it, with all external doors of the building and all windows of the habitable rooms closed. 			

8.8 Historic heritage

Topic:	Historic heritage
Relevant objectives:	Existing operative objectives in Chapters B5 and D17 of the AUP (OP)

8.8.1 Risk assessment

The heritage assessments carried out to support the Whenuapai Structure Plan and this plan change are outlined in section 5.9 of this report. It is considered there is sufficient information under section 32(2)(c) of the RMA to act based on that information.

8.8.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 10 below.

Table 10: Assessment of proposed methods for historic heritage

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Other methods in the AUP (OP)</p> <ul style="list-style-type: none"> ▪ Deletion of individual entries for the Clarks Lane workers' cottages from Table 1 Places in Schedule 14.1 of the AUP (OP) ▪ Addition of the Clarks Lane Historic Heritage 	<p>Environment</p> <ul style="list-style-type: none"> ▪ No costs to the environment as the identified built heritage is protected by the scheduling. <p>Economic</p> <ul style="list-style-type: none"> ▪ Economic costs to the landowners of the site with the anti-aircraft battery associated with a reduction in the potential land available to meet their development aspirations. 	<p>Environment</p> <ul style="list-style-type: none"> ▪ The built heritage features in Clarks Lane contribute to the local and regional history representing some of the earliest development in the area. ▪ The anti-aircraft battery site contributes to the local and regional history as it represents the ongoing military presence in Whenuapai since the 1940s. 	<p>Efficiency</p> <p>Utilising the plan change as the statutory process to assess and improve the protection of the buildings in Clarks Lane and the values of the anti-aircraft battery site is efficient as combining this amongst the planning of the area ensures that integrated resource management of the whole of Whenuapai occurs. It is also more efficient than doing a separate plan change for</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>Area to Table 2 Areas in Schedule 14.1 of the AUP (OP)</p> <ul style="list-style-type: none"> ▪ Addition of a statement of significance and related map for the Clarks Lane Historic Heritage Area to Schedule 14.2 of the AUP (OP) ▪ Addition of the Whenuapai heavy anti-aircraft battery to Table 1 Places in Schedule 14.1 of the AUP (OP). 		<p>Social</p> <ul style="list-style-type: none"> ▪ The built heritage has a direct connection to the Clark family, which provides a social benefit associated with the prominence of this family in the early development of the area. ▪ The built heritage has a direct connection to the military history of Whenuapai and Hobsonville, which provides a social benefit associated with the development of the social identity of the area. <p>Cultural</p> <ul style="list-style-type: none"> ▪ The location and setting of the buildings in Clarks Lane provide an important part of the cultural fabric of Whenuapai and the neighbouring Hobsonville as they assist in defining the historic communities that resided in this area. ▪ The location and setting of the anti-aircraft battery site provides an important part of the cultural fabric of Whenuapai and the neighbouring Hobsonville as it assists in defining the historic communities and military history in this area. 	<p>heritage values.</p> <p>Effectiveness</p> <p>Utilising the plan change as the statutory process to assess and insert Clarks Lane historic heritage area and the anti-aircraft battery site into AUP (OP) is the most appropriate way to achieve the existing objectives within Chapter D17 Historic Heritage Overlay in the AUP (OP). These provisions have immediate legal effect from the date of notification so will become effective from then.</p>

8.9 Provision of open space

Topic:	Provision of open space
Relevant objective:	Objective I616.2(11)

8.9.1 Risk assessment

It is considered there is sufficient information to include provisions in the plan change to guide the development of the open space network.

8.9.2 Assessment of the provisions

The costs, benefits, efficiency and effectiveness of the proposed provisions are set out in Table 11 below.

Section 32(2)(b) of the RMA requires costs and benefits to be quantified where practicable.

- The costs to owners and cost to council to acquire open space are not quantified because the value of land should be carried out by a qualified valuer and is dependent on the specific characteristics of the site.
- Benefits associated with the amenity, aesthetic/coastal character and recreation values from open space are not quantified because of their intrinsic nature as well as the complex relationship between economic measures and said values, that is premiums on property close to amenity values and proximity to open space.
- Where possible, spatial costs and benefits are quantified.

