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

Date: **Monday 19 to Wednesday 21 May 2025**
(Thursday 22 May as an overflow day if required)

Time: **9.30am**

Meeting room: **Henderson Chamber**

Venue: **Level 2, 1 Smythe Road, Henderson**

ADDENDUM HEARING REPORT

PRIVATE PLAN CHANGE 100 - RIVERHEAD

RIVERHEAD LANDOWNER GROUP

COMMISSIONERS

Chairperson	Karyn Kurzeja (Chairperson)
Commissioners	Nigel Mark-Brown
	Vanessa Wilkinson

Julie McKee
KAIWHAKAHAERE WHAKAWĀTANGA
HEARINGS MANAGER

Telephone: 09 977 6993 or 0274 909 902
Email: julie.mckee@aucklandcouncil.govt.nz
Website: www.aucklandcouncil.govt.nz

Note: The reports contained within this document are for consideration and should not be construed as a decision of Council. Should commissioners require further information relating to any reports, please contact the hearings advisor.

WHAT HAPPENS AT A HEARING

Te Reo Māori and Sign Language Interpretation

Any party intending to give evidence in Māori or NZ sign language should advise the hearings advisor at least ten working days before the hearing so a qualified interpreter can be arranged.

Hearing Schedule

If you would like to appear at the hearing please return the appearance form to the hearings advisor by the date requested. A schedule will be prepared approximately one week before the hearing with speaking slots for those who have returned the appearance form. If changes need to be made to the schedule the hearings advisor will advise you of the changes.

Please note: during the course of the hearing changing circumstances may mean the proposed schedule may run ahead or behind time.

Cross Examination

No cross examination by the applicant or submitters is allowed at the hearing. Only the hearing commissioners are able to ask questions of the applicant or submitters. Attendees may suggest questions to the commissioners and they will decide whether or not to ask them.

The Hearing Procedure

The usual hearing procedure is:

- **The chairperson** will introduce the commissioners and will briefly outline the hearing procedure. The Chairperson may then call upon the parties present to introduce themselves. The Chairperson is addressed as Madam Chair or Mr Chairman.
- **The applicant** will be called upon to present their case. The applicant may be represented by legal counsel or consultants and may call witnesses in support of the application. After the applicant has presented their case, members of the hearing panel may ask questions to clarify the information presented.
- **Submitters** (for and against the application) are then called upon to speak. Submitters' active participation in the hearing process is completed after the presentation of their evidence so ensure you tell the hearing panel everything you want them to know during your presentation time. Submitters may be represented by legal counsel or consultants and may call witnesses on their behalf. The hearing panel may then question each speaker.
 - Late submissions: The council officer's report will identify submissions received outside of the submission period. At the hearing, late submitters may be asked to address the panel on why their submission should be accepted. Late submitters can speak only if the hearing panel accepts the late submission.
 - Should you wish to present written evidence in support of your submission please ensure you provide the number of copies indicated in the notification letter.
- **Council Officers** will then have the opportunity to clarify their position and provide any comments based on what they have heard at the hearing.
- The applicant or their representative has the right to summarise the application and reply to matters raised by submitters. Hearing panel members may further question the applicant at this stage. The applicants reply may be provided in writing after the hearing has adjourned.
- **The chair** will outline the next steps in the process and adjourn or close the hearing.
- If adjourned the hearing panel will decide when they have enough information to make a decision and close the hearing. The hearings advisor will contact you once the hearing is closed.

Please note

- that the hearing will be audio recorded and this will be publicly available after the hearing
- catering is not provided at the hearing.

**A NOTIFIED PRIVATE PLAN CHANGE TO THE AUCKLAND UNITARY PLAN BY
RIVERHEAD LANDOWNER GROUP**

TABLE OF CONTENTS		PAGE NO.
Reporting officer's addendum report		5 – 22
Attachment 1	Specialist Technical Memos	
	Open space	25 – 28
	Stormwater and Flooding Report	29 – 39
	Transport Report	40 - 50

Reporting officer, David Wren

Reporting on proposed Private Plan Change 100 which seeks to rezone 6 ha of land in Riverhead from Future Urban to Rural-Mixed Rural zone and 75.5 ha to a mix of Residential – Mixed Housing Suburban, Residential – Terrace Housing and Apartment Building, Business – Local Centre and Business – Neighbourhood Centre zones with associated precinct provisions. The request also seeks to shift the Rural Urban Boundary to align with the boundary between the proposed Rural Mixed Rural zoning and the urban zones.

APPLICANT: RIVERHEAD LANDOWNER GROUP

Private Plan Change 100 - Private Plan Change 100 - Riverhead
Monday 19 to Wednesday 21 May 2025 (with Thursday 22 May as an overflow day if required)

Addendum Hearing Report for Proposed Private Plan Change 100: Riverhead to the Auckland Unitary Plan (Operative in part)

Section 42A Hearing Report under the Resource Management Act 1991

Report to:	Hearing Commissioners
Hearing Date/s:	19 to 22 May 2025
File No:	Hearing Report – Proposed Private Plan Change 100 (PC100)
File Reference	N/A
Report Author	David Wren, Consultant Planner
Report Approvers	Peter Vari, Team Leader Planning Regional, North, West and Islands
Report produced	14 April 2025

Summary of Proposed Private Plan Change 100 Riverhead: PPC100 seeks to rezone approximately 6 hectares of Future Urban Land to Rural – Mixed Rural zone. The RUB is also proposed to be shifted accordingly. PPC100 also seeks to rezone approximately 75.8 hectares of Future Urban zoned land for urban development, which will comprise approximately:

- 1.8ha Business – Local Centre zone;
- 0.7ha Business – Neighbourhood Centre zone;
- 4.3ha Residential – Terrace Housing and Apartment Building zone; and
- 69ha Residential – Mixed Housing Suburban zone;

The private plan change proposes to introduce and apply the ‘Riverhead Precinct’ to the portion of the Plan Change area proposed to be urbanised to manage the effects of urbanisation on the local environment and to ensure that a quality built environment is achieved.

Contents

Executive Summary	17
1. Proposed Plan Change	19
2. Analysis of the section 32AA report and any other information provided by the applicant	20
3. Assessment of effects	25
3.1. Urban Form	25
3.2. Centres Hierarchy	25
3.3. Visual Amenity	25
3.4. Natural character and landscape	25
3.5. Mana whenua values	25
3.6. Transport	25
3.7. Infrastructure and servicing	26
3.8. Ecological effects	26
3.9. Natural Hazards - Flooding	26
3.10. Natural hazards - Geotechnical	26
3.11. Land Contamination	26
3.12. Heritage and Archaeology	26
3.13. Reverse Sensitivity	26
3.14. Parks and Open Space	27
4. Statutory and policy framework	27
4.1. Auckland Unitary Plan	28
5. Conclusions	28
6. Recommendations	29
7. Signatories	30

Abbreviations

Abbreviations in this report include:

Abbreviation	Meaning
AUP	Auckland Unitary Plan
'the applicant'	Riverhead Landowner Group (referred to as 'the applicant' in this report).
FDS	Future Development Strategy
FULSS	Future Urban Land Supply Strategy 2017
FUZ	Future Urban Zone
NPS-UD	National Policy Statement for Urban Development
PPC100 or 'Plan Change'	Proposed Private Plan Change 100
RMA	Resource Management Act 1991
RPS	Regional Policy Statement

Attachments	
Attachment 1	Specialist peer review addendum memoranda

Executive Summary

1. PPC100 seeks to rezone approximately 6 hectares of Future Urban Land to Rural – Mixed Rural zone. The RUB is also proposed to be shifted accordingly. PPC100 also seeks to rezone approximately 75.8 hectares of Future Urban zoned land for urban development, which will comprise approximately:
 - 1.8ha Business – Local Centre zone;
 - 0.7ha Business – Neighbourhood Centre zone;
 - 4.3ha Residential – Terrace Housing and Apartment Building zone; and
 - 69ha Residential – Mixed Housing Suburban zone;
2. The private plan change proposes to introduce and apply the 'Riverhead Precinct' to the portion of the Plan Change area proposed to be urbanised to manage the effects of urbanisation on the local environment and to ensure that a quality built environment is achieved..
3. The Section 42A hearing report (**S42A Report**) released on 17 March 2025 did not recommend that PC100 be approved because of a number of outstanding matters including:
 - The extent to which PPC100 is integrated with the provision of infrastructure and in particular the provision of water supply and wastewater disposal and treatment and the required upgrading of transport infrastructure. There is in my view too much uncertainty about whether much of the required infrastructure will be available in the near term. To this end PPC100 may be premature.
 - The effects of urbanisation of the plan change area on flooding downstream and within the plan change area have not been adequately assessed and the Council/ Health Waters specialists have advised that they consider the effects are likely to be more than minor.
 - The extent to which PPC100 gives effect to the NPS-UD and the RPS in respect of the provision of public transport.
 - The inconsistency with the Auckland Future Development Strategy and the lack of an assessment against that document.
 - The report identified a number of areas where additional assessment is required. These assessments are required in order to make a fully informed decision on PPC100.
 - A number of matters have been raised by Council specialists.
4. Direction 2 from the Hearing Panel, issued on 14 March 2025, indicated that an addendum S42A report shall be prepared if required. The purpose of this addendum S42A report is to update the assessment, conclusions and recommendations as necessary to assist the Hearing Panel following changes proposed by the applicant. It does not address submissions.
5. This addendum S42A report has been prepared in accordance with section 42A of the RMA. The discussion and recommendations in this report are intended to assist the Hearing Panel, the requestor and those persons or organisations that lodged submissions on PPC100. The recommendations contained within this report are not the decisions of the Hearing Panel.
6. This report also forms part of council's ongoing obligations to consider the appropriateness of the proposed provisions, as well as the benefits and costs of any policies, rules or other methods, as well as the consideration of issues raised in submissions on PPC100.
7. On the basis of the information available at the time of preparing this addendum S42A report, acknowledging that several matters in contention have been resolved, my recommendation has not

changed.

1. Proposed Plan Change

8. The planning evidence of Karl Cook attached a revised set of Precinct provisions (**precinct provisions**). These changes are summarised as follows;

Precinct description

9. The addition of references to matters that the Precinct seeks to address (including stormwater management and open space needs), clarification of the green corridors and reference to upgrades to the road network and coordination with water supply and wastewater infrastructure.

Objectives and policies

10. References to all modes of transport, coordination of subdivision and development with infrastructure and the multi-purpose green corridors.

Transport infrastructure rules

11. The addition of a development trigger (relating to occupation of dwellings) for eastbound lanes on SH16 and consequential re-arranging of the rules relating to staging of other transport upgrades.

The addition of provisions for determining compliance with the transport upgrade standards and a rule relating to the internal road function and design elements table (Appendix 1 to the Precinct).

Yards

12. The addition of a 3m yard for boundaries adjoining Coatesville-Riverhead Highway, Riverhead Road, and Cambridge Road (with 2.5m, as notified, applying to all other front yards) and requirements for landscaping of 50% of front yards.

Riverhead Road culvert upgrade

13. The addition of a standard requiring the upgrading of the culvert under Riverhead Road prior to development south of the road that discharges stormwater into the tributary to the Rangitopouri Stream via the culvert.

