

Appendix A – PPC17 Addendum (Transportation Review)

Memo

To:	Damien McGahan – Aurecon		
From:	Naomi McMinn – Gray Matter	Date:	27 November 2025
Subject:	Private Plan Change 17 – Te Rapa North Industrial – Addendum Technical Specialist Memorandum		
Technical Area:	Transportation		
Version:	V2		

Purpose

1. This addendum has been prepared to provide further assessment and comment following review of the applicants and submitters evidence, in respect of transportation in relation to the Private Plan Change 17 – Te Rapa North Industrial (PPC17).

Introduction

2. My name is Naomi Claire McMinn. I am a Senior Civil / Transportation Engineer at Gray Matter Ltd. My qualifications and experience were set out in my Technical Specialist Memorandum for Section 42A Reporting dated 8 September 2025.
3. I reconfirm that I have read and am familiar with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023 and I agree to comply with it.
4. This report is prepared as an addendum to my primary Section 42A to provide further assessment and comment on Private Plan Change 17 (PPC17) following review of the applicant's evidence, submitter evidence and the applicant's rebuttal evidence. It also proposes several amendments to PPC17 having considered the evidence.

Scope

5. This addendum covers the following:
 - a. A summary of PPC17 relevant to my area of expertise, focusing on key changes arising from the Supplementary Information and the key issues considering:
 - Evidence lodged by the Applicant (Fonterra Limited);
 - Evidence lodged by submitters; and
 - Rebuttal evidence lodged by the Applicant.
 - b. Recommended amendments of PPC17 provisions.
 - c. Any remaining technical issues or matters requiring resolution.

Documents and Further Information Considered

6. I have considered the following documents in the preparation of this assessment:
 - a. *Te Rapa Private Plan Change 17 Request* (the Request)
 - i. *Appendix 4 – Integrated Transport Assessment - BBO dated December 2024 (ITA)*
 - ii. *Appendix 10 – Te Rapa North Industrial Structure Plan* (Structure Plan)
 - b. The Supplementary Information and Transport Memo (19 August 2025)
 - c. The following statements of evidence:
 - i. *Statement of Expert Evidence of Cameron Beswick Inder on Behalf of Fonterra Limited (Transport) 7 October 2025 including Attachment 1 Revised Transport Modelling and Assessment Technical Note (Statement of Mr Inder)*
 - ii. *Statement of Expert Evidence of Nicholas Colyn Grala on Behalf of Fonterra Limited (Planning) 7 October 2025 including Attachment 1 – PC17 Provisions (PPC17 provisions)*
 - iii. *Statement of Expert Evidence of Mark Apeldoorn on behalf of Horotiu Farms Limited and Te Awa Lakes Unincorporated Joint Venture Limited (Collectively referred to as “TAL”) dated 29 October 2025 (Statement of Mr Apeldoorn)*
 - iv. *Statement of Evidence of Leo Donald Hills on behalf of Empire Corporation Limited and Porter Group dated 30 October 2025 (Statement of Mr Hills)*
 - v. *New Zealand Transport Agency Letter to Hamilton City Council dated 29 October 2025 (NZTA Submission)*
 - vi. *Statement of Rebuttal Evidence of Cameron Beswick Inder on behalf of Fonterra Limited (Transport) 20 November 2025 (Statement Rebuttal Evidence of Mr Inder)*

Review and Analysis of Evidence

Key Changes to the Proposal (PPC17) (compared to the Request and the Supplementary Information)

7. The proposed infrastructure staging and development areas are now different to that previously been provided in the Request, and in the Supplementary Information. The most notable changes are that:
 - a. Figure 1 of Mr Inder’s evidence describes the extent of the Plan Change Area as 91ha and includes three land areas (“West Block”, “North Block” and “South-East Block”). These are fewer blocks and different names compared to the Supplementary Information and the Structure Plan.

- b. Mr Inder's evidence¹ states that the net developable area of the PPC17 is 53ha. This is a reduction of 10ha compared to the Request and the basis of the ITA.
 - c. PPC17 no longer triggers construction of Access 1 (new signalised intersection with Te Rapa Road) or the east-west road that are shown on the Structure Plan.
 - d. PPC17 no longer includes Stage 1 (1A or 1B) or Stage 2 development.
 - e. The access to the Dairy Factory Manufacturing site is shown as Access 4 on the Structure Plan and the legend states it is an optional intersection (to replace the existing grade-separated interchange). This is inconsistent with the provisions that rely on access to the South-East Block through the interchange (PPC17 Rule 3.9.3.2.xviii).
 - f. Mr Inder's evidence² is based on consented traffic from the Te Awa Lakes development (TAL). The Request included Waikato Regional Transportation Model Scenarios (WRTM) with the full TAL Plan Change. Compared to the Request, the PPC17 is based on significantly fewer trips from the TAL.
 - g. PPC17 proposes up to 20ha of development with access from the south via Old Ruffell Road.
 - h. PPC17 no longer includes infrastructure upgrades that were included in the Request. The ITA and WRTM modelling that supported the Request included triggers for the infrastructure mitigations consistent with the TAL Structure Plan (3.8.5.3.1 and 3.8.5.3.2). Development of around 30 ha of the PPC17 would be expected to generate similar trip thresholds, however, the PPC17 provisions do not trigger a need for the same infrastructure provision. The PPC17 relies on the TAL Development Plan Application ITA that relies on future applications to assess cumulative effects.
 - i. The Ruffell Road level crossing remains closed for most of the development of the PPC17 area. Opening of the level crossing is now subject to a Level Crossing Safety Impact Assessment (LCSIA) and safety improvements and is only required for when development exceeds 42 ha.
8. In my view, these changes, in particular the reduction in trips, creates greater uncertainty about whether the mitigations are appropriate. My concerns would be addressed by development within PPC17 being required to provide a Broad ITA for each stage of the development over the initial 20ha.
9. The proposed Structure Plan map has inconsistent references to Access 1 and to development blocks. This could lead to confusion and risk compromising the intent of the Plan Change. An updated Structure Plan and consistent references to development blocks and Access numbers is needed.

Updated Assessment of Effects

Trip Generation

¹ Statement of Mr Inder, paragraph 9.8

² Statement of Mr Inder, paragraph 9.7 and 9.11

10. I generally agree with the trip generation rate used for the industrial land use.
11. The revised net developable area of PPC17 is 53ha of industrial activity generating 860 vph³. This is a reduction from 63ha generating 1,030 vph. This is slightly different to the land use modelled in the updated WRTM Scenario B which includes the full development of PPC17 as 52.5 ha⁴. I am concerned that without an upper limit on the developable area within PPC17 the total trip generation remains uncertain. This contributes to the lack of certainty in the future traffic environment as there could be additional development in the PPC17 area that has not been considered as part of this updated assessment.

Future Traffic Environment and Modelling

12. In my view, the WRTM is the appropriate tool for evaluating the transport network impacts of the PPC17. The WRTM is managed and operated by the Co-Lab on behalf of a number of Councils. The WRTM future year scenarios include 2035 and 2045. The land use projections in the WRTM are based on the Waikato Integrated Scenario Explorer (WISE) which is a land use model maintained by WRC.
13. I am concerned that the underlying land use and trip generation that forms the basis for the PPC17 has been reduced to reflect consented traffic limits from the TAL area rather than the land use and trip generation permitted by the TAL Structure Plan and projected in the WRTM.
14. The WRTM scenarios used in the initial ITA included full development of the TAL Structure Plan area. In this initial modelling the 2035 scenario resulted in TAL generating 1,344 vph during the AM peak and 1,490 vph during the PM peak⁵.
15. I understand that while the Major Facilities Zone in the Te Awa Lake Structure Plan is not currently consented it could be developed provided that assessment and infrastructure improvements described in Rule 3.8.5.3.2 are implemented. So, while not yet consented the Major Facilities Zone could be developed and would increase demand on the transport network beyond that included in Mr Inder's assessment. In my opinion, trips generated by the Major Facilities Zone should be included in the future transport environment. That approach is consistent with the ITA and WRTM that supported the Request which Mr Inder⁶ has now resiled from.

³ Statement of Mr Inder, Paragraph 9.8

⁴ Statement of Mr Inder, Paragraph 9.10

⁵ WM35TSAALLT3 and WM35TSPALLT3

⁶ Statement of Mr Inder, paragraph 9.2c), 9.7 and Attachment 1 Revised Transport Modelling and Assessment Technical Note, Sections 2.1 and 2.2.