Table 11: Assessment of proposed policies for the provision of open space

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p><u>Policies in the Whenuapai 3 Precinct</u></p> <p>Policy I616.3(20) Require the provision of open space as shown on Whenuapai 3 Precinct Plan 1 through subdivision and</p>	<p>Economic</p> <ul style="list-style-type: none"> ▪ Potential loss of developable land for landowners where some of their land is used for open space. ▪ Cost to the council to acquire open space. 	<p>Environment</p> <ul style="list-style-type: none"> ▪ The provisions seek to ensure adequate provision of quality open space for the community as the area develops. ▪ Amenity values from the provision of open space. 	<p>Efficiency</p> <p>The proposed policies are efficient in achieving Objective I616.2(11), and provide some certainty for landowners, developers and the existing and future communities as to where parks will be generally</p>

Plan Change Provision	Costs	Benefits	Efficiency and Effectiveness
<p>development, unless the council determines that the indicative open space is no longer required or fit for purpose.</p> <p>Policy I616.3(21) Only allow amendments to the location and alignment of the open space where the amended open space can be demonstrated to achieve the same size and the equivalent functionality.</p>		<p>Social</p> <ul style="list-style-type: none"> ▪ Increased opportunities for passive and active recreation through an additional 15ha (excluding esplanade reserves vested during subdivision) of open space and through the encouragement of pedestrian and cycle connectivity. <p>Cultural</p> <ul style="list-style-type: none"> ▪ Opportunities to enhance cultural and heritage values through the provision of open space. <p>Economic</p> <ul style="list-style-type: none"> ▪ Policy I616.3(20) provides the council with the ability to reject proposals for open space if it is no longer required or fit for purpose. ▪ Increased property values due to proximity to open space amenity and recreational values. 	<p>located.</p> <p>Effectiveness Combined with non-RMA methods, including the council's acquisition policy, the policies are the most effective way of achieving Objective I616.2(11).</p>

9. Section 86B of the RMA

When deciding the date on when a plan change takes effect, the RMA provides in section 86B(3) that:

- A rule in a proposed plan has immediate legal effect if the rule—
- (a) protects or relates to water, air, or soil (for soil conservation); or
 - (b) protects areas of significant indigenous vegetation; or
 - (c) protects areas of significant habitats of indigenous fauna; or
 - (d) protects historic heritage; or
 - (e) provides for or relates to aquaculture activities.

Historic heritage is defined in the Act as:

historic heritage—

- (a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities:
 - (i) archaeological;
 - (ii) architectural;
 - (iii) cultural;
 - (iv) historic;
 - (v) scientific;
 - (vi) technological; and
- (b) includes—
 - (i) historic sites, structures, places, and areas; and
 - (ii) archaeological sites; and
 - (iii) sites of significance to Māori, including wāhi tapu; and
 - (iv) surroundings associated with the natural and physical resources

As discussed in section 6.9 the proposed amendments to Schedule 14.1 and the Historic Heritage Overlay protect historic heritage. These amendments are subject to D17 Historic Heritage Overlay which manages the protection of significant historic heritage places, including the modification, relocation, demolition, use and development of these places. Tables D17.4.1 to D17.4.3 specify the activity status of activities affecting scheduled historic heritage places.

The proposed amendment to Schedule 14.1 and the Historic Heritage Overlay have immediate legal effect from the date of notification in accordance with section 86B(3) of the RMA.

10. Conclusion

The purpose of this plan change is to rezone 351 hectares of land in Whenuapai, generally Stages 1A to 1E of the Whenuapai Structure Plan, to enable development to occur in a greenfield area. Most of the land is currently zoned Future Urban under the AUP (OP). It is proposed to rezone this land to various residential and business zones and introduce new provisions by way of a new precinct in the AUP (OP) to manage the effects of greenfield development.

As assessed in section 7 of this report, the proposed objectives within the Whenuapai 3 Precinct, when considered in conjunction with relevant existing AUP (OP) objectives, are the most appropriate way to address the resource management issues identified and to achieve the purpose of the RMA. Section 8 of this report demonstrates that the proposed policies, rules and other methods are efficient and effective in achieving the objectives. The plan change is within the scope of the council's functions under section 31 of the Act.