Matter of discretion and assessment criteria

14. The addition of, and minor changes to, provisions for the assessment of infrastructure upgrades, development and subdivision not complying with the internal road function and design elements table in Appendix 1 and 2, and the Riverhead Road culvert upgrade.

Special information requirements

15. The addition of requirements for a water and wastewater servicing strategy relating to the first stage of development or subdivision of land and for a transportation assessment with applications to infringe the road upgrade standards.

Precinct plans

16. Changes to Precinct plan 2 to reference multi-purposes corridors (rather than singular), to reference indicative open space (rather than neighbourhood parks), to reduce the number of indicative open spaces from three to two and shift the key pedestrian connection north of Riverhead Road southwards, with a consequential relocation of the adjacent indicative open space to align with the relocated pedestrian connection.

17. A change to Precinct plan 3 to adjust the position and extent of the new footpath in Cambridge Road.

Appendices

18. Minor changes to access restriction, road reserve and on-street parking

2. Analysis of the section 32AA report and any other information provided by the applicant

19. The applicant provided a section 32AA report in respect of the changes proposed as required by the RMA. This is attached in Appendix C of Mr Cook's evidence.

Key Changes Proposed

Transport

20. These have been assessed by Mr Peake for the Council. Mr Peake has provided an addendum technical memo which is attached in Attachment 1. In summary Mr Peake advises as follows:

A new Standard IX.6.1A Staging of development with road upgrades State Highway 16 and Coatesville-Riverhead Highway has been introduced. I support the inclusion of this new standard as it will require the upgrade of the SH16 / Coatesville-Riverhead Highway intersection and upgrades to the Coatesville-Riverhead Highway intersections with Old Railway Road and Riverland Road prior to the occupation of any dwelling (refer to Table IX.6.1A.1 (a)).

I also support the intent of the threshold to limit the quantum of dwellings that may occur before two eastbound lanes on SH16 east of Coatesville-Riverhead Highway are introduced (refer to Table IX.6.1A.1(b)). However, I consider that the dwelling thresholds are too high....

Given that there are multiple different types of dwellings that could be constructed, for the reasons I set out above in Section 4.0, the use of a dwelling unit equivalent would be appropriate and the adoption of a single dwelling unit equivalent threshold. I propose that the threshold of 590 dwelling unit equivalents be adopted and that the dwelling unit equivalents presented in Table 1 above for different dwelling types should be applied.

I acknowledge the Discretionary activity status of non-compliance with the Standard IX.6.1A. I consider that Discretionary or Non-complying status for not complying with this standard is appropriate as the effects of not complying will need to be assessed in some detail.

Amendments have been made to Standard IX.6.1 with some of the changes that I recommended in my Technical Specialist Memorandum accepted by the Applicant.

Consequential changes have been made as a result of introducing the new standard IX.6.1A. I defer to the Reporting Planner to comment on the detail of the changes proposed by Mr Cook.

New Standard IX.6.2A Road design has been introduced to require development and or subdivision to comply with IX.11.1 Appendix 1 Road function and design elements table – Internal roads within the Precinct. I support the inclusion of this standard and the Restricted Discretionary status for non-compliance.

A new Special Information Requirement IX.9(6) Transport assessment has been introduced to require a transport assessment to be provided where an application infringes Standard IX.6.1A. I support this addition.

Minor changes have been made to the IX.11.2 Appendix 2 – Road function and design elements

table – External roads to the precinct in relation to Cambridge Road. I support these changes.

I note that in this table, that for Riverhead Road, the description of the extent of Riverhead Road refers to the eastern boundary of 307 Riverhead Road. This should be amended to the “western boundary” to be consistent with the amendment to Standard IX.6.1(2)(c).

The additional information provided in the evidence of Mr Church has generally satisfied the gaps identified in my Specialist Technical Memorandum dated 28 August 2024 and my general conclusions and recommendations remain unchanged except where I note below.

I acknowledge the results of the additional modelling of the SH16 / Coatesville Riverhead Highway intersection and that this satisfies my queries on its operation. My concerns over the double left turn from Coatesville-Riverhead Highway remain but I note that the modelling is on the layout proposed by NZTA for the Stage 2 Bringham Creek to Waimauku project and not under the control of the Applicant.

Information on traffic generation without the school or retirement village has been provided, and I am now satisfied that should these not proceed, that this should not result in a greater number of trips on the external road network.

The additional assessment included in the evidence has confirmed that two lanes eastbound on SH16 will be required to support development over a particular threshold.

A new Standard has been included in the Precinct Provisions (IX.6.1A, and Table IX.6.1.1(b)) that sets out a threshold of dwellings over which SH16 would need to be upgraded to provide two eastbound lanes between Coatesville-Riverhead Highway and Bringham Creek Road. I support the inclusion of this new standard and the introduction of a threshold. However, I consider that the number of dwellings is too high for the likely trip generation in the short to medium term and could result in the capacity of eastbound SH16 being exceeded as a single lane. I consider that the dwelling threshold should be derived based on a higher trip generation rate for dwellings that is commensurate with a location that has limited access to public transport, as was used in sensitivity testing in the ITA. This would result in a lower number of dwellings that would trigger the threshold.

I recommend that the proposed thresholds in Table IX.6.1A.1 (b) be replaced by a single threshold based on dwelling unit equivalents (590 dwelling unit equivalents) and that Dwelling Unit Equivalents for the different dwelling types as set out in Table 1 (in Mr Peakes memo) should be adopted. This would simplify the interpretation of the standard.

Overall, I remain of the view that PPC100 only partly aligns with the relevant traffic and transport Regional Policy Statement Objectives and Policies in relation to coordinating development with transport infrastructure. Until the full upgrades to Coatesville- Riverhead Highway, Riverhead Road and the Bringham to Waimauku SH16 are complete, Riverhead will be reliant on private vehicle use to travel to the wider network as there are currently no planned or funded improvements to public transport that will directly serve Riverhead and the plan change area. Riverhead will continue to be surrounded by rural roads with no facilities for active modes (particularly cyclists) to travel to surrounding areas (Kumeu or Westgate). Improvements for public transport or active modes are unlikely to occur for some.

PPC100 will provide some of the identified prerequisite transport infrastructure and this will enable some development to occur. Subject to my recommendations above, I support the Precinct Provisions that manage the quantum of development that can occur prior to wider transport improvements (such as two eastbound lanes on SH16 between Coatesville-Riverhead Highway and Bringham Creek Road, or the completion of the Alternative State Highway).

21. I rely on the technical advice provided by Mr Peake and note that his conclusions remain unchanged except where stated. In particular his concerns regarding public transport and alternative mode access remain unchanged.

22. In respect of the precinct rules for transport themselves, the activity table and the standards, would allow subdivision and the construction of houses or other buildings, provided that they are not occupied, ahead of the upgrades to SH16 and the Coatesville-Riverhead Highway.
23. I am firmly of the view that the use of the term 'occupancy' used in the triggers is inappropriate, is impractical to implement and will result in adverse effects. I also consider that urban subdivision should not occur until the major pre-requisites are in place. To do otherwise risks the construction of urban development (i.e. subdivision and buildings) that cannot be used. This will likely result in pressure from owners to occupy buildings ahead of the necessary infrastructure actually being available. I remain of the view that the appropriate trigger is either the s224C certificate for subdivision or the construction of a building (issue of building consent). The prime reasons for my views are that the Council is not able to effectively prevent the occupation of constructed buildings ahead of infrastructure being available. In addition given that the land within Riverhead is held in multiple ownerships that may be developed at the same time, calculating when the trigger point is reached (i.e. x number of dwellings are occupied) is not practical.
24. I also remain of the view that non-complying activity status is most appropriate for non-compliance with the staging standards (i.e. IX.6.1A and IX.6.1) given that these standards are a key part of ensuring development and the provision of infrastructure is integrated, as is required by the higher level planning documents, and the potential scale of effects on existing major infrastructure that would result if development proceeds in advance of improvements to that infrastructure.
25. I support the restricted discretionary activity status for proposals not complying with Standard IX.6.2A (Road Design).

Parks

26. The changes proposed in respect of parks infrastructure being additional objectives and policies and changes to the Precinct Plan including to provide two parks rather than three have been reviewed by Mr Sadlier for Council Parks and Community Facilities.
27. Mr Sadlier advises that he continues to support the views expressed in the primary s42a report and the specific recommended changes to PC100. In regard to the proposed open space provision requirements in the PC100 precinct, he continues to support the proposed objectives, policies, standards, and special information provisions relating to open space provision as recommended in my primary s42A report and subsequently the changes to PC100 proposed by the applicant.
28. Based on this assessment I support the changes proposed by Mr Cook.

Stormwater and Flooding

29. Ms Li and Ms Tsang from Healthy Waters have reviewed the proposed changes in respect of stormwater and flooding. They have provided an interim assessment report which is set out in Attachment 1.
30. Ms Li and Ms Tsang advise that;

The latest changes proposed to the PPC 100 stormwater and flood management are summarised in Paragraph 9.5 of Ms Rhynd's evidence and are outlined below:

- (a) *Reduce catchment discharging north to the Forest Stream by circa 8ha.*
- (b) *Upgrade the existing Riverhead Road Culvert to manage conveyance of flows in existing and proposed MPD PPC100 conditions.*
- (c) *Optimise catchment diverted to the southern stream.*

(d) Introduce an attenuation volume to manage off-site effects on southern stream.

The updated flood model results based on the proposed changes are summarised in Paragraph 9.11 of Ms Rhynd's evidence and are outlined below:

- (a) Top water level increase north of the site has been effectively removed by the reduction of the S02_P catchment discharging to the north and upgrade of Riverhead Road Culvert.
- (b) No change within the Forest Stream floodplain near Crabb Fields Lane.
- (c) Up to 300mm decrease in top water level immediately upstream and downstream of the existing Riverhead Road Culvert.
- (d) No change in top water levels within the southern stream channel and Coatesville-Riverhead Highway Culvert.

Ms Li considers that the flood risk assessment based on the updated model results is inconclusive for the reason as outlined in Paragraph 3 above. In addition, initial spot checks of some of the key model parameters, such as time of concentration, indicate that while some catchments have been assigned appropriate values (i.e. hydrology parameters), other catchments appear to have inappropriate values. Further clarification and justification from the Applicant are needed to demonstrate the robustness and appropriateness of the modelling approach used to support the flood risk assessment.

The only model scenario that has been considered and assessed for the updated stormwater and flood management is the 100-year ARI with 3.8°C climate change. The updated model results for the 100-year ARI with 3.8°C climate change scenario indicate a minimal change (i.e. 1-2 mm increase) of flood level downstream to the north of the PPC 100 site and near the Forest Stream floodplain close to Crabb Fields Lane.

However, in Ms Li's opinion, without the understanding and comprehensive analysis of a range of rainfall scenarios, it is premature to conclude that the updated stormwater and flood management will achieve appropriate flood mitigations and that downstream flooding risks to people, property and infrastructure will not increase. To assess the overall flood effects, it is essential to model a broader range of rainfall events, including more frequent events and scenarios that account for spatial variations in rainfall.