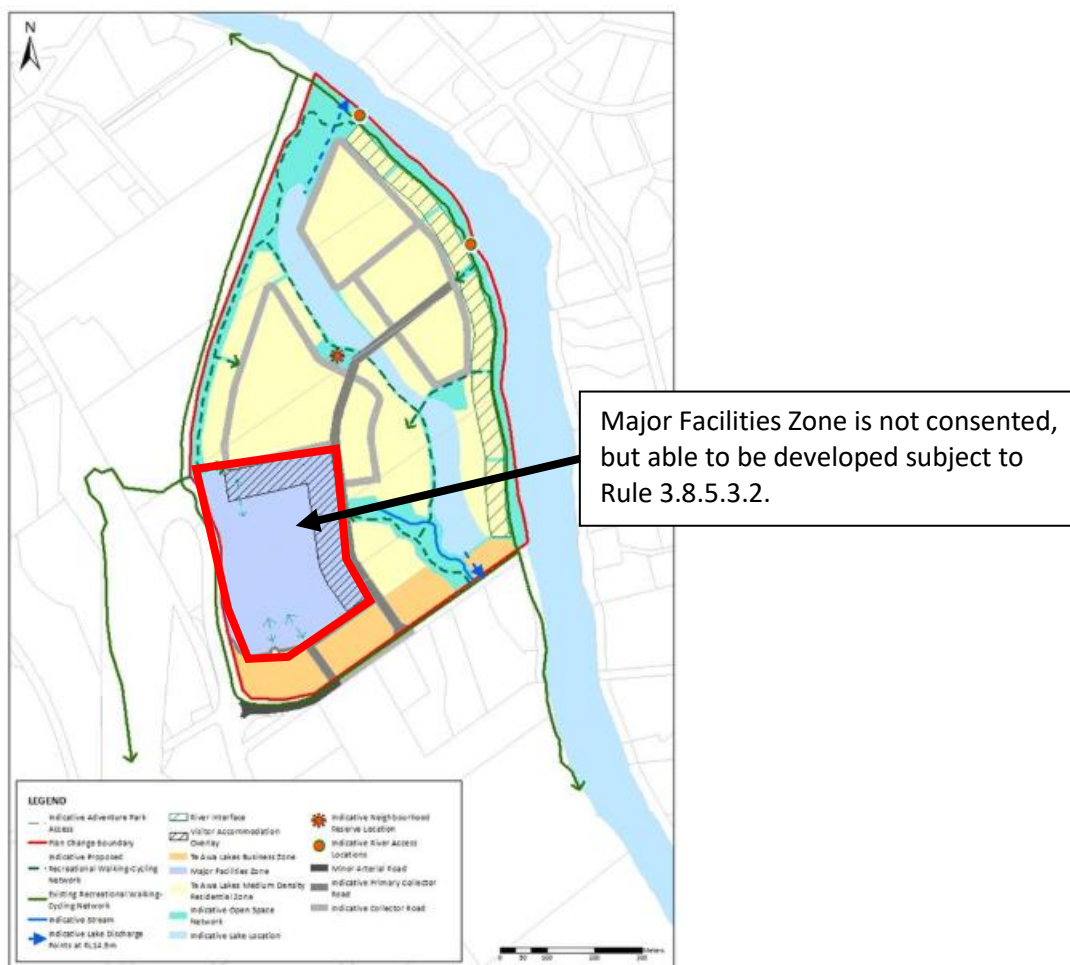


Figure 1: Te Awa Lakes Structure Plan

16. Mr Inder⁷ does not consider the Major Facilities Zone to form part of the future transport environment. Mr Inder's assessment⁸ has adjusted the WRTM baseline by reducing peak period trips from Te Awa Lakes area to match the consented⁹ trip generation limits of:

- a. 500vph in the 2035 peak periods¹⁰
- b. 722vph in the 2045 peak periods¹¹

17. This is significantly less traffic than the WRTM predicts for the full development of the TAL Structure Plan. The table below shows the TAL traffic in the 2035 scenario that supported the Request (highlighted blue) and the significant reduction in TAL traffic in the recent transport modelling scenarios that Mr Inder's evidence relies on.

⁷ Statement of Mr Inder, paragraph 9.13

⁸ Statement of Mr Inder, Attachment 1 - Revised Transport Modelling and Assessment Technical Note Section 2.2

⁹ Consent 010.2021.00011468.001

¹⁰ Condition 73 of Consent 010.2021.00011468.001

¹¹ Section 11.3 of the Broad ITA, 17 March 2021, Stantec

Scenario Description	WRTM reference	TAL traffic AM (vph)	TAL traffic PM (vph)
2035 Scenario 1 (44ha Stage 1 development)	WM35TSAALLT3, WM35TSPALLT3	1,344	1,490
2035 revised (Baseline (no PPC17))	WM35TVAALLT7, WM35TVPALLT7	434	548
2035 revised (Scenario A (PPC17-42ha))	WM35TWAALLT8, WM35TWPALLT8	433	548
2045 revised (Scenario B (PPC17 full development))	WM45TWAALLT9, WM45TWAPALLT9	659	756

18. I understand that Mr Inder is relying on a future consent application for the Major Facilities to trigger cumulative effects assessment.

19. I note that there are applications listed on the Fast-track consenting website for development in the wider area:

- a. Te Awa Lakes¹² - additional development at Te Awa Lakes including 2,500 dwellings, a town centre, business precinct and recreational precinct.
- b. Te Kowhai East¹³ - development of 137 ha (net) industrial development plus two small commercial nodes to the northeast of the SH1C/SH39 interchange.

20. Both developments would increase trips using Te Rapa Road and illustrate the rapidly changing land use environment that will impact on the transport network including the assumptions made in the assessment of PPC17.

21. In summary, I am concerned that:

- a. The future transport environment assessed by Mr Inder has not considered trips generated by development of the Major Facilities Zone in TAL and may underestimate the impact of PPC17 on important strategic corridors like Te Rapa Road;
- b. The proposed PPC17 provisions generally cover the key infrastructure and upgrades needed following the initial 20ha development. However, the timing and staging is not certain and I consider that more frequent assessment is needed as development progresses. In my view upgrade of the Ruffell Road /Old Ruffell Road intersection is needed to support initial access to the Plan Change area. My views on the proposed provisions are discussed in more detail later in this assessment; and
- c. Future development in the wider area will further increase demand of travel along the Te Rapa Road corridor and across the NIMT railway. While PPC17 cannot mitigate for the potential developments, I believe that the PPC17 provisions should be responsive and flexible enough to respond to other changes to the transport environment.

22. My concerns would be addressed by development within PPC17 being required to provide a Broad ITA for each stage of the development over the initial 20ha. Each Broad ITA would

¹² <https://www.fasttrack.govt.nz/projects/te-awa-lakes>

¹³ <https://www.fasttrack.govt.nz/projects/te-kowhai-east>

assess the cumulative effects of the proposed stage within the updated transport environment and identify the necessary mitigation (including timing and responsibility).

Te Awa Lakes Structure Plan

23. Rule 3.8.5.3.1 requires transportation infrastructure upgrades to support development of the Te Awa Lakes Structure Plan area including:

Rule 3.8.5.3.1 a) i) The Te Rapa Road/McKee Street intersection is to be signalised, including any additional works to address adverse transferred effects associated with the signalisation, at the Te Rapa Road/Kapuni Street intersection;

24. Rule 3.8.5.3.2 requires that all consent applications in the Major Facilities and Business 6 Zone include a Broad ITA. A Broad ITA is also required where consented development results in more than 500vph cumulatively across all zones. This rule identifies the following locations where assessment and infrastructure upgrades are likely to be needed:

- a. Te Rapa Road between the Fonterra Interchange and Hutchinson Road to determine whether an additional northbound lane is required;
- b. Te Rapa Road between the Fonterra Interchange and Ruffell Road to determine whether an additional southbound lane is required;
- c. the Te Rapa Road/Hutchinson Road intersection to determine if upgrading is required; and
- d. the Horotiu Interchange to determine if upgrading is required.

25. The Request supported by the ITA and WRTM modelling included the infrastructure mitigations required by the TAL Structure Plan (Rules 3.8.5.3.1 and 3.8.5.3.2). I support this approach as TAL has been granted consent for development generating up to 500vph and therefore any further development generating additional trips on the affected section of Te Rapa Road would trigger the need to assess the effects and where necessary proposed mitigation stated in Rule 3.5.6.3.2. In my view, PPC17 generates this additional traffic but does not include provisions that trigger a need for the same level of assessment.

26. I note that the WRTM has been updated since the TAL Structure Plan was included in the ODP and more recent modelling completed by Mr Inder and HCC indicates lower traffic volumes on Te Rapa Road. In my view the inherent uncertainty in traffic modelling combined with the rapidly changing land use environment increases the need for robust transport assessments through a Broad ITA to be completed as part of each development stage (over the initial 20ha).

27. In my view, the lack of certainty in timing of development both at PPC17, TAL and beyond increases the risk that the mitigation proposed as part of PPC17 may not be sufficient. The lack of certainty in timing and location of development supports the need for a Broad ITA to be completed as part of each development stage.

28. My concerns would be addressed by development within PPC17 being required to provide a Broad ITA for each stage of the development over the initial 20ha.

Future Infrastructure – McKee Street/Te Rapa Road Signalised Intersection

29. The Te Rapa Road/McKee Street is currently a priority T intersection. The WRTM scenarios include the McKee Street/ Te Rapa Road intersection as a signalised intersection. The PPC17 relies on it being a signalised intersection¹⁴. However, there is no provision that triggers the intersection upgrade.
30. It appears that PPC17 relies on development at Te Awa Lakes occurring first and completing signalisation of the intersection accordance with Rule 3.8.5.3.1 a) i) and the relevant consent condition¹⁵. There is a risk that PPC17 occurs prior to development at Te Awa Lakes triggering this upgrade. In my view the initial stage of PPC17 should also include a requirement to signalise the Te Rapa Road/McKee Street intersection upgrade.
31. Mr Inder¹⁶ states that the signalised is expected to be completed soon. However, the consent condition allows an alternative completion timing, subject to acceptance by Council. In case the PPC17 development occurs prior to the upgrade being completed by TAL, I recommend including a provision requiring that upgrade prior to initial development in the PPC17 area.

Potential Impacts on the Surrounding Network

32. Mr Inder¹⁷ outlines that there will be a need to upgrade the Ruffell Road/ Te Rapa Road signalised intersection when development in the North and West Blocks exceeds 35 ha. I have obtained SCATS¹⁸ data for the Ruffell Road/Te Rapa Road intersection from HCC. When compared to the values used in Sidra modelling, the SCATS data indicates more dominant directional peak flows on Te Rapa Road.