Overall, the plan change enables subdivision, use and development within a greenfield area while ensuring any adverse effects on the environment can be appropriately avoided, remedied or mitigated in a way that is consistent with Part 2 of the Act and the direction given by the Regional Policy Statement.

References

Legislation

Hauraki Gulf Marine Park Act 2000
Resource Management Act 1991

National policy documents

National Policy Statement for Freshwater Management 2011
National Policy Statement on Urban Development Capacity 2016
New Zealand Coastal Policy Statement 2010

Council documents

Auckland Plan 2012
Auckland Regional Growth Strategy 1999
Auckland Transport Alignment Project 2016
Auckland Unitary Plan (Operative in Part)
Best for the West – Growth Management Strategy for Waitakere 2010
Future Urban Land Supply Strategy 2017
Integrated Transport Programme 2012-2041
North West Transformation Area Wastewater Servicing Strategy 2015
Open Space Provision Guidelines 2016
Parks and Open Spaces Acquisition Policy 2013
Parks and Open Spaces Strategic Action Plan 2013
Regional Land Transport Plan 2015-2025
Regional Public Transport Plan 2015
Supporting Growth Strategy 2016
Whenuapai 3 Precinct Stormwater Management Plan 2017
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Appendix 1: Draft Whenuapai Plan Change – Summary of Feedback and Responses

Topic	Summary of feedback received	Response
Airbase noise	The effects of noise from the airbase on new residents have been identified as a potential issue.	The Planning Team is working with the New Zealand Defence Force to better understand the noise issue and any effects on new residents to the area. Additionally, work is being carried out to determine the best way to manage reverse sensitivity effects of urbanisation around the airbase.
Biodiversity	The draft precinct provisions do not provide a level of certainty to ensure the protection, maintenance and enhancement of biodiversity of the area.	<p>The Auckland Unitary Plan (Operative in Part) (AUPOP) policy framework and provisions achieve the purpose of the Resource Management Act 1991 and will give effect to the New Zealand Coastal Policy Statement. These will continue to apply for development in the plan change area.</p> <p>In addition to the existing AUPOP provisions, the Whenuapai 3 Precinct recognises the area's role in the North-West Wildlink by requiring riparian planting and encouraging the ecological corridor functions of the streams network in the area.</p>
Biodiversity	Feedback was received supporting the recognition of the North-West Wildlink.	The support is noted.
Centres	Request to include a neighbourhood centre adjacent to the proposed neighbourhood park.	The Planning Team, in conjunction with the Auckland Design Office, are currently looking at potential locations for a new neighbourhood centre. It will be shown in the plan change when it is publicly notified.
Coastal hazards	There was feedback received regarding coastal hazard risk and that development should be avoided in areas of significant risk.	Appropriate coastal setbacks and associated provisions are currently being refined through the preparation of a detailed coastal hazard assessment of the area.
Draft precinct provisions	Feedback received opposing the additional matters identified in the draft precinct such as those relating to biodiversity, riparian planting, water quality, stormwater and coastal hazard management.	The plan change addresses matters beyond the provisions of the Auckland Unitary Plan (Operative in Part). The draft plan change was informed by the Whenuapai Structure Plan, feedback from the public, engagement with mana whenua and technical reports. The Upper Waitemata Harbour is a sensitive receiving environment and, coupled with the additional work undertaken specific to Whenuapai, it is considered appropriate to include additional provisions to address issues relating to stormwater, riparian planting, biodiversity, water quality and coastal hazard risk.