Given the above, Ms Li considers that the Applicant's flood risk assessment still lacks sufficient evidence to confirm the conclusion reached. Should a feasible flood management solution be confirmed at the plan change stage and should the plan change proposal be approved, Ms Li agrees with Ms Rhynd that more detail flood modelling and assessment should be required at the resource consent stage and the below special information requirement is recommended to be included in the Riverhead Precinct provisions:

IX.9 Special information requirements

(NEW) Flood modelling and Assessment

At each stage of subdivision and/or development of any site within the Precinct, a detailed flood modelling and assessment must be undertaken and provided to support the proposal to confirm that flooding risks to people, property and infrastructure will not increase. Modelling limitation must include but is not limited to:

- Detail of stormwater infrastructure at each stage of development.
- Terrain detail for proposed development.

- All downstream public infrastructure from any discharge point of proposed development, including the pipe network serving Duke Street, Riverhead Point Drive and culverts.
- Building footprints and finished floor levels downstream of proposed development.

31. Ms Li and Ms Tang also note that the applicant has rejected all the proposed amendments that they recommended as part of the S42A report. These matters (which are set out in the memorandum) remain outstanding. They advise that overall their position on the proposed Riverhead Precinct remains unchanged. As discussed above more assessment and a wider range of flood scenarios is also required in respect of the updated flood management proposal which relies on the new proposed Rule IX.6.16 Riverhead Road Culvert Upgrade.
32. In respect of the new standard IX.6.16 Riverhead Road Culvert Upgrade (subject to completed modelling) Ms Tsang agrees that this should be included, but that non-compliance should be a discretionary activity rather than a restricted discretionary given the nature and extent of possible adverse effects.
33. Based on this assessment I am of the view, at the time of writing, that additional modelling is still required to understand flooding effects. Healthy Waters will provide an update on this as part of the Council's closing comments at the hearing. A number of other matters raised in the S42A report have not been addressed. Accordingly at this time I have not changed my view from that expressed in the s42A report.

Front yards

34. The changes include greater front yard setbacks from a number of identified main roads. The landscaped area standard has also been amended to require at least 50% of the area of the front yard to be landscaped. I support these changes.

Ecological

35. The revised precinct provisions have included recommended changes contained in the Section 42A report and the technical memo from Ms Wong. Ms Wong advises that she supports the proposed changes that give effect to her prime concerns concerning the omission of standards for the margins of wetlands.

Water and Wastewater

36. In the s42A report I discussed my concerns regarding the provision of water and wastewater infrastructure. The applicant's changes in respect of this has been to add some text concerning the co-ordination of water and wastewater infrastructure into the precinct description and objectives and policies and to add a new special information requirement for a water and wastewater strategy at the first stage of development or subdivision.
37. In my view while the changes to the objectives and policies are welcomed, there are no other changes (i.e. to rules) that would ensure that infrastructure supply and development are actually integrated. In addition the mechanisms for dealing with situations where such infrastructure is not available are inadequate for the reasons set out in the s42A report. The water and wastewater strategy plan required as part of the first stage of development is likely to be ineffective as it will have no statutory weight and will not be able to be imposed on other or future landowners noting the plan change area is held in several landownerships.
38. The evidence from Mr Cook and Mr White provide a discussion on potential alternative means of providing such infrastructure but I am not aware of how this is proposed to be funded or whether any possible alternative will be compatible with or supported by Watercare. This is discussed below in paragraphs 53 and 54.

39. I have not changed my view on this matter from the S42A report.

3. Assessment of effects

40. The following discussion outlines issues identified in the S42A Report and whether they have been resolved having considered the evidence submitted and highlights key outstanding issues in contention.

3.1. Urban Form

41. With the exception of the locations of parks the applicant is not proposing any significant change to the proposed urban form. As noted above Mr Sadler supports the proposed changes in respects of Parks infrastructure.

3.2. Centres Hierarchy

42. In the s42A report I raised some concerns about the location of the Local Centre zone. This is addressed in the evidence of Mr Cook, Ms White and Mr Heath. The applicant's view as summarised in the evidence from Mr Cook is;

"The Plan Change was the most efficient and effective option because the proposed zoning layout has been informed by a Structure Plan to respond to the characteristics of the Plan Change area. The Local Centre zone has been sized to meet current and future demands (B2.5.1(1)) and most of the Plan Change area falls within an accessible 800m walkable catchment to improve community access to good, services and community facilities in accordance with H11.2(4) and H12.2(4)."

43. I have no concerns about the size of the local centre and its location on the intersection of two main roads is appropriate. It is however located somewhat south when viewed from the entirety of Riverhead. While the location provides an 800m catchment to the plan change area, the area generally to the north of the Queen Street / Albert Street area lies outside of the 800m catchment.

44. Given that the existing business centre to the north will remain and be able to service the north, I am satisfied that the proposed location of the local centre is appropriate.

3.3. Visual Amenity

45. I remain of the view that PPC100 will not create significant adverse visual amenity effects.

3.4. Natural character and landscape

46. I remain of the view that PP100 will have appropriate effects on natural character and landscape values.

3.5. Mana whenua values

47. There have been no changes proposed in respect of these matters. The s42A report considered that PPC100 will adequately manage effects of the plan change on cultural values.

3.6. Transport

48. The applicant has recommended several changes in respect of the provisions relating to transport. These have been assessed by Mr Peake in the memorandum attached in Attachment 1 to this report and is discussed above.

49. A number of matters are agreed between Mr Peake and the applicant, but a number of matters

remain outstanding.

3.7. Infrastructure and servicing

Stormwater

50. This is discussed above in paragraphs 29 - 33.

Water supply

51. The evidence of Mr. White is firstly that the applicants have agreed to fund and construct the second water main required to service an expanded Riverhead. Secondly, Mr. White identifies a discrepancy between the capacity required and Watercare's submission and the GHD report. This has been reviewed and while a discrepancy remains Mr. White considers that the capacity within the transmission infrastructure is sufficient and it is technically feasible to serve the plan change area for water ahead of proposed upgrades identified and the FDS.
52. At this stage I make no further comment ahead of receiving the evidence from Watercare.

Waste water

53. Mr. White states there is agreement between the applicant and Watercare that 1000 dwellings can be serviced for wastewater. Beyond this Mr. White has identified a number of options that may be utilised for servicing the plan change area for wastewater reticulation.
54. In my view, while options may be available, there is still a lack of certainty as to whether these can be implemented and funded. Mr. Cook is generally of the view that solutions will be found as development proceeds. Subject to alternative evidence from Watercare, my view is the lack of certainty as to whether the plan change area can be adequately serviced for waste water reticulation in the short to medium term remains, and (as state above) in my view the precinct provisions do not ensure that waste water infrastructure provision and development is adequately integrated. I also consider that adverse effects may arise if development proceeds without full urban infrastructure.

3.8. Ecological effects

55. As noted above the changes proposed to PPC100 the concerns of the Council's ecologist, Ms Wong have been addressed.

3.9. Natural Hazards - Flooding

56. This is discussed above in paragraphs 29-33.

3.10. Natural hazards - Geotechnical

57. There are no geo-technical issues in contention.

3.11. Land Contamination

58. There are no issues in contention in respect of land contamination.

3.12. Heritage and Archaeology

59. There are no issues in contention in respect of heritage and archaeology.

3.13. Reverse Sensitivity

60. There are no issues in contention in respect of reverse sensitivity

3.14. Parks and Open Space

61. Mr Sadlier has reviewed the proposed changes regarding parks and open spaces as set out above and concluded that the changes meet his previous concerns.

4. Statutory and policy framework

62. An update to my assessment of the statutory and policy framework is provided to reflect the issues discussed above. The general discussion in my s42A report remains unchanged. On the key issues I can advise as follows.

NPS-UD and FDS

63. I consider that on balance the additional information provided in respect of water and wastewater infrastructure (more particularly wastewater) does not give me sufficient confidence that PPC100 gives effect to the NPS-UD and the FDS. I coming to this view I have considered the following;

64. NPS-UD Policy 8 which states;

Local authority decisions affecting urban environments are responsive to plan changes that would add significantly to development capacity and contribute to well- functioning urban environments, even if the development capacity is:

(a) unanticipated by RMA planning documents; or

(b) out-of-sequence with planned land release.

65. The FDS sets a number of prerequisites for development ahead of time which is explained as follows on page 45;

There may therefore be cases where the timing and development of areas could be brought forward. This will however need to be considered on a case-by-case basis. While this creates a 'pathway' for development that wishes to proceed earlier, the council will only consider this where there is not a significant impact on the council's financial position and broader well-functioning urban environment outcomes can be met.

66. In respect of Riverhead the prerequisites listed are:

- Bringham to Waimauku SH16 Upgrade
- SH16 Main Road Upgrade
- Alternative State Highway
- Access Road upgrade
- Coatesville-Riverhead Highway upgrades
- Northwest Rapid Transit extension to Huapai
- Riverhead separation from the KHR WW Main

67. In respect of these Mr Cook identifies that Riverhead is grouped together with Huapai-Kumeu and that not all of these prerequisites are necessary for Riverhead. That may be the case. Mr Cook

further notes that;

(a) The Plan Change is supported by a comprehensive assessment demonstrating how the proposed land use change will be integrated with stormwater management solutions, hydrology mitigation and erosion protection can be provided for, flooding effects are avoided, and stormwater infrastructure can be provided; and

(b) Transport, wastewater and water supply infrastructure prerequisites relevant to the development of Riverhead are either currently available or will be provided, with any necessary funding met.

68. With respect to stormwater and flooding at this time the assessment in the s42A report remains unchanged in that stormwater and flooding effects have not yet been avoided.
69. In respect of the NPS-UD I consider that PPC100 is unlikely to provide a well-functioning urban environment due to flood risks and a potential lack of infrastructure in the short to medium term. The additional information shows that there are options for infrastructure provision, but the funding and acceptability of that infrastructure (particularly wastewater) is unclear. Additionally the PPC100 provisions do not in my view give adequate certainty that the necessary infrastructure will be provided ahead of development as has been discussed above. In my view uncertainty remains around consenting risks, the lack of agreements in place in respect of potential alternative means of wastewater infrastructure. I also note that there remains uncertainty about the timing of the SH16 upgrades, with NOR for this work still on hold.
70. If agreements were in place or on track to be in place I would have greater confidence that land use and infrastructure provision were integrated. The FDS states¹ that;
- For the removal of doubt, any and all options and approaches described here, or any other mechanism or solution that may be identified to provide infrastructure that enables development in future urban areas prior to when the council (and its CCOs) can or intend to provide that infrastructure, will be subject to an agreement between the council and developer prior to any development proceeding.*
71. The evidence from the applicant does not include any agreements with the Council or its CCOs in respect of any options. On the basis the development should not proceed until an agreement about the provision of infrastructure is in place, rules discussed above are not sufficient to ensure that this happens. However, once land is rezoned there will be an expectation that development can occur. I am not aware of any hard and fast edict on what degree of certainty is appropriate, and I am not advocating that full agreements need to be in place before the plan change is approved, but I would have greater confidence if the applicant and Watercare were tracking in the same direction.
72. In addition there have been no changes that address the lack of public transport and alternative mode access deficiencies.

4.1. Auckland Unitary Plan

73. Overall, my assessment against the key objectives and policies of the RPS remains largely unchanged. Mr Cook comments that he does not consider that Riverhead is a Rural and Coastal Town because Riverhead is located within the RUB. The terms Rural and Coastal Town or Rural Urban Boundary is not defined in the AUP. Chapter G1 identifies that the Rural Urban Boundary identifies land suitable for urban development.