	AM Peak Northbound	AM Peak Southbound	PM Peak Northbound	PM Peak Southbound
SCATS	30%	70%	65%	35%
Sidra ¹⁹	38%	62%	54%	46%

33. I have completed sensitivity testing in Sidra the using the SCATS volumes on Te Rapa Rd. This shows that the increased demand on Te Rapa Road northbound in the PM peak results in poor levels of service and longer delays for PPC17 traffic, in particular for right turning traffic into Ruffell Road. I am concerned that the modelling provided by Mr Inder may underestimate delays at the intersection. Furthermore, I am concerned that increased demand on Te Rapa Road, such as from development of the Major Facilities Zone in Te Awa Lakes, will lead to poorer levels of service for the side road traffic.
34. Under the proposed provisions, this intersection upgrade is not triggered until 42ha of PPC17 development. As the timing of development in PPC17 is not certain, and Mr Inder has considered a significantly reduced traffic demand from the Te Awa Lakes, I am concerned that there is a risk of adverse effects occurring prior to the upgrade being triggered. I recommend that this intersection is considered as part of the Broad ITA triggered by development in the PPC17 that exceeds 20ha.
35. Mr Inder²⁰ identifies that the Kapuni Street/Te Rapa Road intersection should be upgraded to address the existing level of service deficiency. The TAL Structure Plan Rule 3.8.5.3.1 a) i)

¹⁴ Statement of Mr Inder paragraphs 8.17 c) and 10.14 and 13.36

¹⁵ Consent 010.2021.00011468.001

¹⁶ Statement of Mr Inder, paragraph 13.39

¹⁷ State ment of Mr inder paragraph 9.20

¹⁸ Sydney Coordinated Adaptive Traffic System (SCATS)

¹⁹ Statement of Mr Inder Attachment 1 – Revised Transport Modelling and Assessment Technical Note section 2.4.5

²⁰ Statement of Mr Inder Attachment 1 Revised Transport Modelling and Assessment Technical Note section 2.4.6

and consent condition covers additional works to address adverse transferred effects associated with the signalisation of McKee Street/Te Rapa Road.

36. Mr Inder²¹ recommends that a left-in left-out arrangement is considered at the Kapuni Street/Te Rapa Road intersection. In my view, left-in left-out arrangement will result in additional traffic using the Church Road/Te Kowhai Road/Te Rapa Road roundabout to U-turn due to the inability to complete right turns at Kapuni Street. I am concerned that the consequential impacts of this change have not been considered.
37. HCC does not have any committed plans to upgrade Kapuni Street/Te Rapa Road. In my view, signalling the intersection would provide for right turn movements from Te Rapa Road and may be preferred over a left in, left out arrangement as it would not result in additional trips at the Church Road/Te Kowhai Road/Te Rapa Road roundabout.
38. While Rule 3.8.6.3.2 requires evaluation of effects and mitigation for other locations along Te Rapa Road when TAL generates more than 500vph, PPC17 does not propose any improvements or additional lanes along Te Rapa Road between Access 2 and Ruffell Road. I am concerned that without an east-west transport connection (such as the NRC or through reopening of the Ruffell Road level crossing) all PPC17 traffic will need to travel along Te Rapa Road.
39. Mr Inder²² states that his proposed upgrade to the Ruffell Road/Te Rapa Road intersection will include extending four lanes on Te Rapa Road north to McKee Street. I agree this outcome is likely and can be confirmed as part of the future detailed design.
40. Mr Inder²³ presents traffic volumes extracted from the WRTM modelling. This shows an increase of around 10-30% in traffic volumes along Te Rapa Road as a result of the PPC17 and consented TAL.
41. I have reviewed the WRTM scenarios and resulting peak flows along Te Rapa Road. In my view, additional lanes along Te Rapa Road between Access 2 and Church Road are likely to be required as development occurs. For example, the peak traffic traveling southbound along Te Rapa Road past the Dairy Factory site is 1,102 vph²⁴. Lane capacity is typically 900-1,200 vph indicating that with the addition of the PPC17 traffic there are locations where the Te Rapa Road corridor is nearing capacity and additional lanes will be needed to maintain adequate levels of service during peak periods. This is consistent with TAL Structure Plan Rule 3.8.5.3.2 that expects additional lanes on Te Rapa Road near the Dairy Factory.
42. The PPC17 provisions include requirements for Simple ITAs and for Broad ITAs. As outlined in the Operative District Plan²⁵ the requirements for Simple and Broad ITAs are very different. The focus of a Simple ITA is on local effects where Broad ITA has a broader scope including a specific requirement to consider safety and efficiency (Table 15-2b, Item m) Safety and Efficiency). I am concerned that only requiring a Simple ITA for future stages of PPC17 will not adequately assess the wider transport effects of future development. For example, subdivision for industrial use equivalent to around 7ha would generate more than 1,500vpd and trigger a Broad ITA.

²¹ Statement of Mr Inder paragraph 14.38

²² Statement of Mr Inder, paragraph 10.15

²³ Statement of Mr Inder, Attachment 1, Table 3

²⁴ WM35TWAALLT8 (consented TAL trips)

²⁵ Operative District Plan, Appendix 15-2 Integrates Transport Assessment Requirements

43. I recommend that the provisions are updated to:

- a. Include the McKee Street/Te Rapa Road signalisation consistent with the TAL Structure Plan, Rules 3.8.5.3.1 and 3.8.5.3.2;
- b. Require Broad ITAs that consider key locations on the transport network; and
- c. Require a Broad ITA for each stage of development beyond 20ha.

Proposed Structure Plan, including Development Areas and Triggers

44. I am concerned that there is no updated Structure Plan map that illustrates the infrastructure staging and development areas that are set out in Table 3.9.3.2a. Without an updated Structure Plan map and Transport Infrastructure Plan it is not clear where development will occur and where infrastructure improvements are required.
45. I note that there are inconsistent references to accesses and land development blocks within Mr Inder's evidence and within the proposed provisions. For example, access to the initial development is from the south via Old Ruffell Road. This access is labelled "Access 3" on the Proposed Structure Plan, however Mr Inder²⁶ refers to this as "Access 1".
46. Because the PPC17 does not require the East-West Road or the intersection with Te Rapa Road to service the development, it would be desirable for the Structure Plan map to clearly identify the infrastructure triggered by PPC17 and infrastructure that will be provided by other parties.
47. I consider that walking and cycling connections and bus stops should be shown on the Structure Plan map.
48. The Fonterra Evidence (Mr Inder and Mr Grala²⁷) both include the figure below showing three development areas of the PPC17. These development areas and naming are inconsistent with the proposed structure plan.

²⁶ Statement of Mr Inder, paragraph 9.16

²⁷ Statement of Mr Inder, figure 2 and Statement of Mr Grala figure 2.

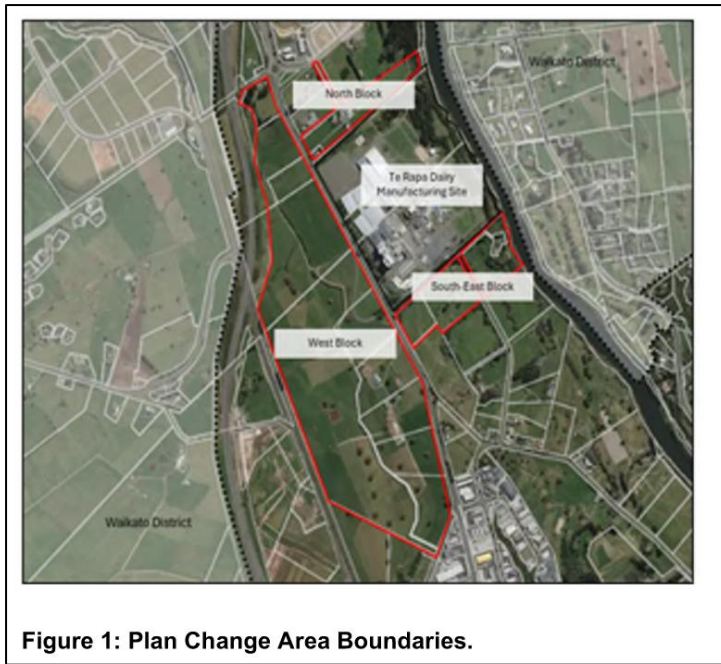


Figure 2: PPC17 Development Areas (Figure 1 of the Transport Evidence and of the Planning Evidence)