Topic	Summary of feedback received	Response
Extent of plan change area	<p>There was support to only rezone Stage 1A-1E of the structure plan area, recognising that there are infrastructure constraints associated with development.</p> <p>However, we also received feedback from landowners and developers outside of the draft plan change area seeking to be included in this plan change. Some parties sought all of Stage 2 to be included and others sought the inclusion of specific sites within Stage 2.</p>	<p>The Regional Policy Statement provisions of the Auckland Unitary Plan (Operative in Part) (AUPOP) require that land is developed in an integrated manner with the appropriate infrastructure. Triggers are required in this instance to comply with these provisions. However the Environment Court's decision in <i>Foreworld Developments Ltd v Napier City Council W008/2005</i> suggests that the use of development triggers where infrastructure cannot be provided within the lifetime of a plan raises expectations and is contrary to the purpose of the Resource Management Act 1991. Therefore, only the parts of the structure plan area that can be readily developed within the life of the AUPOP are being rezoned in this plan change. The boundary of the plan change area was determined in consultation with Auckland Transport and Watercare. It is determined by the ability of existing bulk infrastructure to service the area. The infrastructure constraints for the remaining land (Stage 1F and Stage 2) are significant and infrastructure will not be available until at least 2026. This infrastructure will need to be programmed for future funding in the 2018-2022 Long-term Plan.</p>
Inclusion of Stage 2	<p>There were requests to include land outside of the plan change area (i.e. land identified as Stage 2 in the structure plan) in this plan change on the basis that the infrastructure required to service Stage 2 can be provided by developers.</p>	<p>Not all infrastructure can be provided by developers. The Council has a strategic and regional overview of the transport and wastewater networks.</p> <p>In terms of transport infrastructure, the cumulative effect of incremental expansion of the plan change area needs to be carefully considered. Analysis undertaken to date suggests that the cumulative effects of development beyond that assumed for the currently proposed Stage 1 are such that significant 'bulk' transport infrastructure investment will be required beyond site-specific mitigation. This will include capacity improvements on State Highways 16 and 18, the State Highway 16/18 connection, and the North-Western Busway and stations. The capital works for these projects remain unfunded, though business cases have been initiated. Auckland Transport does not support the live zoning of land which depends on unfunded projects.</p> <p>In terms of wastewater, Watercare is currently able to provide bulk wastewater services only to Stage 1 of the plan change area, with developers providing the local wastewater networks connecting into as</p>

Topic	Summary of feedback received	Response
		development progresses. Servicing the rest of the area requires the Northern Interceptor to be built and connected to the Rosedale Wastewater Treatment Plant. Servicing of the Stage 2 area before the Northern Interceptor is connected will establish a patchwork of pump stations and pipes. This is not a desirable long-term outcome and likely to be redundant or need to be replaced if some or all of them do not fit the long-term servicing strategy.
Infrastructure capacity	The existing infrastructure cannot cope with the level of growth anticipated by the plan change.	The plan change boundary has been decided in consultation with infrastructure providers. There is existing capacity in the current wastewater network to accommodate growth in the plan change area with developers providing the local wastewater networks connecting to the bulk supply. In terms of transport infrastructure, the precinct provisions require certain intersections to be upgraded as development progresses in each stage. The Council is currently in the process of refining the infrastructure triggers for transport in order to more precisely define what traffic volumes can be supported at each stage from a transport perspective. Stage 2 of the Whenuapai Structure Plan was not included in this plan change due to infrastructure capacity issues relating to the wider transport network and wastewater. The required infrastructure cannot be provided to unlock the land in Stage 2 for approximately another 10 years.
Infrastructure funding	Feedback received relating to the funding of infrastructure by developers and whether the Council would be double-dipping by increasing rates as well as require developers to pay for the necessary infrastructure.	The Council follows the tools provided by the Local Government Act 2002 for funding public works, which may be a combination of rates, development contributions or agreed contributions. Double-dipping is not allowed. Funding of infrastructure is required as land is developed while rates provide for the ongoing maintenance and improvements of those infrastructure assets over time.
Open spaces	There were requests for more green spaces and walkways by the coast.	The Draft Whenuapai Plan Change identifies five 0.3-0.5 hectare neighbourhood parks, one three-hectare suburb park and one 10-hectare sports park. This is consistent with Council's adopted Open Space Provision Policy 2016. Additionally there will be provision of esplanade reserves along the coast and vegetated riparian corridors along the stream network. Developers may also wish to vest additional open space which will be assessed at a case-by-case basis at the time of subdivision.