5. Conclusions



¹ FDS page 46

74. In respect of flooding and stormwater matters in my view the concerns expressed in the s42 A report remain outstanding at this time.
75. In respect of infrastructure it is my considered opinion that the additional information and changes proposed to be made to PPC100 do not yet give sufficient effect to the NPS:UD and the RPS.
76. In respect of the details of the Precinct provisions many of the changes made are supported as noted in the discussion above. However, I consider that the infrastructure staging and trigger provisions do not give sufficient certainty, nor do they adequately integrate development and infrastructure.
77. As noted at the beginning of this addendum report, its purpose is to address the changes proposed by the applicant since notification. This is not a summary of the Council's staff or its advisors' positions on submissions, nor is it rebuttal of the applicant's evidence. It is intended that summary statement will be provided in the normal manner at the end of the hearing. That statement will address evidence including that of submitters and any questions the Commissioners may have during the course of the hearing. I have not provided an updated set of provisions but will do that with the summary statement if appropriate.

6. Recommendations

78. I make no further recommendation as a result of the changes proposed by the applicant as while a number of matters raised in the s42A report have been resolved by the amendments proposed by the applicant (i.e. matters relating to ecology, parks and open space, business land provision, and some of the transport matters) a number of matters remain outstanding including;
 - a) The extent to which PPC100 is integrated with the provision of infrastructure and in particular the provision of water supply and wastewater disposal and treatment and the required upgrading of transport infrastructure.
 - b) The effects of urbanisation of the plan change area on flooding and stormwater disposal downstream and within the plan change area.
 - c) The extent to which PPC100 gives effect to the NPS-UD and the RPS in respect of integration of land use and the provision of infrastructure and the provision of public transport.
 - d) The extent to which PPC100 is consistent with the Auckland Future Development Strategy.

7. Signatories

Name and title of signatories	
Authors	 David Wren, consultant planner
Reviewer / Approved for release	 Peter Vari, Team Leader Planning, Regional , North, West and Islands

ATTACHMENT 1

SPECIALIST TECHNICAL MEMOS

Memorandum to: David Wren, Reporting Consultant Planner
Subject: s42A Addendum Report – (Open Space assessment)
From: Douglas Sadlier, Senior Parks Planner, Auckland Council
Date: 10.04.2025

1. My full name is Douglas Reginald Keith Sadlier.
2. I prepared a specialist review dated 04.02.2025. I refer to my qualifications and experience in my original review and do not repeat those matters here.
3. The purpose of this memorandum is to respond to the evidence of:

Applicant

- a. Mr Karl Cook, Planning
- b. Ms Lauren White, Urban Design

4. I respond to the open space assessment and changes provided by the above experts in their evidence regarding the provision of open space in PC100 and its alignment with relevant Council policies and frameworks - matters also relevant to the quality of open spaces proposed in PC100.
5. I agree with Mr Cook with the amendment to the IX. Precinct description in relation to 'green corridors' as follows:

"Green corridors are multi-purpose public spaces which provide informal recreation, ecological, stormwater and/or movement functions that are integrated with, or adjacent to, the street network"
6. 'Green corridors,' as noted in the amendment above, can function in this manner with appropriate engagement, design, consenting, construction, and maintenance.
7. I agree with Mr Cook (and Ms White) at 14.3 and 14.4 of the evidence that a multipurpose green corridor is a structural element and that design flexibility can be achieved at detail design stage, as part of a future subdivision process, as follows:

"14.3 Ms White considers that the multipurpose green corridors are a structural element of the Precinct with the genesis stemming from the Rodney Greenways plan, feedback from the community and discussion with the project stormwater engineers. In Ms White's expert view, the green corridors are not required to enable the appropriate and successful development of the Plan Change area or satisfy future recreational needs. Instead, it is a place making element capable of being achieved in numerous ways across a number of different development stages. At paragraph 9.11

of her evidence, Ms White provides examples of the different forms the green corridors can take and emphasises that design flexibility is essential at detail design stage to allow both practicality and creativity. I agree with Ms White's expert view on the place making and structuring role the multipurpose green corridors will take within the Precinct and the need for the provisions to enable design flexibility at the detail design stage."

"14.4 Turning to the future management of the multipurpose green corridor, it is my view that the extent and ownership of any open space land will ultimately be dealt with as part of the future subdivision processes."

8. I agree with Ms White in 7.28 and 7.29 of the evidence that the success of the north-south green corridor and open space in general is dependent on collaboration between multiple parties as follows:

"7.28 I acknowledge that the success of these corridors is dependent on the collaboration of both landowners/developers and various council-controlled organisations, particularly Auckland Transport, Council Parks and Places, and Healthy Waters. I recognise also that there are currently challenges to this collaboration (or extent of collaboration) but consider it beneficial and forward thinking for PC100 to encourage this outcome. This outcome is also in line with Policy E38.3.22(f), which directs development to "integrate drainage reserves and infrastructure with surrounding development and open space networks."

"7.29 Open space has been identified by many residents/stakeholders as particularly important to the Plan Change area and wider Riverhead environment, and proposed policy IX.3(13) charges the relevant organisations to work together to realise this important placemaking intention."

9. I agree with Mr Cook with the addition of a further objective to the IX.2 Objectives as follows:

"(5A) The design and layout of subdivision and development enables opportunities for integration between open space, ecological, stormwater management and/or movement functions within multi-purpose green corridors".

10. Integration between open space and other functions as noted in the objective addition above will be an important aspect to the subdivision process proposed for PC100.

11. I agree with Mr Cook with the amendment to the IX.3 Policies in relation to 'street network, built form and open space' as follows:

"(12) In addition to matters (a)-(c) of Policy E38.3.18, ensure that the location and

design of publicly accessible public open spaces contribute to a sense of place and a quality network of open spaces for Riverhead, including by incorporating natural features such as:

(a) Wetlands and streams;

(b) The Beech tree identified on IX.10.2 Riverhead: Precinct plan 2, where possible; and

(c) Any other mature trees that are worthy of retention, where possible.”

“(13) Encourage the provision of integrated a continuous and connected multi-purpose green corridors in the locations indicatively shown on IX.10.2 Riverhead: Precinct plan 2, which achieves the following outcomes:.

(d) Co-locates Incorporates smaller open spaces along the multi-purpose green corridor to achieve a connected an integrated network of open space.”

12. Public open spaces rather than public accessible spaces and an integrated network of open space as noted above are functions Parks supports.

13. I agree with Mr Cook with the new and revised IX.10.2 Riverhead Precinct – Precinct Plan 2 Structural Elements – Legend and Plan for: revising the legend from ‘proposed neighbourhood park (indicative location)’ to ‘indicative open space’; moving a ‘key pedestrian connection’ south to align better with the existing Riverhead Memorial Park; and there now being two indicative open space areas rather than three for the following reasons:

- More direct connections to the existing Riverhead Memorial Park should be encouraged and have been improved upon with the amendments made to Precinct Plan 2 – Structural Elements.
- The two proposed indicative open space areas (that if acquired by Council are likely to be neighbourhood parks), and their recommended location as agreed by Parks & Community Facilities (PCF), are in accord with the National Policy Statement Urban Development (NPSUD) 2020 which at Policy 2.2, requires urban environments to have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport. This policy statement requires at 3.5 that Local Authorities must be satisfied that the additional infrastructure (including public open space) to service the proposed development capacity will be available.
- The two proposed indicative open space areas are not located within a flood plain.

14. I agree with Mr Cook in his evidence relating to the ‘Elements of the Precinct – 3.10 (h)(i)(ii) Open Space’ as follows:

“(h) Open Space:

(i) No Open Space zoning is proposed as part of Plan Change 100; however, it is anticipated that appropriate areas of open space land will be established via subdivision processes. There are two indicative open spaces shown on Precinct Plan 2 as well as the multi-purpose green corridors, which is a key structuring element for the Precinct. Additional assessment criteria for open space are included within the Precinct to ensure that the open space network integrates with natural features and delivers the multi-purpose green corridor.

(ii) The extent and ownership of any open space land will ultimately be dealt with as part of the future subdivision processes, and it will be up to Council to undertake any necessary re-zoning of public land to Open Space following vesting.”

15. I agree with Mr Cook that open space vesting will be initiated through the subdivision consent process and potential acquisition and open space zoning will occur at a later part of the Council process as noted above.

Conclusion

16. I continue to support the views expressed in my primary s42a report and the specific recommended changes to PC100 as noted above.

17. In regard to the proposed open space provision requirements in the PC100 precinct, I continue to support the proposed objectives, policies, standards, and special information provisions relating to open space provision as recommended in my primary s42A report, the report of Mr David Wren, and the changes to PC100 as noted above.



Prepared by:

Douglas Sadler

Senior Parks Planner, Parks & Community Facilities

Private Plan Change (PPC) 100 – Riverhead

Technical Specialist Memorandum (Stormwater and Flooding) for Council's section 42A Addendum Report

11 April 2025

To: David Wren – Consultant Reporting Planner (on behalf of Auckland Council)
From: Kedan Li – Senior Healthy Waters Specialist, Auckland Council Healthy Waters
Amber Tsang – Consultant Planner (on behalf of Auckland Council Healthy Waters)

Introduction

1. This memorandum has been jointly written by Ms Kedan Li and Ms Amber Tsang. Our qualifications and experience are outlined in the previous section 42A Technical Specialist Memorandum on stormwater and flooding, dated 10th February 2025 (previous memorandum).
2. We (Ms Li and Ms Tsang) have reviewed the primary evidence prepared by Ms Bronwyn Rhynd (engineering) and Mr Karl Cook (planning) on behalf of the Applicant, the Addendum to Riverhead Plan Change Area Stormwater Management Plan (Addendum SMP) attached to Ms Rhynd's evidence, and the latest proposed precinct provisions in relation to stormwater and flooding.
3. The Hec Ras model to support the Addendum SMP was provided on 3rd April 2025, upon our request. A preliminary review of the flood model results has been undertaken. It is noted that the updated model still does not include geometry data nor model boundary condition details, which are critical to inform a full technical review. A full technical review of the updated model is in progress.
4. The purpose of this memorandum is to provide our interim comments on PPC 100 following the latest changes proposed in relation to stormwater and flooding.

Revised stormwater management and flood risk assessment

5. The latest changes proposed to the PPC 100 stormwater and flood management are summarised in Paragraph 9.5 of Ms Rhynd's evidence and are outlined below:
 - (a) *Reduce catchment discharging north to the Forest Stream by circa 8ha.*
 - (b) *Upgrade the existing Riverhead Road Culvert to manage conveyance of flows in existing and proposed MPD PPC100 conditions.*
 - (c) *Optimise catchment diverted to the southern stream.*
 - (d) *Introduce an attenuation volume to manage off-site effects on southern stream.*
6. The updated flood model results based on the proposed changes are summarised in Paragraph 9.11 of Ms Rhynd's evidence and are outlined below:
 - (a) *Top water level increase north of the site has been effectively removed by the reduction of the S02_P catchment discharging to the north and upgrade of Riverhead Road Culvert.*

(b) No change within the Forest Stream floodplain near Crabb Fields Lane.

(c) Up to 300mm decrease in top water level immediately upstream and downstream of the existing Riverhead Road Culvert.

(d) No change in top water levels within the southern stream channel and Coatesville-Riverhead Highway Culvert.