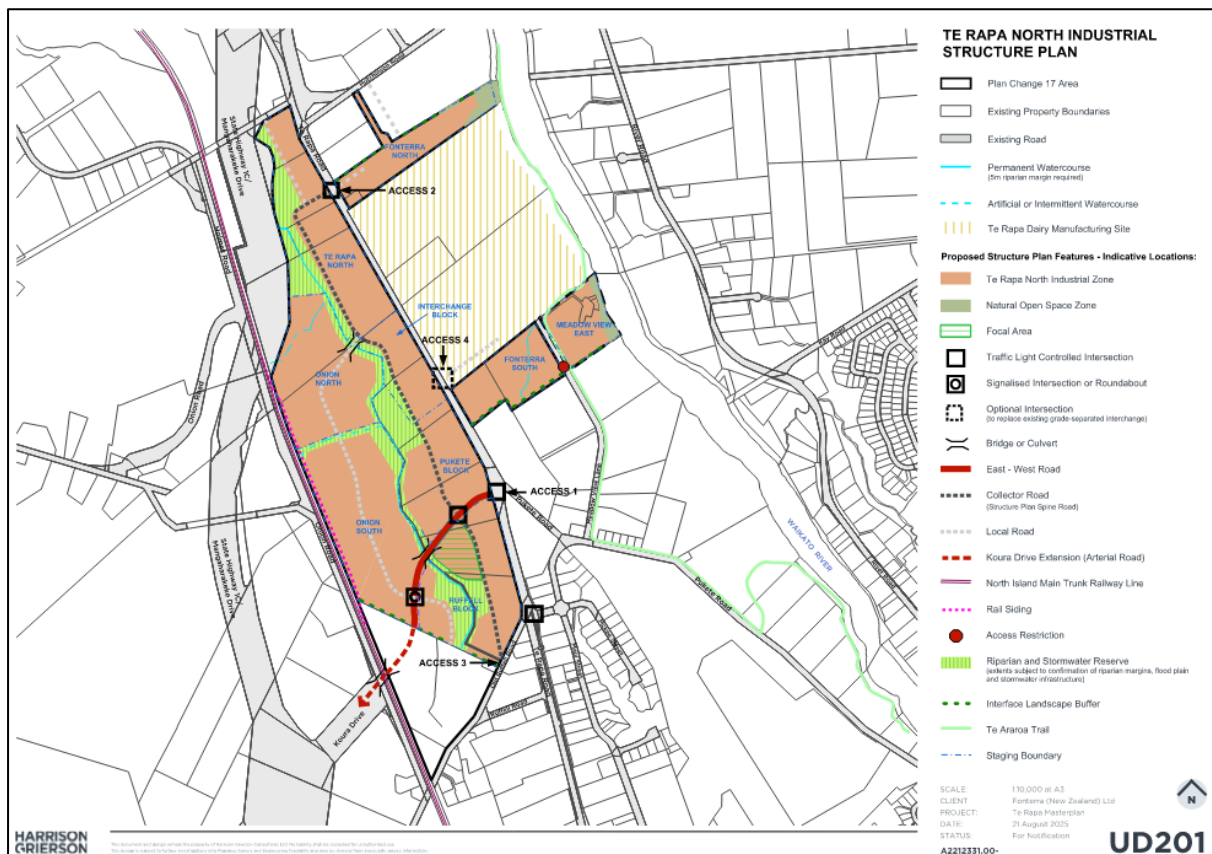


Figure 3 Proposed Structure Plan²⁸

²⁸ Provided with the Supplementary Information

Recommended Amendments to PPC17 provisions

49. I have provided input to the amended provision in Chapters 1, 3, and 12, prepared by the S42A Planner focusing on transportation aspects and in particular the Rule 3.9.3.2 Transport Upgrade Framework table.
50. Figure 4 below illustrates my recommended Transport Infrastructure Plan with the development areas and naming consistent with Mr Inder's Figure 2. In the paragraphs below I provide my reasons and recommendations for the amendments to the planning provisions.

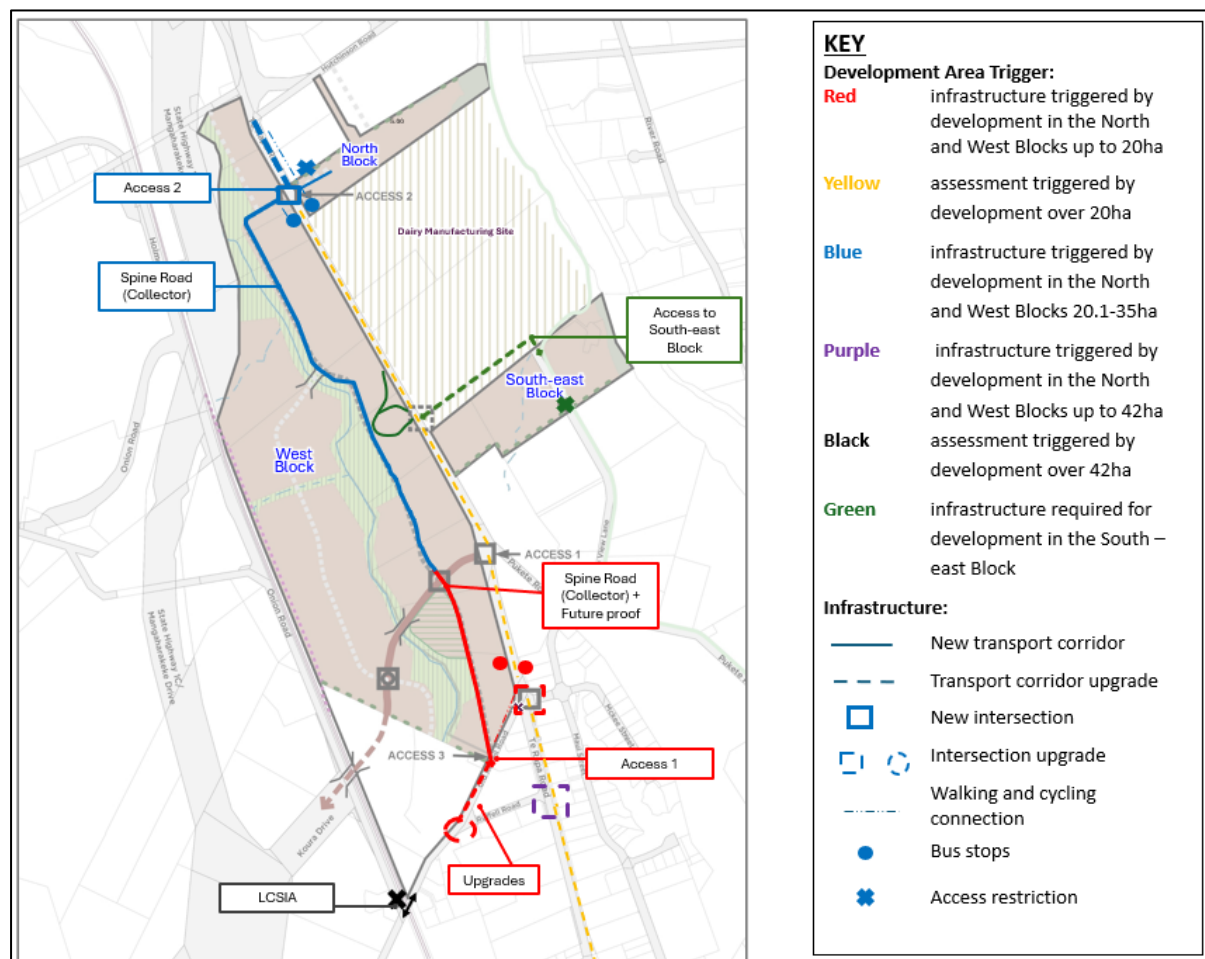


Figure 4: Recommended PPC17 Transport Infrastructure Plan

Ruffell Road/Old Ruffell Road Intersection

51. Initial access to PPC17 is proposed from the south allowing development of up to 20ha in the West Block. There will be a significant change in the use of the Ruffell Road/ Old Ruffell Road intersection from the PPC17 traffic.
52. The existing intersection is a Give Way priority T intersection. There is no marked right turn bay on Ruffell Road and Old Ruffell Road is on a skew angle. There is a risk that large vehicles generated by the PPC17 turning between Ruffell Road and Old Ruffell Road (left

turn out and right turn in) will not be able to make the left turn out without crossing the centreline and present a safety risk to other road users.

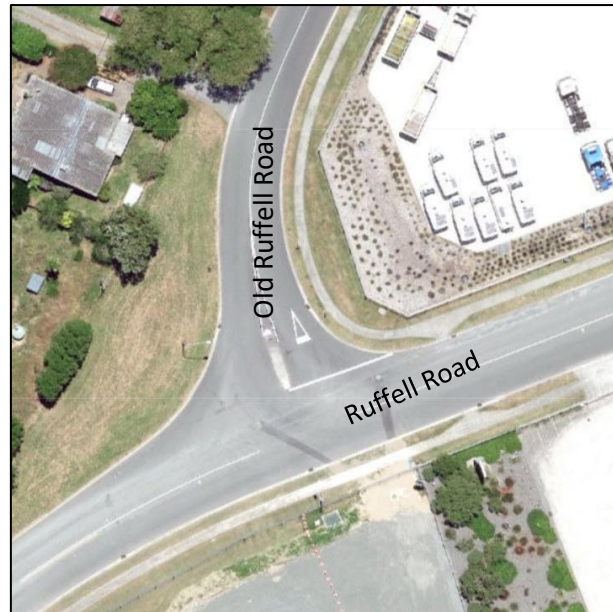


Figure 5: Existing Od Ruffell Road/Ruffell Road Give Way priority T-intersection

53. PPC17 has not provided a safety assessment of the existing intersection or assessed the impact of additional traffic including a high proportion of heavy vehicles using the intersection. In my view there will be a significant change in the intensity, nature of vehicles and turning demand at the intersection. Vehicle tracking has not been provided to confirm that the existing arrangement is adequate to accommodate the additional PPC17 traffic and heavy vehicles associated with industrial traffic. This will be the only access to the initial 20ha of development which is expected to generate 325 vph. I am concerned that this is significant change in traffic volumes and turning demand will lead to an increase in crashes.
54. Roundabouts are inherently safer than priority T- intersections because they better manage vehicle speeds and reduce conflict points and crash severity. I have instructed that a safe system assessment be prepared in accordance with the NZTA Safe System Audit Guidelines for transport projects²⁹ to compare the existing intersection and a roundabout. The assessment is based on the increased traffic movements expected to be generated by 20ha of development. The Safe System Assessment score for the roundabout is 81/448 compared to 141/448 for the T intersection, confirming that a roundabout is a safer form of intersection to facilitate the increase in traffic movements from PPC17.