Topic	Summary of feedback received	Response
Open spaces	Opposition to the placement of indicative open spaces including the location of the sports park and the suburb park.	The open spaces are indicative only however their size and location are consistent with the Council's adopted Open Space Provision Policy. In relation to the location of the sports park, it is preferable for it to be located within the future industrial area to avoid reverse sensitivity effects on residential uses. The Council is moving towards artificial turf and flood lighting to extend playing hours which will increase adverse effects on potential residents.
Reverse sensitivity	There was feedback about the potential increased risk of bird strike from change of land use on the operational safety of the airbase.	The Planning Team is working with the New Zealand Defence Force to determine the best way to manage reverse sensitivity effects, including the risk of bird strike, arising from urbanisation around Whenuapai Airbase.
Timing of development	General feedback received around the timing of development.	<p>The plan change enables land to be developed through the rezoning of future urban land however it is up to landowners if they choose to develop their property. There are efficiencies from amalgamating land for development but the Auckland Unitary Plan (Operative in Part) (AUPOP) and the plan change does not require this.</p> <p>There are many factors that contribute to pace of development. The Council controls the resource management effects arising from development through the AUPOP and regulatory processes, however the Council cannot control the commercial decision-making of landowners and developers.</p>
Transport network	The transport network has to have adequate provisions for bus operations, future rapid transport and adequate cycling and walking infrastructure.	<p>All the provisions in the Auckland Unitary Plan (Operative in Part) will apply to the plan change area as well as the precinct provisions. The Whenuapai Structure Plan showed the proposed walking and cycling routes in the area. With regards to walking, cycling and bus operations, proposed standard I616.6.3 in the draft precinct provides guidance on the network roles of each type of road, and cross-references to the Auckland Transport standards which new/upgraded roads need to comply with to enable servicing by these modes.</p> <p>Auckland Transport and the New Zealand Transport Agency are working to progress business cases on the relevant regional projects such as the State Highway 16/18 connections and Brigham Creek Road upgrades. Local and collector roads will be provided through development.</p>

Topic	Summary of feedback received	Response
Transport network	There was opposition to the placement of some indicative roads. Some parties expressed the preference for indicative roads to be along property boundaries to enable costs to be shared.	Further work to refine the best location for all indicative roads is occurring. The location of roads also needs to consider implications for streams, planned parks and feedback on roads from other landowners. A refined position in respect of the arterial and collector roads will be included in the proposed plan change when it is notified.
Zoning and density	There was support for the inclusion and location of the Light Industry Zone so people can live locally and have local trips to work. However there was also feedback seeking for more business land within the plan change area.	<p>The Light Industry Zone is positioned in the areas where the motorways join which is a strategic location for business land. It is also under the flight path for Whenuapai Airbase where residential uses are less appropriate. There is 93 hectares of business land in the plan change area which is considered enough for the next 10 years. The surrounding areas in the plan change are more suitable to residential uses to take advantage of existing centres and coastal amenity.</p> <p>There will be more business land released in Stage 2 and there is also land zoned as Light Industry outside of the plan change area on Hobsonville Road.</p>
Zoning and density	There were requests for zoning changes to specific properties.	The zoning for the plan change area is being reviewed. Any zoning changes will need to give effect to the Regional Policy Statement in the Auckland Unitary Plan (Operative in Part).
Other	There were requests for specific types of activities such as petrol stations and retail shops.	The Council controls development through the Unitary Plan and regulatory processes, however we do not control the commercial decision making of landowners. The Council is unable to specify where specific types of retail will go.
Other	Feedback from people we did not want development to occur in Whenuapai and for the area to stay rural.	The area is zoned Future Urban in the Auckland Unitary Plan (Operative in Part) which means urbanisation will occur sometime in the future. Future urban land forms part of Auckland's 30-year housing supply. The Whenuapai plan change is the first plan change to Future Urban zoned land in Auckland. Stage 1 Whenuapai has been identified as being able to be serviced by infrastructure within the next 10 years.
Other	There were requests to include a separate precinct map showing overlays in the Auckland Unitary Plan (Operative in Part).	The overlays are shown on the Auckland Unitary Plan (Operative in Part) (AUPOP) maps. Plan changes to the AUPOP can only include material that is new. The plan change needs to be read in conjunction with the existing provisions of the AUPOP so that the complete policy and rule framework for development is understood.