7. Ms Li considers that the flood risk assessment based on the updated model results is inconclusive for the reason as outlined in Paragraph 3 above. In addition, initial spot checks of some of the key model parameters, such as time of concentration, indicate that while some catchments have been assigned appropriate values (i.e. hydrology parameters), other catchments appear to have inappropriate values. Further clarification and justification from the Applicant are needed to demonstrate the robustness and appropriateness of the modelling approach used to support the flood risk assessment.
8. The only model scenario that has been considered and assessed for the updated stormwater and flood management is the 100-year ARI with 3.8°C climate change at the maximum probable development (MPD) scenario. The updated model results for the 100-year ARI with 3.8°C climate change at MPC scenario indicate a minimal change (i.e. 1-2 mm increase) of flood level downstream to the north of the PPC 100 site and near the Forest Stream floodplain close to Crabb Fields Lane. However, the updated model indicates that there are more than 60mm flood depth increment at 280 Riverhead Road.
9. In Ms Li's opinion, without the understanding and comprehensive analysis of a range of rainfall scenarios, it is premature to conclude that the updated stormwater and flood management will achieve appropriate flood mitigations and that downstream flooding risks to people, property and infrastructure will not increase. To assess the overall flood effects, it is essential to model a broader range of rainfall events, **including more frequent events, scenarios that account for spatial variations in rainfall, and existing land use scenarios.**
10. Given the above, Ms Li considers that the Applicant's flood risk assessment still lacks sufficient evidence to confirm the conclusion reached. Should a feasible flood management solution be confirmed at the plan change stage and should the plan change proposal be approved, Ms Li agrees with Ms Rhynd that more detail flood modelling and assessment should be required at the resource consent stage and the below special information requirement is recommended to be included in the Riverhead Precinct provisions:

IX.9 Special information requirements

(NEW) Flood modelling and Assessment

At each stage of subdivision and/or development of any site within the Precinct, a detailed flood modelling and assessment must be undertaken and provided to support the proposal to confirm that flooding risks to people, property and infrastructure will not increase. Modelling limitation must include but is not limited to:

- Detail of stormwater infrastructure at each stage of development.
- Terrain detail for proposed development.
- All downstream public infrastructure from any discharge point of proposed development, including the pipe network serving Duke Street, Riverhead Point Drive and culverts.
- Building footprints and finished floor levels downstream of proposed development.

Upgrade of Riverhead Road culvert

11. Our concerns regarding flood effects on properties downstream of the Riverhead Road culvert as well as erosion and stream bank stability effects, as discussed in Paragraph 40 of our previous memorandum, remain outstanding. Upgrade of the culvert would increase discharge volume and how the downstream properties, particularly 280, 289, 301, 301A and 305 Riverhead Road, would be affected is yet to be assessed and addressed by the Applicant's experts.
12. A new standard (IX.6.16) and associated assessment criteria (IX.8.2. (20)) in relation to the upgrade of the Riverhead Road culvert has been added as part of the latest proposed Riverhead Precinct provisions. While the inclusion of the standard is agreed with, Ms Tsang considers that subdivision and/or development proposals that fail to comply with the proposed Standard IX.6.16 should require resource consent as a discretionary activity, instead of a restricted discretionary activity. Standard IX.5. proposed as part of the Riverhead Precinct provisions preclude any application for a restricted discretionary activity from public or limited notification. Due to the potential flood effects and that the existing flooding risks within the downstream Riverhead stormwater catchment are already significant, Ms Tsang considers that notification of such applications should not be precluded.

Duke Street culverts

13. Ms Li advises that the memo prepared by CKL dated 4th August 2023 (i.e. Exhibit 3 attached to Ms Rhynd's evidence) does not fully address her concerns raised in relation to the need to provide a detailed capacity assessment of the Duke Street culverts and confirm mitigation requirement, as discussed in Paragraphs 36 and 37 of our previous memorandum.
14. The CKL memo indicates that the Duke Street culverts do not have capacity for the 10-year and 100-year ARI rainfall events. The flood model indicates an overtopping depth of more than 30cm over 2 hours for the 10-year ARI event and more than 60cm over 3.5 hours the 100-year ARI event in the pre-development scenario. It is stated that the hazard classification is significant in the pre-development scenario and would remain significant in the post-development scenario. However, the overtopping duration would increase from 2 to 4 hours in the 10-year ARI event and from 3.5 to 5.5 hours in the 100yr ARI event. No mitigation has been proposed.

Management of floodplains within PPC 100

15. Our concerns raised in relation to how floodplains within the PPC 100 site will be managed remain outstanding. As shown in Figure 6 of the Addendum SMP, the inundation area (i.e. floodplains) will decrease in the southern portion of the PPC 100 site but will remain the same in the northern portion of the PPC 100 site, as a result of the revised stormwater and flood management. As discussed in Paragraph 56 of our previous memorandum, if the floodplains are proposed to be removed through earthworks, stormwater networks or overland flow paths, then the volume of runoff will need to be passed downstream, and this should be considered and presented in the updated flood risk assessment.

Adequacy of onsite and downstream primary network assessment

16. Our concerns raised in relation to the primary network assessment, as discussed in Paragraph 58 of our previous memorandum, remain outstanding. No discussion nor assessment regarding this has been provided in Ms Rhynd's evidence.

Proposed Mixed Rural Zone (MRZ)

17. Our recommendation remains that the proposed MRZ extent should be increased from 6 to 8.5ha. Until a full technical review of the updated PPC flood model is completed and confirms

otherwise, the Healthy Waters Regionwide Model results and the Auckland Future Development Strategy findings stand.

Stormwater Management Area Control – Flow 1 (SMAF1)


18. Our recommendation remains that SMAF1 is applied to the entire Riverhead Precinct, including sub-catchments S03_P_1 and S03_P_2. The erosion and flood control device referenced in Ms Rhynd's evidence functions as an energy dissipation measure only. While it serves to reduce the intensity of stormwater flow, it does not address the issue of frequent stormwater volume being discharged into the stream. SMAF1 is specifically designed to mitigate frequent stormwater discharges, which if left unchecked, would contribute to stream erosion.

Stream erosion

19. Ms Li's advice regarding the need of an erosion impact assessment on the downstream vehicle crossing bridges to 17 Wautaiti Drive, 52 Crabb Fields Lane and 22 Cobblers Lane, as discussed in Paragraphs 65 of our previous memorandum, remains outstanding. No discussion nor assessment regarding this has been provided in Ms Rhynd's evidence.
20. Ms Rhynd disagrees with the need of undertaking watercourse erosion assessment at the resource consent stage, which we have recommended as a specific information requirement to be included in the Riverhead Precinct provisions (refer to the Precinct Provision table below).
21. Greenfield development enabled by PPC 100 would increase imperviousness and will result in an increase in flow rate and volume of runoff into the receiving streams and increase the risk of stream erosion. For streams that are already subject to moderate or high risk of erosion, SMAF1 hydrology mitigation alone would not be sufficient. In addition, the revised stormwater management seeks to alter a number of natural drainage catchments, including collecting the northern catchment flows to a single point and increasing the catchment flows discharging to the South Stream. As a consequence, there could be significant alterations to the natural flow regime experienced by the streams, not only in reaction to the land use change, but also to the diversion of flows. To address and mitigate potential stream erosion effects, Ms Li considers that a watercourse erosion assessment is necessary at the resource consent stage when outlet design and location are confirmed.

Precinct provisions

22. All of our recommended amendments to the proposed Riverhead Precinct provisions have been rejected by the Applicant's experts. No specific reason is provided in Ms Rhynd or Mr Cook's evidence, except for requesting a fuller assessment to support the recommendation of a Watercourse Assessment as a new special information requirement.
23. Our recommendations as outlined in our previous memorandum, the Applicant's latest proposal and our comments in response to the Applicant's latest proposal are provided in the table below. Overall, our position on the proposed Riverhead Precinct provisions remains unchanged.
24. As discussed above, more assessment is required from the Applicant to confirm that downstream flooding risk will not increase. Additional amendments to the proposed precinct positions may be recommended after a full review of the updated flood model is completed and if a feasible flood management solution can be confirmed.


Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
Precinct Plan – Riverhead Stormwater Management Area Control – Flow 1	The SMAF1 overlay is applied to the entire Riverhead Precinct.	<p>The SMAF1 overlay is not applied to the proposed sub catchments S03_P_1 and S03_P_2.</p> <p>Riverhead Stormwater Management Area Control (Flow 1)</p> 	Our recommendation remains unchanged as discussed in Paragraph 18 above.
Objective IX.2.6	Stormwater <u>quality and quantity</u> is managed to <u>maintain the health and well-being of avoid, as far as practicable, or otherwise minimise or mitigate, adverse effects on the receiving environment and is enhanced over time in degraded areas.</u>	Stormwater is managed to avoid, as far as practicable, or otherwise minimise or mitigate, adverse effects on the receiving environment.	<p>Our recommendation on Objective IX.2.6 remains unchanged.</p> <p>Objective IX.2.6, without the recommended amendments, is not considered to align with the relevant Regional Policy Statement provisions for stormwater management in Chapters B7.3 Freshwater systems and</p>

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
			B7.4 Coastal water, freshwater and geothermal water in the Auckland Unitary Plan. These provisions direct that degraded freshwater systems are enhanced (Objective B7.3.1(1)) and freshwater quality is maintained where it is excellent or good and progressively improved over time where it is degraded (Objective B7.4.1(2)), in addition to adverse effects being avoided, remedied or mitigated.
Policy IX.3.17 Stormwater Management	<p>Require subdivision and development to be consistent with the water sensitive approach outlined in the supporting stormwater management plan, including:</p> <p>(x) <u>Be consistent with an approved stormwater management plan;</u></p> <p>(a) Providing <u>Provide</u> a central stormwater management treatment spine through the precinct in general accordance with the multi-purpose green corridor in the locations indicatively shown on IX.10.2 Riverhead: Precinct plan 2;*</p> <p>(b) Applying water sensitive design to achieve water quality and hydrology mitigation;</p> <p>(c) Requiring the Use of inert building materials to eliminate or minimise the generation and discharge of contaminants;</p> <p>(d) Requiring treatment of <u>Treat</u> runoff from <u>all impervious surfaces (except roofs)</u> public road carriageways and publicly accessible carparks by a water quality device designed in accordance with GD01;</p>	<p>Require subdivision and development to be consistent with the water sensitive approach outlined in the supporting stormwater management plan, including by:</p> <p>(a) Providing a central stormwater management treatment spine through the precinct in general accordance with the multi-purpose green corridor in the locations indicatively shown on IX.10.2 Riverhead: Precinct plan 2;</p> <p>(b) Applying water sensitive design to achieve water quality and hydrology mitigation;</p> <p>(c) Requiring the use of inert building materials to eliminate or minimise the generation and discharge of contaminants;</p> <p>(d) Requiring treatment of runoff from all impervious surfaces (except roofs) public road carriageways and publicly accessible carparks by a water quality device designed in accordance with GD01;</p> <p>(e) Requiring runoff from other trafficked impervious surfaces to apply a water sensitive approach to treat contaminant generating surfaces, including cumulative effects of lower contaminant generating surfaces;</p>	<p>Do not object to the proposed deletion of Policy IX.3.17 (a).</p> <p>Our recommendation on Policy IX.3.17 (x), (d) and (e) remains unchanged.</p> <p>Subdivision and development enabled by PPC 100 should be consistent with an approved SMP, not any supporting SMP.</p> <p>Policy IX.3.17 should reflect the stormwater management proposed in the Applicant's SMP, and that is for all impervious surfaces to receive a level of water quality treatment in accordance with GD01.</p>