²⁹ <https://www.nzta.govt.nz/assets/resources/road-safety-audit-procedures/docs/safe-system-audit-guidelines.pdf>

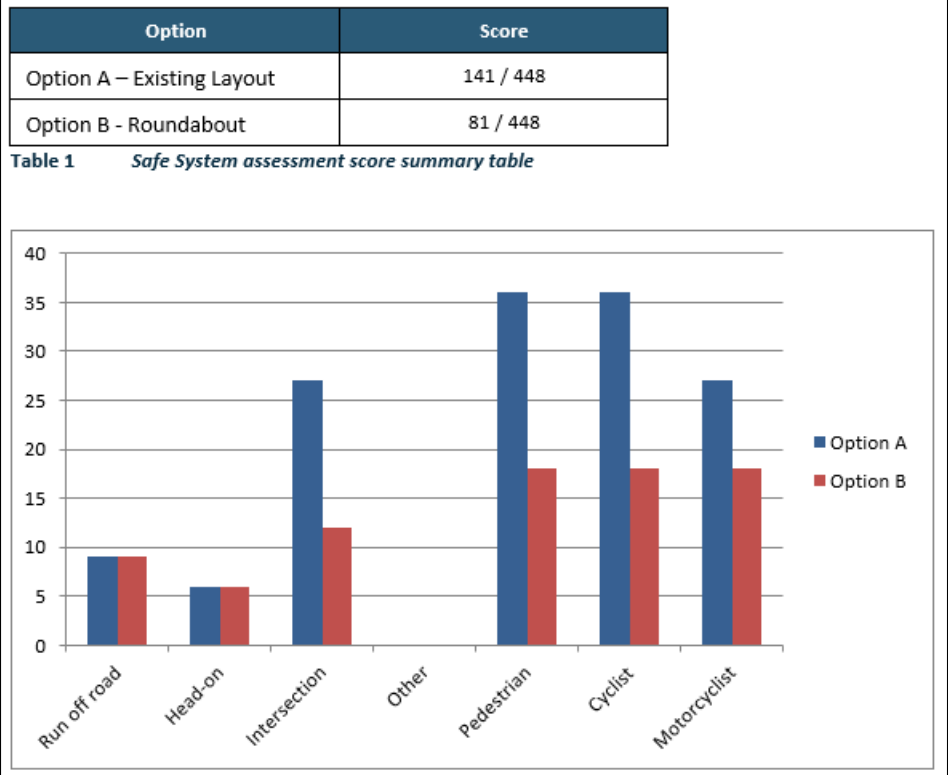


Figure 6: Safe System Assessment

55. In my view, a roundabout is needed to safely accommodate the increase in traffic generated by PPC17 and will provide a safer form of intersection, manage vehicle speeds, and provide for all movements. It will also future proof the intersection so that it could safely accommodate any other changes in traffic such, for example, if the Ruffell Road level crossing is opened or additional industrial development is enabled.
56. I instructed that the roundabout concept shown below be prepared. This concept demonstrates that a roundabout with an 8m diameter central island will fit within the existing road reserve. The design vehicle used for the concept design is the 17.9m semi-trailer demonstrating suitability to accommodate industrial traffic.

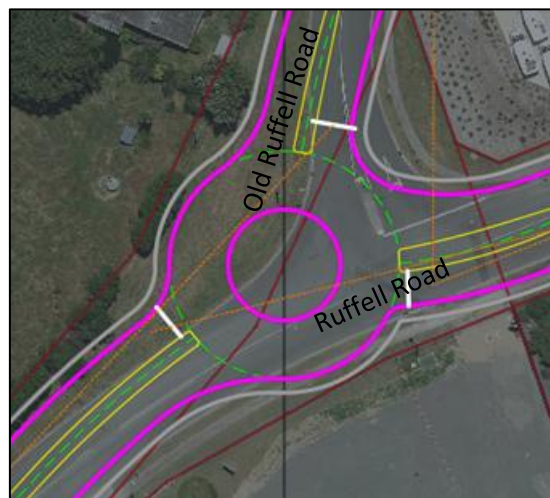


Figure 7: Old Ruffell Road/Ruffell Road roundabout concept

57. I recommend that the Rule 3.9.3.2a be amended to include the following:

- *Design and construction of the Old Ruffell Road/ Ruffell Road intersection upgrade to a roundabout.*
- *The roundabout be completed prior to:*
 - i. *Any section 224c certificate for subdivision under the Resource Management Act 1991 ('RMA') being issued that takes the cumulative net developable area in the West Block of the Structure Plan up to and including 20ha: or,*
 - ii. *Any industrial / commercial activity within the West Block of the Structure Plan area generating a cumulative average weekday pm peak traffic volume up to 325 vehicles per hour (two-way), accessing via Old Ruffell Road*

Access into the PPC17 from Old Ruffell Road

58. The Structure Plan Spine Road is proposed as a continuous north south collector road including:

- a. A connection to Old Ruffell Road;
- b. A T-intersection with Old Ruffell Road stub; and
- c. Future proofing for a four-leg intersection between the Spine Road and the planned Northern River Crossing.

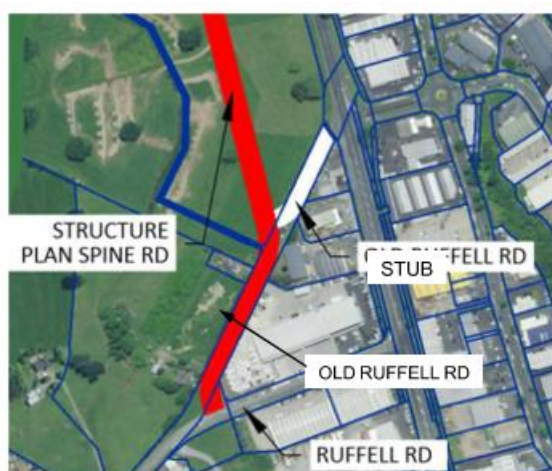


Figure 8: Recommended Spine Road connection to Old Ruffell Road³⁰

59. PPC17 does not include a concept layout for the Spine Road connection to Old Ruffell Road or the T- intersection for the stub. There are existing industrial businesses along Old Ruffell Road and the design of the Spine Road will need to maintain access to the existing businesses, provide appropriate separation distances and vehicle tracking.

60. The proposed provision (Rule 3.9.3.2a) requires future proofing for a four-leg intersection between the Spine Road and the planned NRC. In my view this will require development of a concept design at the time of subdivision to demonstrate that the intersection meets the

³⁰ Statement of Mr Inder, Figure 5

relevant design standards and to inform the subdivision boundaries so that the required land is protected.

Upgrade of Old Ruffell Road

61. Rule 3.9.3.2a provides for the upgrade of Old Ruffell Road. I have provided input to the provisions prepared by the S42A Planner:

“Upgrade of Old Ruffell Road to Collector standard in accordance with the typical cross-section shown in Figure 3.9.2.5.e between the Structure Plan Spine Road and Ruffell Road. The upgrade shall include provision for a walking and cycling connection between the Structure Plan spine Road and the existing bus stops north of McKee Street on both sides of Te Rapa Road.”

62. I agree that Old Ruffell Road needs to be upgraded to collector cross-section. However, the existing road reserve is around 20m wide and the District Plan³¹ cross section for an industrial collector road is 26.5m wide and cannot be provided within the existing road reserve.
63. I support the proposed modification to the footpath/ shared path. However, I recommend that the carriageway should provide two 4m wide traffic lanes and a 2m flush median. I recommend that Figure 3.9.2.5e is updated as shown below. Providing a flush median will provide space for vehicles to turn at the existing industrial vehicle crossings and is consistent with the proposed Structure Plan Spine Road (Collector).

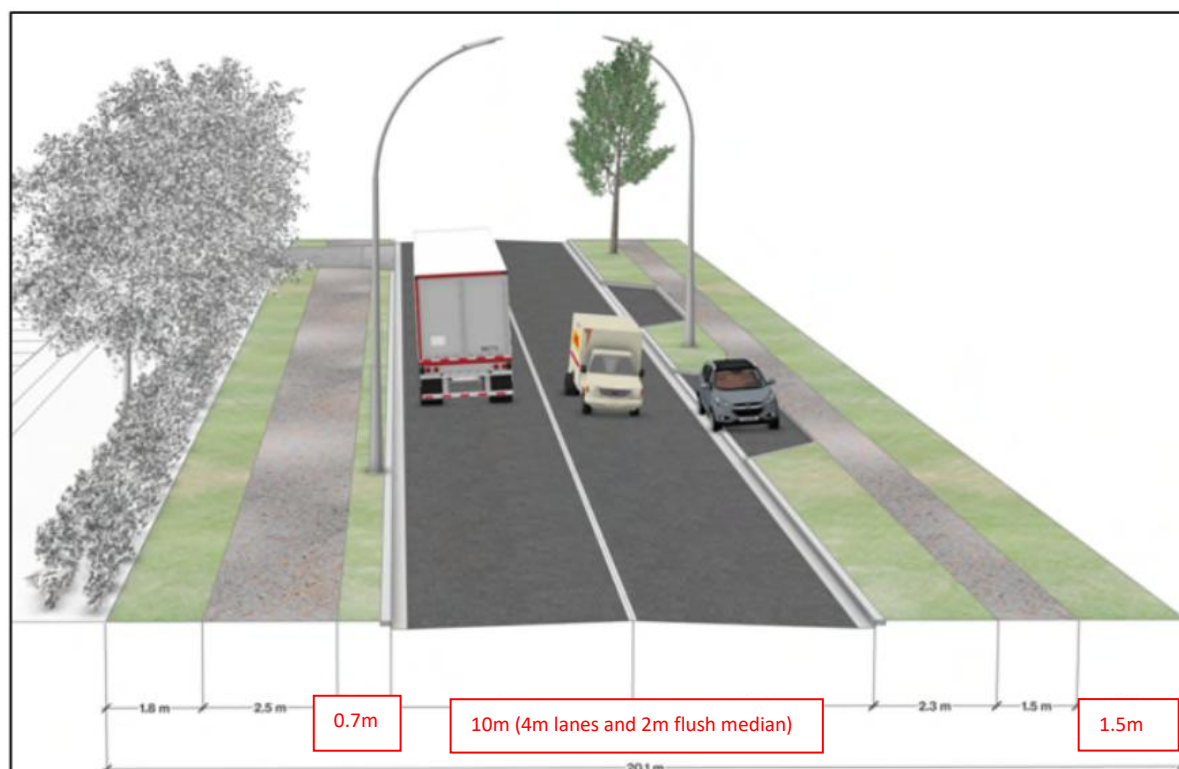


Figure 9: Recommended cross -section for Old Ruffell Road upgrade to collector (Figure 3.9.2.5.e)