Appendix 2: Whenuapai Plan Change Stage 1 Technical Inputs – Draft Triggers for Transport Investment

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Base Scenario (background growth based on ART 2021)	<ul style="list-style-type: none"> ♦ Existing primary schools at Whenuapai and Hobsonville ♦ 2,000 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ♦ No new business activity 	♦ As per Scenario I10 predictions.	FTN from Brigham Creek Road to Kumeu. ¹⁴	Inherent assumption in trip rates in surrounding areas.	A comprehensive network of pedestrian footpaths and appropriate cyclist infrastructure commensurate with development but in line with ultimate provisions.	Any development fronting an existing road will need to upgrade it to urban standard etc.
			FTN on Hobsonville Road which may require widening of Hobsonville Road to provide bus priority. ¹⁵	Inherent assumption complete by 2021.		
			Bus shoulder running Auckland CBD to Westgate. ¹⁶		Inherent assumption complete by 2021.	Traffic signals at: <ul style="list-style-type: none"> ▪ Brigham Creek Road/Totara Road/Mamari Road ▪ Brigham Creek Road/Tamatea Avenue ▪ Brigham Creek Road/Kauri Road ▪ Brigham Creek Road/Trig Road
			Re-alignment and urbanisation (50 km/hr) of Trig Road south of SH18 to connect to Luckens Road and traffic signals at the Trig Road/Hobsonville Road/Luckens Road intersection. ¹⁵	Background traffic growth but further assessment may indicated needed earlier based on growth in Trig Road South.		
			Traffic signals on Hobsonville Road ¹⁵ at <ul style="list-style-type: none"> ▪ Brigham Creek Road ▪ Sinton Road ▪ Clark Road ▪ Marina View Road ▪ Westpark Drive ▪ Suncrest Drive 		Inherent assumption complete by 2021.	
			SH16 widening between Hobsonville Road and Lincoln Road. ¹⁶	Background traffic growth.		
			New roundabout at SH16/Coatesville-Riverhead Highway intersection. ¹⁴		The SH16/Brigham Creek Road intersection and SH18 Upper Harbour Bridge are close to operating at capacity during peak modelled times in 2021. Accordingly, investment will likely be necessary with further development within the Whenuapai Plan Change and they have been assumed to be in place prior to development associated with the development scenarios tested.	
			SH16/Brigham Creek Road roundabout capacity improvements comprising a longer northbound short lane on the SH16 north approach.	Widening of SH18 Upper Harbour Bridge in the westbound direction.		
			Widening of SH18 Upper Harbour Bridge in the westbound direction.			

¹⁴ Identified in draft preferred Transport for Future Growth Area (TFGA) project

¹⁵ Identified in Northern Strategic Growth Area (NorSGA) project

¹⁶ Part of the Western Ring Route project

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Scenario 1a (background growth based on ART 2021)	<ul style="list-style-type: none"> • Existing primary schools at Whenuapai and Hobsonville • New primary school in south Trig Road area • New secondary school on Riverlea Road • 4,350 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 • No new business activity 	<ul style="list-style-type: none"> • As above. 	As above.	As above.	Bus connector route through Trig Road South area, connecting with FTN services and bus priority on Hobsonville Road and RTN at Westgate.	Inherent assumption in trip rates therefore needed for development in Trig Road South.
					Extension of Riverlea Road to meet Brigham Creek Road and traffic signals at Brigham Creek Road/Riverlea Road.	New Secondary School on Riverlea Road.
					New local road extending west from Trig Road into area south of SH18.	Any additional development west of Trig Road.
					New local road extending east from Trig Road into area south of SH18	Any additional development east of Trig Road
					Traffic signals at Trig Road/Connector road between SH18 and Hobsonville Road intersection.	Should be assessed for each application as affected by location of development – indicative requirement is at 400 dwellings each side.