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
	<p>(e) Requiring runoff from other trafficked impervious surfaces to apply a water sensitive approach to treat contaminant generating surfaces, including cumulative effects of lower contaminant generating surfaces;</p> <p>(f) Providing <u>Provide</u> indigenous planting of on the riparian margins of permanent or intermittent streams; and</p> <p>(g) Ensuring <u>Ensure</u> development is coordinated with sufficient stormwater infrastructure.</p> <p><i>*Note: Clause (a) above is not consistent with the stormwater management proposed in the current Stormwater Management Plan prepared by CKL. In addition, it is shown on IX.10.2 Riverhead: Precinct plan 2 that the green corridor is for stormwater conveyance but not treatment. Amendment to this clause might be required after clarification and further information is provided by the Applicant in their evidence.</i></p>	<p>(f) Providing indigenous planting of on the riparian margins of permanent or intermittent streams; and</p> <p>(g) Ensuring development is coordinated with sufficient stormwater infrastructure.</p>	
Standard IX.6.4 Stormwater Quality	<p>Purpose: To ensure that stormwater is managed and treated prior to discharge to maintain and enhance the health and ecological values of the receiving environment.</p> <p>(1) Stormwater runoff from <u>all impervious surfaces (except roofs)</u> new, or redeveloped, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all roads must be treated with a stormwater management device(s) meeting the following standards:</p>	<p>Purpose: To ensure that stormwater is managed and treated prior to discharge to maintain and enhance the health and ecological values of the receiving environment.</p> <p>(1) Stormwater runoff from new, or redeveloped, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all roads must be treated with a stormwater management device(s) meeting the following standards:</p> <p>(a) The device or system must be sized and designed in accordance with 'Guidance Document 2017/001</p>	<p>Our recommendation on Standard IX.6.4 (1) and (2) remains unchanged.</p> <p>Standard IX.6.4, without the recommended amendments, is inconsistent to the stormwater management proposed in the Applicant's SMP, and that is for all impervious surfaces to receive a level of water quality treatment in accordance with GD01.</p> <p>If internal non-potable reuse of roof runoff is not to be proposed, the recommended Standard IX.6.4(4) can be deleted and Standard IX.6.4(1) is amended as follows:</p>

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
	<p>(a) The device or system must be sized and designed in accordance with 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'; or</p> <p>(b) Where alternative devices are proposed, the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance to that of 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'.</p> <p>(2) For all other trafficked impervious surfaces, water quality treatment in accordance with the approved stormwater management plan must be installed.</p> <p>(3) New buildings, and additions to buildings must be constructed using inert cladding, roofing, spouting and building materials that <u>and</u> avoid the use of high contaminant yielding building products which have:</p> <p>(a) Exposed surface(s) or surface coating of metallic zinc of any alloy containing greater than 10% zinc; or</p> <p>(b) Exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or</p> <p>(c) Exposed treated timber surface(s) or any roof material with a copper containing or zinc-containing algaecide.</p> <p><u>(4) Roof runoff must be directed to a tank sized for the minimum of 5mm retention volume for non-potable reuse within the property.</u></p>	<p>Stormwater Management Devices in the Auckland Region (GD01)'; or</p> <p>(b) Where alternative devices are proposed, the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance to that of 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'.</p> <p>(2) For all other trafficked impervious surfaces, water quality treatment in accordance with the approved stormwater management plan must be installed.</p> <p>(3) New buildings, and additions to buildings must be constructed using inert cladding, roofing, spouting and building materials that avoid the use of high contaminant yielding building products which have:</p> <p>(a) Exposed surface(s) or surface coating of metallic zinc of any alloy containing greater than 10% zinc; or</p> <p>(b) Exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or</p> <p>(c) Exposed treated timber surface(s) or any roof material with a copper containing or zinc-containing algaecide.</p>	<p>(1) Stormwater runoff from all impervious surfaces (except roofs) new, or redeveloped, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all roads must be treated with a stormwater management device(s) meeting the following standards.</p>

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
Assessment Criteria IX.8.2. (2) Stormwater and Flooding	<p>(m) Whether development is in accordance with the <u>an</u> approved Stormwater Management Plan and Policies E1.3(1)-(14).</p> <p>(n) The design and efficacy of infrastructure and devices with consideration given to the likely effectiveness, ease of access, operation, <u>ongoing viability and maintenance</u>, and integration with the surrounding environment <u>including the road corridor where relevant</u>.</p> <p>(o) Whether the proposal ensures that <u>subdivision and development</u> manage flooding effects (<u>including cumulative effects</u>) upstream or and downstream of the site <u>and in the Riverhead precinct</u> so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 100-year ARI flood event.</p> <p>(p) The location, size, design and management of any interim flood attenuation areas that may be necessary to ensure that development does not increase flooding risks prior to upgrades of culverts.*</p> <p><i>*Note: No on-site flood attenuation is proposed by the Applicant based on the CKL report. Amendment to Assessment Criterion (p) above might be required after clarification and further information addressing the matters raised in this memo is provided by the Applicant in their evidence.</i></p>	<p>(m) Whether development is in accordance with the approved Stormwater Management Plan and Policies E1.3(1)-(14).</p> <p>(n) The design and efficacy of infrastructure and devices with consideration given to the likely effectiveness, ease of access, operation and integration with the surrounding environment.</p> <p>(o) Whether the proposal ensures that development manage flooding effects upstream or and downstream of the site and in the Riverhead precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 100-year ARI flood event.</p> <p>(p) The location, size, design and management of any interim flood attenuation areas that may be necessary to ensure that development does not increase flooding risks prior to upgrades of culverts.</p>	<p>Our recommendation on Assessment Criteria IX.8.2. (2) (n) and (o) remains unchanged.</p> <p>The recommended amendments to Assessment Criteria IX.8.2. (2)(n) is to address the concerns raised in Auckland Transport's submission in relation to the publicly vested stormwater assets in the road corridor.</p> <p>The existing flooding risks within the downstream Riverhead stormwater catchment are already significant and there are known and documented flooding issues downstream of PPC 100. The recommended amendments to Assessment Criteria IX.8.2. (2)(o) is to ensure that not only development proposals, but subdivision proposals also include appropriate flood management. The recommended amendments also highlight the need to consider cumulative effects when assessing individual proposals within the Riverhead Precinct. The stormwater discharge effects of individual subdivision and development may be minor, but the cumulative effects can be significant and have the potential to increase flooding risks.</p> <p>Regarding Assessment Criteria IX.8.2. (2)(p), we recommend that it is deleted as it is now covered by the new Standard IX.6.16. Riverhead Road Culvert Upgrade proposed by the Applicant.</p>
IX.9 Special information requirements	<u>(NEW) Watercourse Assessment</u>	The recommended special information requirement is rejected.	Our recommendation remains unchanged as discussed in Paragraph 21 above.

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
	<p>An application for any land modification, subdivision and/or development which:</p> <ul style="list-style-type: none"> • <u>Adjoins a permanent or intermittent stream; or</u> • <u>Discharges stormwater to the Southern Stream and the unnamed stream to the west of the Riverhead Precinct and identified in Figure (NEW) below.</u> <p><u>Must be accompanied by a Site Specific Watercourse Assessment prepared by a suitably qualified person.</u></p> <p><u>The assessment must include a stream reach assessment identifying any erosion hotspots, stream bank erosion and appropriate erosion mitigation measures.</u></p> 		

Precinct provision	S42A recommendation	Applicant's latest proposed provisions as outlined in Mr Cook's evidence	Comments
NEW Standard IX.6.16. Riverhead Road Culvert Upgrade	Not assessed in the previous section 42A Technical Specialist Memorandum.	<p><u>Purpose: To ensure that there is conveyance of surface flow in the Riverhead Road culvert.</u></p> <p><u>(1) Prior to development of land south of Riverhead Road that discharges stormwater north into the tributary to the Rangitopouri Stream via the culvert under Riverhead Road, the culvert under Riverhead Road must be upgraded to accommodate conveyance of flow up to 1 per cent AEP.</u></p>	As discussed in Paragraph 12 above, the inclusion of the standard is agreed with. Ms Tsang considers that subdivision and/or development proposals that fail to comply with this standard should require resource consent as a discretionary activity, instead of a restricted discretionary activity, so that notification of such applications is not precluded.
NEW Assessment Criteria IX.8.2. (20) Infringement of Standard IX.6.16. Riverhead Road Culvert Upgrade	Not assessed in the previous section 42A Technical Specialist Memorandum.	<p><u>(a) the likelihood of a flood hazard event occurring and its magnitude and duration, and the consequences of the event, its possible effects on public health, safety, property and the environment;</u></p> <p><u>(b) the extent to which the proposal and any subsequent land use is likely to exacerbate the existing flood hazard or create a new flood hazard upstream; and</u></p> <p><u>(c) the extent to which a flood hazard assessment or mitigation measures address methods provided to manage the flood hazard.</u></p>	Refer to comments above.

Technical Specialist Memo

To: David Wrenn, Consultant Reporting Planner
From: Martin Peake - Director, Progressive Transport Solutions Ltd
Date: 9 April 2025

Subject: Private Plan Change 100 – Riverhead
Traffic And Transportation Assessment – Addendum

1.0 Introduction

- 1.1 I prepared a Technical Specialist Memo dated 28 August 2024 traffic and transportation on behalf of Auckland Council, of Private Plan Change 100 for Riverhead, lodged by Riverhead Landowner Group, in relation to traffic and transportation effects.
- 1.2 Expert evidence has been submitted by the Applicant which responds to issues and queries raised in my original memo. I have reviewed the expert evidence, and this memorandum has been prepared as an addendum to respond to the evidence and updated Precinct Provisions. In writing this memo, I have reviewed the following evidence:
- a) Statement of Evidence of Mr Terry Church – Transport, 31 March 2025, and
 - b) Statement of Evidence of Mr Karl Cook – Planning, 1 April 2025
- 1.3 My qualifications and experience, and my involvement with Private Plan Change 100 (PPC100) is detailed in my original memo.

Expert Witness Code of Conduct

- 1.4 I have read the Code of Conduct for Expert Witnesses, contained in the Environment Court Consolidated Practice Note (2023) and I agree to comply with it. I can confirm that the issues addressed in this Memo are within my area of expertise and that in preparing this Memo I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

2.0 Summary of Matters to be Addressed in the Addendum Memorandum

- 2.1 In my original memorandum at Paragraph 7.10, I identified gaps in the traffic and transportation assessment where additional analysis was required to enable me to confirm my opinion on traffic effects of the Plan Change. I discuss each of these items in Section 3.0.
- 2.2 I included a recommendation on the requirement for the provision of two eastbound lanes on State Highway 16 (SH16) to accommodate traffic from PPC100¹. Further information and analysis on this is included in the expert evidence and I respond to this in Section 4.0.

¹ Technical Specialist Memo – Traffic and Transportation, Martin Peake, 28 August 2024, Paragraph 7.11(a)

- 2.3 Updated Precinct Provisions have been provided in the evidence of Mr Cook which includes details of changes accepted from the reporting planner's Section 42A report, and subsequent amendments as proposed by the Applicant as a result of consideration of the s42A recommendations and submissions. I discuss the updated Precinct Provisions in Section 5.0.