³¹ Operative District Plan, Appendix 15-5 Criteria for the Form of Transport Corridors and Internal Vehicle Access, Table 15-5a

Bus Stops on Te Rapa Road (Near McKee Street)

64. There are existing bus stops on Te Rapa Road just north of McKee Street that have not been included in the provisions or identified on the Structure Plan map. To support and encourage use of public transport, the walking and cycling connection required along Old Ruffell Road should extend to the bus stops on Te Rapa Road.
65. This will require a crossing of McKee Street to be provided. I consider that a pedestrian crossing can be incorporated into the signalised upgrade of the McKee Street/Te Rapa Road intersection. The provision should require a continuous walking and cycling connection is provided from PPC17 to both Te Rapa Road and the existing bus stops north of McKee Street (located on both sides of Te Rapa Road).
66. I recommend that the Rule 3.9.3.2a include a new provision:
- *Design and construction of the McKee Street/Te Rapa Road intersection to a signalised intersection including a signalised pedestrian crossing of Te Rapa Road.*
 - *The upgrade to signals to be completed prior to:*
 - i. *Any section 224c certificate for subdivision under the Resource Management Act 1991 ('RMA') being issued that takes the cumulative net developable area in the West Block of the Structure Plan up to and including 20ha: or,*
 - ii. *Any industrial / commercial activity within the West Block of the Structure Plan area generating a cumulative average weekday pm peak traffic volume up to 325 vehicles per hour (two-way), accessing via Old Ruffell Road*
67. I consider that the bus stops and the walking and cycling connection should be shown on both the Structure Plan and the Transport Infrastructure Plan (as indicated on Figure 4 above).

Need for and timing of Broad ITA

68. In my view, the basis of the PPC17 has under-estimated the trip generation that can reasonably be expected from zoned land in the surrounding area and that the future transport effects may not adequately been considered. The lack of certainty in timing of development in the PPC17 and in the surrounding area increases the risk that the mitigation identified by Mr Inder are not sufficient.
69. The PPC17 provisions include requirements for Simple ITAs and for Broad ITAs. There is a risk that Simple ITAs focusing on local capacity and efficiency effects will not address wider transport effects of the PPC17 or safety effects. I consider that a Broad ITA is the appropriate level of assessment.
70. The proposed provisions allow for 42ha to be developed before triggering the Broad ITA, which represents 80% of the PPC17 development area. Sequencing of development is not specified in the provisions and will depend on market demand. I am concerned that the lack of specified staging makes it harder to predict network assignment and the transport effects. My concern is that, depending on the sequencing of both PPC17 and the TAL, traffic volumes could reach levels that require intervention at some locations sooner than anticipated by Mr Inder.

71. My concerns would be addressed by PPC17 being required to provide a Broad ITA for each stage of the development over the initial 20ha. Each Broad ITA would be required to assess the cumulative effects of the proposed stage within the updated transport environment and identify the necessary mitigation (including timing and responsibility).
72. I recommend that Rule 3.9.3.2 require a Broad ITA for development in the Te Rapa North Structure Plan area over 20ha.

Access 2 and Development 20.1ha - 35ha

73. I support the proposed provisions (Table 3.9.3.2a) for development in the West and North Blocks between 20.1ha and 35ha.
74. As outlined above I recommend that Broad ITAs are required for cumulative development above 20ha.

Spine Road

75. The proposed provisions (Rule 3.9.3.2a) do not require the Spine Road to be connected until development over 35ha, resulting in the PPC17 West Block to be serviced by two long cul-de-sacs for an uncertain period of time. This is not aligned with good transport planning principles for road hierarchy and network connectivity and results in increased travel distance and time, and increased demand and conflict on Te Rapa Road and at intersections.
76. Gymnasiums and food outlets are permitted activities in the Focal Area of the PPC17 and are likely to attract people working throughout the PPC17 area. Without the Spine Road being fully connected people working in the north of the West Block would need to travel additional distance along Te Rapa Road and Ruffell Road to the focal area. This could be up to around 1km of additional travel distance required and could result in longer delays at the Ruffell Road and Access 2 intersections with Te Rapa Road. Te Rapa Road is a Major Arterial strategic corridor with a principal function of movement of significant levels of goods and people between parts of the city and beyond. In my view, these local trips (and resulting intersection delays) should be avoided by providing a continuous Spine Road.
77. I recommend that the Rule 3.9.3.2a requiring the Spine Road to be connected prior to development over 35ha in the West and North Blocks. This would provide a continuous internal connection in the West Block, removing the need for trips within the PPC17 area to use Te Rapa Road.
78. The Request included an optional at-grade intersection to replace the Dairy Factory interchange on Te Rapa Road. However, this is not required through the proposed provisions. The location of the Spine Road as indicated on the Structure Plan appears to conflict with the Dairy Factory interchange. This is annotated in Figure 10 below.
79. In my view, detailed design of the Spine Road will need to consider the existing features including the interchange and the riparian and stormwater reserve. This is a risk that the detailed design may identify that changes to the location and alignment of the Spine Road and/or the interchange may be required. It is possible that an additional structure may be needed to cross the stream.



Figure 10: LHS- aerial photograph of the interchange. RHS – indicates the interchange and conflict with the Structure Plan Spine Road

Te Rapa Road/ Ruffell Road intersection

80. I support the provision requiring design and construction of a capacity upgrade to Te Rapa Road/Ruffell Road intersection.

Access to South-East Block

81. For development in the South-East Block the provisions (Rule 3.9.3.2a) require a road connection to be provided through the Dairy Manufacturing Site connecting the South-East Block to the existing Dairy Factory interchange.
82. The Structure Plan indicates a local road and the optional at-grade intersection to replace the existing grade-separated interchange. The local road (grey dashed line) is shown through the Dairy Manufacturing site. It is not clear if this is to be a public road, private road or some form of easement. I am concerned that the sites in the South-East block may not have access to a public road.
83. Rule 12.5.1a includes a Vehicle Access Restriction. It is not clear to me if the proposed Rule is sufficient to ensure access is provided to the two properties as they do not have access to a legal road. It is also not clear how Lot 1 DPS 61136 or Lot 3 DPS 61136 will be provided vehicle access. In my view, further legal and planning advice is required to ensure that this rule is acceptable.

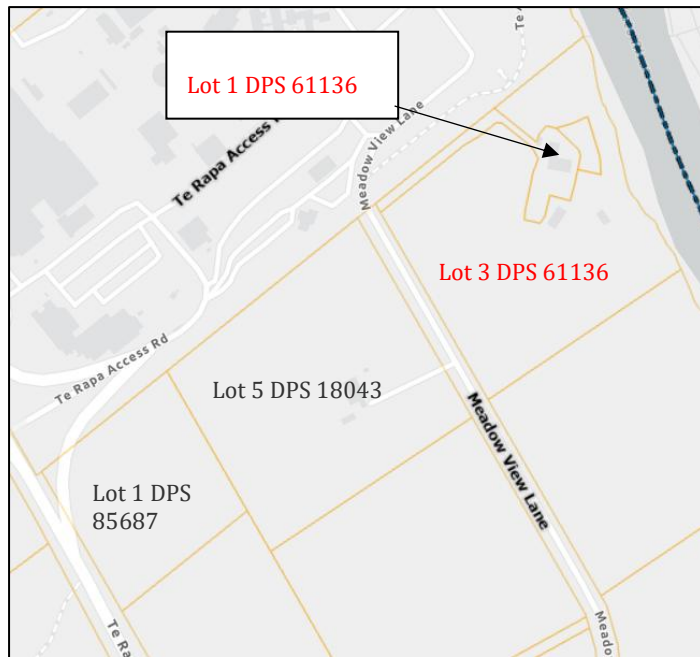


Figure 11: Property map in South-East Block

84. I recommend that the Rule 12.5.1a is amended to include the two missing lots:

“Rule 12.5.1a Lot 1 DPS 85687, Lot 1 DPS 61136, Lot 3 DPS 61136 and Lot 5 DPS 18043 shall achieve vehicle access via the Te Rapa Dairy Manufacturing Site onto Te Rapa Road and shall be restricted from achieving vehicle access onto Meadow View Lane. This rule shall not apply once the Deferred Industrial Zone overlay is removed from all properties along Meadow View Lane.”