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Scenario 1b (background growth based on ART 2021)	<ul style="list-style-type: none"> ♦ Primary schools at Whenuapai, Hobsonville and Trig Road south ♦ New primary school on Riverlea Road ♦ Secondary school on Riverlea Road ♦ 5,105 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 ▪ 755 new dwellings in the Kauri Road area ♦ No new business activity 	As above.	As above, plus widening of Brigham Creek Road between the SH18 interchange roundabouts and changing the lane arrangements to provide a double right turn from the SH18 southbound off-ramp, with two lanes provided through the southbound off-ramp roundabout.	Needs to be assessed for each application but indicatively with 100 new dwellings in the Kauri Road area.	Capacity improvements at the traffic signal controlled intersection of Kauri Road/Brigham Creek Road identified in the Base Scenario, including double right turn lanes from Brigham Creek Road east.	Needs to be assessed for each application but indicatively with 200 new dwellings in Kauri Road area. It is noted that the lane arrangement for this intersection could be constructed initially at the Base Scenario stage, rather than when development occurs.
Scenario 1c (background growth based on ART 2021)	<ul style="list-style-type: none"> ♦ Primary schools at Whenuapai, Hobsonville, Trig Road south and Riverlea Road ♦ Secondary school on Riverlea Road ♦ 5,470 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 ▪ 755 new dwellings in the Kauri Road area ▪ 365 new dwellings northwest of the SH18/Brigham Creek Road interchange ♦ No new business activity 	As above.	As above, plus RTN/FTN along SH18 with stations adjacent to SH18 ¹⁴ , with new link provided between the Sinton Road RTN station and Kauri Road, providing as a minimum, access for pedestrians, cyclists and buses.	Any new development northwest of the SH18/Brigham Creek Road interchange as included in vehicle trip rate predictions for the Kauri Road development.	As above, plus addition of fourth leg to Kauri Road/Brigham Creek Road intersection (assumes this does not connect through to Trig Road).	Any development northwest of the SH18/Brigham Creek Road interchange.

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Scenario 1d (background growth based on ART 2021)	<ul style="list-style-type: none"> ♦ Primary schools at Whenuapai, Hobsonville, Trig Road south and Riverlea Road ♦ Secondary school on Riverlea Road ♦ 6,670 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 ▪ 750 new dwellings in the Kauri Road area ▪ 365 new dwellings northwest of the SH18/Brigham Creek Road interchange ▪ 1200 new dwellings in the Sinton Road area ♦ No new business activity 	As above.	As above, plus capacity improvements at the SH16/Brigham Creek Road roundabout comprising a signalised roundabout or a left turn slip lane on the SH16 south approach.	Required for any development in Sinton Road area, although resulting from growth within all new development areas.	<p>As above, plus removal of the existing Sinton Road connection to the Brigham Creek Road/SH18 Northbound on-ramp intersection, with a new connection provided between Sinton Road and Kauri Road. This link could follow the same alignment as the link identified for Scenario 1c.</p> <p>New local link crossing SH18 connecting the Sinton Road area via Sinton Road East to Hobsonville Road.</p>	<p>Needs to be assessed for each application but indicatively with 500 new dwellings in the Sinton Road area.</p> <p>Needs to be assessed for each application but indicatively with 900 new dwellings in the Sinton Road area. As well as being considered necessary to provide for travel options, this link also provides necessary resilience with regard to emergency access to and from the Sinton Road area.</p>

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Scenario 1e (background growth based on ART 2021)	<ul style="list-style-type: none"> • Primary schools at Whenuapai, Hobsonville and Trig Road south • Secondary school on Riverlea Road • 6,670 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 ▪ 750 new dwellings in the Kauri Road area ▪ 365 new dwellings northwest of the SH18/Brigham Creek Road interchange ▪ 1200 new dwellings in the Sinton Road area • New business activity including 2,800 employees in the vicinity of Brigham Creek Road East and Trig Road. 	As above.	As above, south facing ramps at the SH18/Squadron Drive interchange. ¹⁴	Needs to be assessed for each application but likely required with 1,000 FTE in the development area near Brigham Creek Road.	As above, plus construct new Collector and Local roads into business area from Brigham Creek Road east of Trig Road.	Any development requiring access to avoid driveways onto Brigham Creek Road (as these will have cycle facilities).
			Traffic signals at the intersections forming the SH18/Trig Road interchange (including allowing for future extension of Northside Drive at the on-ramp intersection).	Needs to be assessed for each application but likely required for any new development along Trig Road north of SH18.	Traffic signals at the intersection of the above proposed Collector roads and Brigham Creek Road.	Needs to be assessed for individual application but indicatively required with 100 FTE along any local roads connected to Brigham Creek Road
					Construct new Collector and Local roads east from Trig Road towards Kauri Road Extension (assumes these do not join Brigham Creek Road/Kauri Road intersection - otherwise could need further changes at Brigham Creek Road/SH18 interchange)	Any new development east of Trig Road and any development requiring access to avoid driveways onto Trig Road (as these will have cycle facilities).
					Construct new Collector and Local roads into business area from Trig Road to the west.	Any development requiring access to avoid driveways onto Trig Road (as these will have cycle facilities).
				Urbanisation of Trig Road between Brigham Creek Road and SH18 Interchange	Any development fronting an existing road will need to upgrade it to urban standard and enable separated cycle facilities.	