3.0 Assessment of Additional Information Requested

- 3.1 Set out below is my assessment of additional information provided in the expert evidence that responds to items raised in Paragraph 7.10 of my Technical Specialist Memo. I briefly summarise the identified information gap and then provide a response.

7.10(a) Analysis required to show the potential scale of traffic generation without the school and retirement village.

- 3.2 Mr Church's evidence at Paragraphs 13.8 to 13.10 provides analysis of the likely number of dwellings that could be accommodated instead of the school and the retirement village, and the associated trip generation. I have reviewed the analysis and I am comfortable that should either the school or the retirement village not proceed and residential dwellings be constructed instead, that the overall number of trips on the wider network in the AM peak would be less than those forecast with the school or the retirement village; there is little change forecast in the overall number of external trips in the PM peak.

7.10(b) Analysis is required to demonstrate that the AM peak traffic volumes for the modelling of the SH16 / Coatesville-Riverhead Highway roundabout take into account eastbound demands (not throughput) along SH16

- 3.3 The evidence has not specifically responded to this issue. However, Mr Church has undertaken further traffic modelling using the AIMSUN modelling package². I understand from discussions with Mr Church that this model replicates the eastbound SH16 queues in the AM peak in the base 2023 model. This model has been accepted as being calibrated for use by the NZ Transport Agency (NZTA). I am therefore satisfied that the use of this model to test the operation of upgrades to the SH16 / Coatesville-Riverhead Highway roundabout takes into account the eastbound demand.

7.10(c) Analysis of the SH16 / Coatesville-Riverhead Highway roundabout should take into account the proposed pedestrian crossings

- 3.4 The traffic modelling undertaken in the AIMSUN package has included the pedestrian crossings at the roundabout³. Therefore, I am satisfied that the effects of these crossings on the operation of the roundabout have been taken into account. I acknowledge the comments from Mr Church that the number of users of these crossings will be low.

² Statement of Evidence, Mr Terry Church, 31 March 2025, Section 15

³ Ibid, paragraph 15.5

7.10(d) Traffic Modelling for the SH16/ Coatesville-Riverhead Highway should be undertaken for a Saturday

- 3.5 Specific traffic modelling of the intersection has not been undertaken for a Saturday. However, trip generation for a Saturday has been provided⁴.
- 3.6 The total trip generation is similar to that forecast for the weekday PM peak period and less than that forecast for the weekday AM peak. I would expect inbound and outbound development traffic movements to be relatively balanced on a weekend compared to a weekday as trips are generally not associated with commuting activities.
- 3.7 The traffic modelling results presented in Appendix F of Mr Church's evidence forecasts that the SH16 / Coatesville-Riverhead intersection would have a Level of Service C or better in the AM peak for 2038 and improved performance for 2031 with interim improvements to the roundabout. PM peak performance is forecast to have a good level of service in both 2031 scenarios and 2038.
- 3.8 Therefore, whilst traffic volumes on SH16 at the Coatesville-Riverhead intersection during the weekend day time may be similar to those on a weekday peak, taking into account the more balanced movements through the intersection on a weekend and the forecast performance of the intersection on weekday peaks, I consider that the upgraded SH16 / Coatesville-Riverhead Highway intersection should be able to accommodate PPC100 traffic volumes on a Saturday (subject to the proposed thresholds on development, as discussed in Section 4 in relation to the eastbound SH16).
- 3.9 I note I raised concerns on the safety and operation of the double left turn movement from Coatesville-Riverhead Highway to SH16 in the proposed roundabout. This is retained in the proposals and was not addressed in the evidence; however, I note that the proposed layout is on the arrangement proposed by NZTA as part of the Stage 2 Brigham Creek to Waimauku project and not in the control of the Applicant.

7.10(e) Confirmation is required as whether Cambridge Road will be connected at its southern end with Coatesville-Riverhead Highway

- 3.10 Through the descriptions of the proposed network improvements, Mr Church has confirmed that whilst Cambridge Road is to be upgraded, it is not proposed to be connected to Coatesville-Riverhead Highway⁵. Only a footpath is proposed along the western side of Cambridge Road to connect to the Highway. This would connect to an existing footpath on the western side of Coatesville-Riverhead Highway.

7.10(f) The extent of upgrade works to Cambridge Road should be clarified and the Precinct Provisions updated so that there is consistency between the Standards and the Precinct Plans

- 3.11 As outlined in paragraph 3.11, the works on Cambridge Road have been clarified. I have reviewed the Precinct Provisions, in particular Standard IX.6.1(4) and Precinct Plan 3 – Transport Upgrades. The description of the works is consistent with what is proposed.

⁴ Statement of Evidence, Mr Terry Church, 31 March 2025, Paragraph 13.4 and Appendix A

⁵ Ibid, Paragraph 10.3(d)

7.10(g) Provide details of how the development turning movements have been derived at the Riverhead intersections

- 3.12 Mr Church's evidence⁶ provides details of the assumed trip distribution. Whilst specific analysis has not been provided for each intersection, I am comfortable with the methodology and approach adopted.

7.10(h) Provide details of how upgrades to roads would be undertaken where land is different ownership

- 3.13 Whilst this issue is not specifically responded to in the evidence, Mr Church does discuss this in relation to upgrades for the Coatesville-Riverhead Highway / Riverhead Road intersection where land required is in different ownership and notes that the Riverhead Landowner Group (Applicant) is working with one of the land owners for a positive outcome⁷. Should this not be achieved, this could affect the ability to upgrade the roundabout.

4.0 Eastbound Lanes on SH16

- 4.1 In my Technical Specialist Memorandum at paragraphs 4.74 to 4.76 I discussed the effects of PPC100 on the operation of SH16 eastbound and recommended that two eastbound traffic lanes would be required, as proposed by the NZTA Bringham Creek to Waimauku SH16 Stage 2 works.
- 4.2 The evidence of Mr Church provides an assessment of the operation of eastbound SH16 to accommodate PPC100⁸. His assessment concludes that SH16 would need to be upgraded to two eastbound lanes once development reaches 910 dwellings and 240 retirement units, or 1,050 dwelling if the retirement village is not constructed.
- 4.3 In preparation of this addendum I have liaised with Mr Church to obtain a more detailed breakdown of the dwelling types associated with these thresholds. Mr Church has identified an error in the calculation of the number of dwellings and the number of retirement units, with some retirement units being counted within the dwellings. As a result, Mr Church has advised that the thresholds should be:
- a) With retirement village - 765 dwellings, 145 retirement villas, and 240 retirement units and care beds; or
 - b) Without retirement village - 905 dwellings and 50 retirement villas.
- 4.4 I understand that Mr Church will provide further information on this in his rebuttal evidence.
- 4.5 I have reviewed the assessment provided in Mr Church's evidence. At paragraphs 5.14 and 5.15 of his evidence, he states that eastbound SH16, as a single lane, would have sufficient capacity for an additional 300 vehicles. This is on the basis that the single eastbound lane has a capacity of 1850 vehicles per hour (**vph**). This is derived from the

⁶ Statement of Evidence, Mr Terry Church, 31 March 2025, Ibid, paragraphs 13.5 to 13.7 and Appendix B

⁷ Ibid, Paragraph 14.6

⁸ Ibid, Paragraphs 5.14 to 5.24

capacity on the westbound exit from the Brigham Creek Road roundabout to SH16, and that there are 1465vph eastbound on SH16 and with an allowance of traffic growth for 100vph from Kumeu. Taking into account the existing eastbound traffic and the allowance for growth, this provides approximately 300vph spare capacity.

- 4.6 From discussions with Mr Church he has advised that the 1,465vph is a traffic flow taken from traffic counts on SH16 east of Coatesville-Riverhead Highway for a neutral month. In other months, the traffic data shows that the eastbound traffic volume is 1,538vph. If the higher volume is utilised, the spare capacity would be around 210vph. Mr Church considers that in determining the spare capacity, it is more appropriate to use the neutral month rather than the peak flow. He also considers that the allowance for the 100vph growth also provides some robustness to the assessment (i.e. by allowing for some variation in flow). I accept this approach, but I note that the topography of SH16 may affect the ability for eastbound capacity to match that of the westbound direction as traffic volumes increase. This view is based on my observations of the operation of eastbound SH16 where vehicle braking on the downhill section can result in a shock wave effect that slows vehicles upstream. This has the propensity to result in flow break down at higher traffic volumes and thus limit eastbound capacity. I highlighted the flow breakdown in my Specialist Technical Memo⁹.
- 4.7 To understand how the dwelling thresholds have been calculated from the spare traffic capacity for eastbound SH16, I have discussed this matter with Mr Church, and he has advised that the AIMSUN model has been utilised, and this has determined that 60% of the development can be accommodated. This quantum of development traffic that is forecast to travel eastbound on SH16 has been correlated with the 300vph spare capacity discussed above.
- 4.8 The revised figures in paragraph 4.3 correspond to 60% of the total number of various dwelling and retirement units / villas anticipated with PPC100.
- 4.9 In Mr Church's evidence, he assesses the roundabout and operation of SH16 using the AIMSUN model. He assessed two scenarios with SH16 having a single eastbound lane, Scenario A with the SH16 / Coatesville-Riverhead Highway intersection upgraded to a roundabout (as per the NZTA Stage 2 proposal) and Scenario B with an interim upgrade to the intersection. Model results for both of these scenarios were presented in the evidence for 60% of development and for the future year 2031¹⁰.
- 4.10 I have reviewed the modelling results for the SH16 / Coatesville-Riverhead Highway intersection and predicted corridor travel times along Riverhead Road and SH16 as presented in Appendix D of Mr Church's evidence. The modelling results forecast that with both the interim intersection upgrade and the full NZTA intersection upgrade that the roundabout and eastbound SH16 would operate with an improved level of performance compared to the existing scenario.