85. I also recommend that the Rule 3.9.3.2.a is amended to avoid the potential confusion that the reference to the RP could cause. It would be clearer and consistent to the legal property descriptions. I recommend:

“No vehicle access is provided from any Industrial activity in the South Block (Lot 1 DPS 85687, Lot 1 DPS 61136, Lot 3 DPS 61136 and Lot 5 DPS 18043) to Meadow View Lane.”


Level Crossing Safety Impact Assessment (LCSIA)

86. Development over 42ha triggers the need to complete a LCSIA of the Ruffell Road level crossing to confirm whether the crossing can be reopened to traffic. In my view, Rule 3.9.3.2a is not clear on who is responsible for implementing any upgrades that the LCSIA identifies as being necessary to facilitate reopening of the level crossing. This could be addressed through a PDA once the LCSIA is complete.

Strategic Infrastructure – Northern River Crossing (NRC)

87. While the NRC is not designated or funded it is anticipated to follow the alignment shown on the ODP Transport Corridor Hierarchy Plan³². The NRC is anticipated to be a limited access major arterial similar in nature to Wairere Drive.

³² District Plan, Appendix 15-4 Transport Corridor Hierarchy Plan and Definitions, Figure 15-4c.

88. As part of developing PPC17, Fonterra have provided a concept layout and long section³³ confirming that the proposed East-West Road alignment is feasible. The current Structure Plan map indicates the alignment of the future NRC corridor. I support the East-West Road being shown on the Structure Plan map.
89. While the East-West Road is not required for the PPC17 or specifically triggered by the proposed provisions, it is possible that a local road could be constructed to facilitate development. I am concerned that there is a risk that direct vehicle access could be allowed if the East-West Road is initially constructed to a local road standard as indicated on Figure 3.9. 2.5a.
90. I recommend that vehicle access to the East-West Road be a non-complying activity in Rule 12.3.1 Activity Status Table – Te Rapa North Industrial Zone as follows:
- a. Direct vehicle access to the East-West Road (future NRC) NC*
91. It is not clear on the Structure Plan map that the east-west road is a future Major Arterial (NRC) because the key refers to it as “east-west road”. The PPC17 has not provided a clear transport corridor hierarchy map. I suggest that the Structure Plan legend is updated to “East-West Road (Future Major Arterial)” to clearly identify it’s future hierarchy.
92. I recommend a new Assessment Criteria be included in the provisions to ensure that that at the time the east-west road is designed there is a requirement to engage with HCC and that the appropriate cross-section is allowed for. I have provided input to the Appendix 1-3-3 Assessment criteria Q5 prepared by the S42A planner as follows:
- “Q5 East-West Road Corridor
The extent to which the East-west Road has been designed and located to:*
- i. Take into account feedback from HCC*
- ii. Be consistent with Figure 3.9.2.5a allowing for the upgrade in Figure 3.9.2.5b*
- iii. Avoid direct vehicle access.”*
93. I support the proposed provisions (Rule 12.4.1v.) that require building setbacks from the East-West Road to protect a corridor within which the NRC could be constructed in future.
94. I have made recommendations and provided input to Rule 12.4.1v. prepared by the S42A Planner as below:
- | | |
|--|--|
| <p>v. East — West Road (as shown on the Te Rapa North Industrial Structure Plan)</p> | <p>i. 6.5m <u>on the northern side</u>; and</p> <p> ii. 18.5m setback from the legal road corridor from the southern side of the East-West Road, which shall apply in addition to the above until such time as the Northern River Crossing is constructed.</p> <p>iii. <u>Advice Note: The intent is to achieve the 34.8m legal road width for the NRC (refer Figure 3.9.2.5b) plus the 6.5m setbacks</u></p> |
|--|--|
95. I have recommended edits to the provisions (Rule 3.9.2.5 Movement Network) to improve consistency and to make it clear that the East-West Road is not triggered by the PPC17.

³³ Te Rapa Masterplan Road Layout Plan and Longitudinal Section, drawing reference A2212331.01-HG-ZZ-DR-Z-004, Rev 1, 12/6/2024, HG

Access to North Block

96. The PPC17 has not included assessment of industrial traffic using Hutchinson Road. The North Block includes property (Lot 1 DP 551065) with frontage to Hutchinson Road. The local road proposed as the fourth leg at the signalised Access 2 intersection with Te Rapa Road will provide access to the North Block.

97. I recommend a new Rule be included in the provisions:

“12.5.1 b. Lot 1 DP 551065 shall achieve vehicle access to the new local road (Access 2) onto Te Rapa Road and shall be restricted from achieving vehicle access onto Hutchinson Road.”

Bus Rapid Transit

98. The proposed Bus Rapid Transit (BRT) Northern Corridor (RT1) is anticipated for implementation along Te Rapa Road in the future. While the corridor design is not confirmed, the proposed provisions include Rule 12.4.1 iii requiring building setbacks along Te Rapa Road (10m on the western side and 5m on the eastern side).

99. While the design is not yet confirmed, I understand a 30m wide corridor is likely to be required to accommodate future BRT. While this width is generally available along most of Te Rapa Road, it is constrained at the Dairy Factory interchange.

100. In my view the provisions requiring the building setbacks along Te Rapa Road are sufficient to ensure there will be the ability for additional corridor width to be secured for the BRT in the future if required.

Submitter – Statement of Evidence of Mark Apeldoorn on Behalf of Horotiu Farms Limited and Te Awa Lakes Unincorporated Joint Venture Limited (Collectively Referred to As “TAL”)

101. I agree with Mr Apeldoorn³⁴ that the transport modelling for the PPC17 has not accounted for the expected traffic and cumulative effects of development. Mr Apeldoorn’s concerns support my recommendation for more frequent assessment through Broad ITAs.

102. While Mr Apeldoorn³⁵ has referred to staging provided with the Supplementary Information that is no longer proposed, I agree with his key points and specifically that:

- a. No improvements to the Te Rapa Road corridor are proposed and the responsibility for future upgrades relies on TAL (and/or others)³⁶.
- b. The absence of a fully connected north-south Spine road results in additional local trips on Te Rapa Road between Access 2 and Ruffell Road³⁷.
- c. Overall, the proposal relies on external infrastructure being delivered by others³⁸.

103. I support Mr Apeldoorn’s recommendation³⁹ requiring Access 2 be signalised at the time it is constructed and agree it will provide for high demand of right turns across Te Rapa

³⁴ Statement of Mr Apeldoorn, paragraphs 7.1-7.6

³⁵ Statement of Mr Apeldoorn, paragraphs 8.4-8.9

³⁶ Statement of Mr Apeldoorn, paragraph 8.9

³⁷ Statement of Mr Apeldoorn, paragraph 8.12

³⁸ Statement of Mr Apeldoorn, paragraph 8.13

³⁹ Statement of Mr Apeldoorn paragraph 8.14d)

Road. The proposed provision (Rule 3.9.3.2avi) is explicit that the intersection will be signalised.

104. I agree with Mr Apeldoorn⁴⁰ that the NRC corridor needs to be protected. I agree with Mr Apeldoorn's recommendations⁴¹ and have recommended that Appendix 1-3-3 include the following assessment criteria specific to the East-West Road .
105. I have also recommended that vehicle access to the East-West Road be a non-complying activity in Rule 12.3.1 Activity Status Table – Te Rapa North Industrial Zone.
106. While I agree in part with Mr Apeldoorn⁴² that there is a need for safe, direct and continuous active mode routes, the North-South Spine Road when connected will provide internal connections for walking and cycling within PPC17. I have recommended that the provision requiring the upgrade to Old Ruffell Road includes a walking and cycling connection to Te Rapa Road. This will allow connection from PPC17 to the wider network. In my view, it is more appropriate that the relief sought by Mr Apeldoorn⁴³ remain the responsibility of TAL as per the consent conditions⁴⁴.
107. Mr Apeldoorn⁴⁵ seeks that the PPC17 be amended to include public transport design criteria for collector and arterial roads. While I consider that engaging with Waikato Regional Council regarding the likelihood of public transport routes within the PPC17 area as part of the preparation of the Plan Change would have been desirable, I note that WRC have not submitted on this point seeking any specific relief. In my view, the proposed PPC17 provisions relating to building setback do not preclude the ability for the future BRT along Te Rapa Road.
108. Mr Apeldoorn⁴⁶ states that *"in the absence of adequate regard for the HCC ODP Te Awa Lakes structure Plan a Broad ITA should be required for any land use or subdivisions application."* This statement supports my position that a Broad ITA should be required for development over 20ha.
109. I agree with Mr Apeldoorn⁴⁷ that the assessment has excluded some trip generation from TAL. His positions supports my recommendation that a Broad ITA should be required for development over 20ha.

Submitter – Statement of Evidence of Leo Donald Hills on behalf of Empire Corporation Limited and Porter Group

110. The Porters' land is located on both the west and east sides of the NIMT within the deferred Te Rapa North Industrial Zone. The Statement of Mr Hills⁴⁸ seeks to include the Porters land in PPC17 and recommends additional provisions to secure:
- a. The realignment of Onion Road prior to development;

⁴⁰ Statement of Mr Apeldoorn, paragraph 10.1

⁴¹ Statement of Mr Apeldoorn, paragraphs 10.6a) and b)

⁴² Statement of Mr Apeldoorn, paragraphs 11.1-11.5

⁴³ Statement of Mr Apeldoorn, paragraph 11.5

⁴⁴ Consent 010.2032.11468.001 condition 72

⁴⁵ Statement of Mr Apeldoorn paragraph 12.7a)

⁴⁶ Statement of Mr Apeldoorn, paragraph 15.1c)

⁴⁷ Statement of Mr Apeldoorn paragraph 15.1 f)

⁴⁸ Statement of Mr Hills, paragraph 1.6

- b. The upgrade of Onion Road to a Collector Road standard; and
- c. Provisions to ensure that an East-West corridor is future proofed through Porters' land

111. In my view, although the land is zoned Deferred Industrial and is appropriately located contiguous with existing industrial land and the PPC17 area, PPC17 has been prepared and assessed without consideration of trips generated by development of the Porters' land.