Scenario	Land Use Assumptions		Associated Transport Infrastructure			
	Whenuapai	Adjacent Land Use Development	Regional Transport Network		Whenuapai Proposed Plan Change Transport Network	
			Investment	Triggers	Investment	Triggers
Scenario 2 (background growth based on ART 2026)	<ul style="list-style-type: none"> ♦ Primary schools at Whenuapai, Hobsonville and Trig Road south ♦ Secondary school on Riverlea Road ♦ 8,070 dwellings in Whenuapai including: <ul style="list-style-type: none"> ▪ 850 existing outside future urban zone ▪ 1,150 consented dwellings located either side of Totara Road between Brigham Creek Road and Dale Road ▪ 2,350 new dwellings around Trig Road south of SH18 ▪ 750 new dwellings in the Kauri Road area ▪ 365 new dwellings northwest of the SH18/Brigham Creek Road interchange ▪ 1,200 new dwellings in the Sinton Road area ▪ 700 new dwellings in the Brigham Creek Road/Mamari Road area ▪ 700 new dwellings in the Brigham Creek Road/Riverlea Road area ♦ Business activity including: <ul style="list-style-type: none"> ▪ 2,800 employees in the vicinity of Brigham Creek Road East and Trig Road ▪ 1,400 employees in the vicinity of Trig Road west and Brigham Creek Road extension 	Same as the 2026 Scenario I10 Land Use	As above, plus provide increased capacity at SH16/Brigham Creek Road roundabout comprising a signalised roundabout or free left turn lanes on the SH16 north, Fred Taylor Drive west and Brigham Creek Road east approaches.	Required due to background growth and accumulated growth in Whenuapai.	Extend Riverlea Road into the residential development south of Brigham Creek Road with addition of fourth leg to Brigham Creek Road/Riverlea Road signalised intersection (no connection between Riverlea Road and Spedding Road necessary).	Development south of Brigham Creek Road, to avoid driveways on to Brigham Creek Road.
			Motorway to motorway connections between SH16 (north) and SH18.		New East West road extending from Brigham Creek Road/Trig Road intersection connecting Mamari Road north and Riverlea Road extension. Addition of fourth leg to Trig Road/Brigham Creek Road signalised intersection and include two right turn lanes from Brigham Creek Road east to Brigham Creek Road north.	Assessed for individual application depending where development occurs
			Northside Drive connection to SH18/Trig Road interchange.		Widening of Brigham Creek Road to two lanes per direction between SH16 and Riverlea Road.	Need to be assessed for individual applications depending where development occurs
			Additional westbound lane on SH18 between Squadron Drive westbound off ramp and Trig Road westbound off ramp.		Traffic signals at the Trig Road/Kauri Road Extension intersection.	Needs to be assessed for each application depending where employment occurs.
			Capacity upgrades at SH18/Brigham Creek Road interchange. Options to be assessed by the SH16/18 corridor improvement study		Urbanisation of Mamari Road south of Brigham Creek Road; rear access is assumed to enable separated cycle facility	Needs to be assessed for each application depending where development occurs.
			Widening of Hobsonville Road between Trig Road and Marina View Road		Extend Mamari Road north and south as development occurs, eventually linking between Northside Drive extension and Brigham Creek Road.	Needs to be assessed for each application depending where development occurs.