⁹ Technical Specialist Memo – Traffic and Transportation, Martin Peake, 28 August 2024, Paragraph 4.75-4.76

¹⁰ Statement of Evidence, Mr Terry Church, 31 March 2025, Appendix D

- 4.11 The traffic demands from the modelling shows that eastbound SH16 would have a traffic volume of approximately 1,850vph, equivalent to the capacity outlined above.
- 4.12 While I accept the outcomes of the assessment, I do consider that the trip rates used in the analysis in the short to medium term would be low given the limited availability of public transport and that there are currently no planned Public Transport upgrades for Riverhead in the Regional Public Transport Plan 2023 -2031.
- 4.13 Mr Church emphasises that public transport lags behind development and he draws a parallel between Riverhead and Whenuapai as both being served by a single hourly bus service, and that significant growth has occurred in Whenuapai. Mr Church implies that as Whenuapai can be served by a single bus service, then this would be sufficient for Riverhead. However, the existing Whenuapai service operates at a greater frequency in the peaks (40 minutes)¹¹ and the RPTP includes a new connector service¹² for Whenuapai which is intended to commence in 2026. There is no such improvement for Riverhead included in the RPTP. Auckland Transport's Future Connect, which is Auckland Transport's long-term network plan for the first decade (2024-2034) shows that within Whenuapai that the road network would include connector bus service functions (upgraded from local bus service), whereas Riverhead would continue to have only local bus services. Future Connect is used to inform the 10-year investment programme and the Regional Land Transport Plan (RLTP) and the RPTP.
- 4.14 The difference in approach to these areas is likely to be because land within Riverhead has yet to be live zoned and therefore the population does not exist to support additional bus services. I agree with Mr Church that public transport does lag behind development. Therefore, any improvements to public transport services are unlikely to occur until after land has been zoned and a sufficient quantum of development is occupied and operational. In addition, any additional bus services will be subject to funding. Given this situation and the uncertainty of future public transport, I consider it would be more appropriate to adopt a higher trip rate in the short to medium term. This was acknowledged in the notified ITA in Section 7.2.1 and a sensitivity test was undertaken using higher trip rates.
- 4.15 The vehicle trip rates used in the analysis in Mr Church's evidence are set out in his Appendix A, and in summary the following residential trip rates have been used:
- a) Residential lower density dwellings 0.75.trips per dwelling;
 - b) Residential medium density dwellings 0.60 trips per dwelling; and
 - c) Retirement units / villas / care beds 0.2 trips per unit.
- 4.16 The notified Integrated Transport Assessment Section 7.2.1 utilised the trip rates listed below for the short-medium term as a sensitivity test for 2031 with 60% development.
- a) Residential lower density dwellings 0.95.trips per dwelling;

¹¹ Statement of Evidence, Mr Terry Church, 31 March 2025, Paragraph 11.6

¹² Connector bus services are intended to have a minimum frequency of 30 minutes at peak times

b) Residential medium density dwellings 0.70 trips per dwelling; and

c) Retirement units / villas / care beds 0.2 trips per unit.

- 4.17 If these higher trip rates are used, for the same number of trips, I have calculated that approximately 50% of development could occur, rather than 60%, before two lanes would be required on eastbound SH16.
- 4.18 Taking this into account this would result in a threshold of 640 dwellings, 105 retirement villas, and 200 retirement apartments / care beds. I have not been able to calculate the equivalent figures without the retirement village as I understand that without the village, other land uses would not occur (such as the childcare and café), and I do not have sufficient information to be able to determine the equivalent number of dwellings that could occur.
- 4.19 I agree that a dwelling threshold should be imposed to limit development until two eastbound lanes on SH16 are provided. The imposition of such a limit is particularly important as there is no certainty as to when upgrades to provide four lanes on SH16 as part of the NZTA Brigham Creek to Waimauku Stage 2 project would occur. Mr Church anticipates from his discussions with NZTA that these would be complete by 2029. However, this is still subject to funding and construction. If works require land acquisition, then a designation would need to be applied for. Taking this into account it is considered that there is a significant risk that works may not occur or be complete until sometime after 2029.
- 4.20 The threshold for limiting development is based on the number of dwellings, either residential dwellings and / or retirement units. However, there are different trip rate characteristics associate with lower density and medium density dwellings, and retirement units. Therefore, depending on the type and quantum of residential development that occurs, the number of trips that could be generated may result in the capacity of SH16 being exceeded, even if the number of dwellings is within the threshold. Furthermore, it is unclear how the threshold which includes both residential dwellings and retirement units would operate in practice. For instance, if either the number of residential dwellings or retirement units is exceeded but not the other, does this mean the threshold has been deemed to have been exceeded? This would make interpreting whether the threshold has been reached difficult. Therefore, I consider that rather than specifying various limits for different types of dwelling and for different scenarios (e.g. with and without the retirement village), the use of a Dwelling Unit Equivalent (DUE) with a single dwelling threshold would be more appropriate. I set out DUE in Table 1 based on the trip rates in paragraph 4.16, refer to Attachment A for calculation of the DUE and the threshold.

Table 1 - Dwelling Unit Equivalents

Dwelling Type	Dwelling Unit Equivalent (DUE)
Lower density / Dwelling House	1.00
Medium Density Dwelling	0.74
High Density Dwelling	0.74
Retirement Villa	0.20
Retirement Unit	0.20
Dementia / Care Bed	0.20

- 4.21 Based on the dwelling unit equivalents above, the dwelling threshold should be 590 dwelling unit equivalents (refer to Attachment A for calculation). This approach would assist users of the Precinct Provisions to determine compliance with the threshold for different mixes of dwelling types.
- 4.22 In conclusion, I support the proposal to limit the quantum of development that may occur until two eastbound lanes on SH16 are provided. However, I consider that the number of dwellings that would be allowed by the threshold, as set out in the evidence of Mr Church and included in the Precinct Provisions attached to Mr Cook's evidence, would generate traffic in the short to medium term that would exceed the capacity of a single eastbound lane on SH16. This is because the thresholds have been derived using trip rates that are appropriate once a greater frequency of public transport is established in Riverhead. I consider that the threshold proposed in the Precinct Provisions should be reduced to take into account a higher trip rate in the short to medium term. I also consider that the threshold should be based on a Dwelling Unit Equivalent to simplify the application of the standard.

5.0 Precinct Provisions

- 5.1 I have reviewed the amended Precinct Provisions attached to Mr Cook's evidence as they relate to traffic and transport.
- 5.2 I have the following comments on the changes proposed by Mr Cook to the Precinct Provisions.
- 5.3 A new Standard IX.6.1A Staging of development with road upgrades State Highway 16 and Coatesville-Riverhead Highway has been introduced. I support the inclusion of this new standard as it will require the upgrade of the SH16 / Coatesville-Riverhead Highway intersection and upgrades to the Coatesville-Riverhead Highway intersections with Old Railway Road and Riverland Road prior to the occupation of any dwelling (refer to Table IX.6.1A.1 (a)).
- 5.4 I also support the intent of the threshold to limit the quantum of dwellings that may occur before two eastbound lanes on SH16 east of Coatesville-Riverhead Highway are

introduced (refer to Table IX.6.1A.1(b)). However, I consider that the dwelling thresholds are too high as I discussed in Section 4.

- 5.5 Given that there are multiple different types of dwellings that could be constructed, for the reasons I set out above in Section 4.0, the use of a dwelling unit equivalent would be appropriate and the adoption of a single dwelling unit equivalent threshold. I propose that the threshold of 590 dwelling unit equivalents be adopted and that the dwelling unit equivalents presented in Table 1 above for different dwelling types should be applied.
- 5.6 I acknowledge the Discretionary activity status of non-compliance with the Standard IX.6.1A. I consider that Discretionary or Non-complying status for not complying with this standard is appropriate as the effects of not complying will need to be assessed in some detail.
- 5.7 Amendments have been made to Standard IX.6.1 with some of the changes that I recommended in my Technical Specialist Memorandum accepted by the Applicant. Consequential changes have been made as a result of introducing the new standard IX.6.1A. I defer to the Reporting Planner to comment on the detail of the changes proposed by Mr Cook.
- 5.8 New Standard IX.6.2A Road design has been introduced to require development and or subdivision to comply with IX.11.1 Appendix 1 Road function and design elements table – Internal roads within the Precinct. I support the inclusion of this standard and the Restricted Discretionary status for non-compliance.
- 5.9 A new Special Information Requirement IX.9(6) Transport assessment has been introduced to require a transport assessment to be provided where an application infringes Standard IX.6.1A. I support this addition.
- 5.10 Minor changes have been made to the IX.11.2 Appendix 2 – Road function and design elements table – External roads to the precinct in relation to Cambridge Road. I support these changes.
- 5.11 I note that in this table, that for Riverhead Road, the description of the extent of Riverhead Road refers to the eastern boundary of 307 Riverhead Road. This should be amended to the “western boundary” to be consistent with the amendment to Standard IX.6.1(2)(c).

6.0 Conclusion

- 6.1 The additional information provided in the evidence of Mr Church has generally satisfied the gaps identified in my Specialist Technical Memorandum dated 28 August 2024.
- 6.2 I acknowledge the results of the additional modelling of the SH16 / Coatesville Riverhead Highway intersection and that this satisfies my queries on its operation. My concerns over the double left turn from Coatesville-Riverhead Highway remain but I note that the modelling is on the layout proposed by NZTA for the Stage 2 Brigham Creek to Waimauku project and not under the control of the Applicant.

- 6.3 Information on traffic generation without the school or retirement village has been provided, and I am now satisfied that should these not proceed, that this should not result in a greater number of trips on the external road network.
- 6.4 The additional assessment included in the evidence has confirmed that two lanes eastbound on SH16 will be required to support development over a particular threshold.
- 6.5 A new Standard has been included in the Precinct Provisions (IX.6.1A, and Table IX6.1.1(b)) that sets out a threshold of dwellings over which SH16 would need to be upgraded to provide two eastbound lanes between Coatesville-Riverhead Highway and Brigham Creek Road. I support the inclusion of this new standard and the introduction of a threshold. However, I consider that the number of dwellings is too high for the likely trip generation in the short to medium term and could result in the capacity of eastbound SH16 being exceeded as a single lane. I consider that the dwelling threshold should be derived based on a higher trip generation rate for dwellings that is commensurate with a location that has limited access to public transport, as was used in sensitivity testing in the notified ITA. This would result in a lower number of dwellings that would trigger the threshold.
- 6.6 I recommend that the proposed thresholds in Table IX.6.1A.1 (b) be replaced by a single threshold based on dwelling unit equivalents (590 dwelling unit equivalents) and that Dwelling Unit Equivalents for the different dwelling types as set out in Table 1 above should be adopted. This would simplify the interpretation of the standard.
- 6.7 Overall, I remain of the view that PPC100 only partly aligns with the relevant traffic and transport Regional Policy Statement Objectives and Policies in relation to coordinating development with transport infrastructure. Until the full upgrades to Coatesville-Riverhead Highway, Riverhead Road and the Brigham to Waimauku SH16 are complete, Riverhead will be reliant on private vehicle use to travel to the wider network as there are currently no planned or funded improvements to public transport that will directly serve Riverhead and the plan change area. Riverhead will continue to be surrounded by rural roads with no facilities for active modes (particularly cyclists) to travel to surrounding areas (Kumeu or Westgate). Improvements for public transport or active modes are unlikely to occur for some.
- 6.8 PPC100 will provide some of the identified prerequisite transport infrastructure and this will enable some development to occur. Subject to my recommendations above, I support the Precinct Provisions that manage the quantum of development that can occur prior to wider transport improvements (such as two eastbound lanes on SH16 between Coatesville-Riverhead Highway and Brigham Creek Road, or the completion of the Alternative State Highway).

Martin Peake

9 April 2025

Attachment A – Dwelling Unit Equivalent and Dwelling Threshold Calculations for DUE

DUE Calculation

Dwelling Type	Trip Rate	DUE
Lower Density / Dwelling Houses	0.95	1
Medium Density	0.7	0.74
High Density	0.7	0.74
Retirement Villa	0.2	0.21
Retirement Unit	0.2	0.21
Dementia / Care Bed	0.2	0.21

DUE Calculated by dividing Dwelling type trip rate by Lower Density / Dwelling House Trip Rate

Dwelling Threshold Calculation

Dwelling Type	Units	Trip rate	Trips
Lower Density / Dwelling Houses	200	0.95	190
Medium Density	400	0.7	280
High Density	40	0.7	28
Retirement	305	0.2	61
Total Trips			559

Dwelling threshold calculated from Total Trips divided by Lower Density / Dwelling House Trip Rate

Dwelling Threshold $(559/0.95) =$ 588 dwelling unit equivalents