112. If the Porters' land were included in PPC17 and developed while the Ruffell Road level crossing is closed, all trips generated by the Porters' land (east of the NIMT) would travel to Te Rapa Road via Ruffell Road.

113. I do not support Mr Hills recommended⁴⁹ provision that removes the development trigger of 42ha from Rule 3.9.3.2a iv-xvii. This would mean that the assessment is solely reliant on the peak hour traffic volume and it is not clear how this would be measured. I prefer to rely on development areas as the implementation trigger.

114. If the Panel were supportive of including the Porters' land west of the NIMT in PPC17, I support the inclusion of the Rule 3.9.3.2a xviii as proposed by Mr Hills⁵⁰.

115. The limits of the Southern Block are not clear or indicated on the Structure Plan. If the Panel were supportive of adopting the Porters Land in PPC17, the Structure Plan would need to be updated to clearly identify the Southern Block.

116. Mr Inder⁵¹ considers that the remaining Deferred Te Rapa North Industrial Zone land on the eastern side of the railway line (and not included in PPC17) is able to be developed in future subject to either:

(a) The constructing the east / west section of the NRC between Koura Drive and Te Rapa Road including an intersection with Te Rapa Road; or

(b) In the absence of the east / west described above, some or all the following transport infrastructure upgrades may be needed:

(i) An additional southbound through movement lane at Te Rapa Road / Ruffell Road intersection.

(ii) Reopening the Ruffell Road rail level crossing.

(iii) Capacity / queue storage increases at the signalised Te Rapa Road / McKee Street intersection.

(iv) Additional walking, cycling and public transport connectivity to facilitate greater travel choices, and/or

(v) Financial contributions toward the future BRT service

117. While I agree with the intent of Mr Inder's recommendation, no assessment has been provided to confirm that the proposed infrastructure improvements will be effective. I consider that an assessment of the Porters' land would be needed to confirm the infrastructure upgrades needed to support that development. In my view it would be

⁴⁹ Statement of Mr Hills Table 9-1

⁵⁰ Statement of Mr Hills paragraph 8.1a) and Table 9-1

⁵¹ Statement of Mr Inder, Paragraph 14.45

appropriate and consistent to require a specific assessment at the time this area is developed.

118. Mr Inder⁵² considers further design and assessment of the East-West Road through the Porters' land is needed to protect the future East-West arterial. I agree with Mr Inder⁵³ that the building setbacks proposed in the PPC17 area should not be applied to the Porters' land without additional consideration because they do not allow for the extensive earthworks required on the approach to the NIMT overbridge.
119. I agree with Mr Inder⁵⁴ that direct access to the balance of Porters land on the east side of the railway should be to Ruffell Road (rather than to the East-West Road). A fourth leg at the Old Ruffell Road/Ruffell Road intersection would be an appropriate way to provide for this access into the Porters' land.
120. Mr Inder⁵⁵ states that *"any redundant land on the north side of the future East-West arterial embankment in Porters' land does not require access through the Plan Change Area"*.
121. I partly disagree with Mr Inder as the overbridge and embankment will sever the Porters' land. This severance could be minimised by lengthening the overbridge to provide a local road parallel to the NIMT maintaining connectivity within the Porters land. If the Panel were supportive of including the Porters' land in PPC17, I recommend that this north-south local road be shown parallel to the NIMT to provide connectivity within the Porters' land.

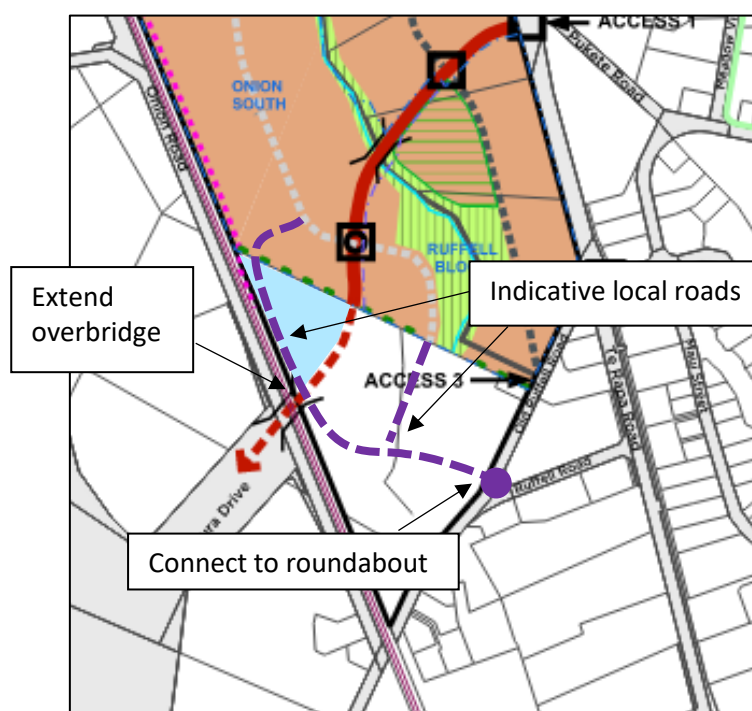


Figure 12: Porters' land on the eastern side of the NIMT and suggested local road

Submitter – NZTA

⁵² Statement Rebuttal Evidence of Mr Inder, paragraph 3.11

⁵³ Statement Rebuttal Evidence of Mr Inder, paragraph 3.14

⁵⁴ Statement Rebuttal Evidence of Mr Inder, paragraph 3.15b)

⁵⁵ Statement Rebuttal Evidence of Mr Inder, paragraph 3.15c)

122. The NZTA submission⁵⁶ agrees with the evidence of Mr Inder and supports the revised provision and refers to Mr Inder's statement (paragraph 14.11). However, it is unclear because their submission does not mention the Broad ITA that is triggered.
123. I agree in principle with the need for the Broad ITA, however as outlined in my evidence above, due to uncertainty in the transport modelling, surrounding land use and development timing, the Broad ITA should be triggered by cumulative development over 20ha.

Conclusions and Recommendations

124. While PPC17 is aligned with surrounding land use and is anticipated by the District Plan I have some concerns relating to the proposed development staging and proposed plan provisions. The proposed infrastructure staging and development areas are different to that previously been provided in the Request, and Supplementary Information.
125. In my view PPC17 has not sufficiently considered the future transport environment as the modelled TAL trip generation is significantly less than that supported the TAL Structure Plan. In my view, these changes, in particular the reduction in trips, creates greater uncertainty about whether the proposed mitigation is appropriate.
126. I consider that there is a risk of PPC17 development occurring (up to 42ha) without triggering assessment is likely to result in safety and efficiency impacts at key intersections and along Te Rapa Road without agreed mitigations or responsibility.
127. To address the uncertainty in the future transport environment and development staging, I consider that more frequent Broad ITAs are necessary to review the future transport environment and that the proposed mitigation adequately addresses the cumulative effects of the development. In my view requirement for Broad ITAs triggered by development over the initial 20ha will provide more certainty and clarity of the effects and likely mitigations to avoid unexpected adverse effects.
128. In my view the transport effects of PPC17 can be managed through District Plan provisions. However, the proposed provisions need to be updated to require:
- Upgrading the Old Ruffell Road/ Ruffell Road intersection to a roundabout to facilitate access to the initial PPC17 development
 - Signalisation of the McKee Street/Te Rapa Road intersection (consistent with the TAL mitigation) for the initial PPC17 development
 - Broad ITAs to be triggered by all development over 20ha
 - The Spine Road as a full connection through the PPC17 for development over 20ha
 - Continuous walking and cycling connection for PPC17 to Te Rapa Road and the bus stops near McKee Street
 - Access restrictions to avoid direct vehicle access to the East-West Road (future Major Arterial) and Hutchinson Road

⁵⁶ NZTA Submission, paragraph 2.3

129. My recommend changes to the proposed provisions have been incorporated into the s42 report. In addition to those changes, I recommend that an updated Structure Plan map and Transport Infrastructure Plan be incorporated into PPC17.
130. I support the requirement to complete a LCSIA of the Ruffell Road level crossing to confirm whether the crossing can be reopened to traffic.
131. The proposed Structure Plan map has inconsistent references to Access 1 and to development blocks. In my view, this could lead to confusion and risk compromising the intent of the Plan Change. I recommend that an updated Structure Plan map with consistent references to development blocks and Access numbers is provided.
132. If the Panel supports the inclusion of the Porters' land east of the NIMT, I consider that further assessment of the East-West Road is needed to ensure provisions adequately protect the East-West Road and provide access to the Porters' land.
133. In my view, the Porters' land on the west side of the NIMT could be included in the PPC17 with subject to Onion Road being upgraded and the Onion Road realignment.
134. In summary, while industrial land use within the PPC17 is anticipated by the District Plan I have concerns relating to the proposed development staging and proposed plan provisions. In my view the PPC17 has not sufficiently considered the future transport environment as the modelled TAL trip generation is significantly less than that supported the TAL Structure Plan. In my view the transport effects of PPC17 can be managed through revised District Plan provisions, including an updated Structure Plan map and Transport Infrastructure Plan, that require frequent assessments of future development areas and earlier provision of transport infrastructure.