

Memo

То:	Paul Ryan – Hamilton City Council	_		
From:	Alan Gregory – Principal Transport Planner, Tonkin + Taylor	Date:	20 May 2025	
Subject:	Rotokauri Strategic Infrastructure Requiremen Section 42A Reporting	nt – Techn	nical Specialist Report for	
Technical Area:	Transportation			
Version:	Final			

Purpose

 This memorandum has been prepared to provide technical assessment under section 42A of the Resource Management Act 1991 (RMA), in respect of transportation in relation to the Rotokauri Strategic Infrastructure Requirement (the Requirement).

Introduction

- 2. My name is Alan Gregory. I hold the qualification of MSC in traffic and transportation. I am a Chartered Professional Engineer (CPEng), a Chartered Member of Engineering NZ (CMENG) and a Member of the Institution of Civil Engineers (MICE).
- 3. I am Principal Transport Planner with Tonkin + Taylor in Hamilton and have been for five years. Prior to that I was Transport Team Leader with MWH for 3 years and Principal Transportation Engineer with Opus International for 8 years. I was National Chair of the Engineering NZ Transportation Group between 2016 and 2019. Before 2006 I worked in the UK in the civil engineering and transport industry.
- 4. I have 30 years of experience in traffic transportation and roading engineering in New Zealand, the Pacific Islands, and the UK. I have extensive knowledge and experience of the Hamilton transportation network. I have 18 years' experience in the evaluation and assessment of transportation effects of development in the Waikato, Bay of Plenty and other regions of New Zealand and have represented several agencies as expert witness over that time.
- 5. I have extensive experience in the planning and assessment of strategic transport initiatives within Hamilton and recent specific experience in the assessment of strategic infrastructure in Ruakura and Peacock areas using the Waikato Regional Transportation Model (WRTM).

Code of Conduct

6. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. I confirm that the opinions

expressed in this memorandum are within my area of expertise except where I state that I have relied on the advice of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

Scope

- 7. This memorandum covers the following:
 - a. The relevant environmental effects of allowing the Requirement and whether any adverse effects will be acceptable,
 - b. Relevant matters raised, and relief sought, in submissions,
 - c. Relevant statutory considerations, including whether the work is reasonably necessary for achieving the objectives of the Requiring Authority for which the Designation is sought.
 - d. Recommended modifications to the Requirement.
 - e. Recommended amendments and/or additions to the Requiring Authority's proposed designation conditions¹

Terms and Abbreviations used in the memorandum

8. Terms and abbreviations used in this memorandum are defined in Appendix 1.

Executive summary

- 9. The Rotokauri Strategic Infrastructure Designation: Notice of Requirement: Final Report 19 September 2024 prepared by Beca Limited for Hamilton City Council (the NOR), offers an appropriate analysis of the impact of the proposed works (the Works) on the transportation network.
- 10. In general, I agree with the analysis. However, I have identified issues which the Requiring Authority should address, either in primary evidence, or during Detailed Design and include in an outline plan of works:
 - a. Issues related to the transport corridor cross-section design, including:
 - i. The Design Report² does not encompass the latest concept design for the minor arterial transport corridor next to the Greenway that was included in the application for Fast-Track consents that was approved in July 2024³ (the Fast-Track concept design). There are discrepancies of up to 1.0m in the width of the design cross section of the minor arterial transport corridor, between that shown in the NOR and that shown on the later concept design.⁴

¹ See s10 of the NOR.

² See Appendix D to the NOR.

³ This application was for the consents required under the Waikato Regional Plan for construction of the Rotokauri Greenway and the bulk earthworks and clean filling required for the sections of the Rotokauri Strategic Infrastructure corridors shown in Figure 1 at Paragraph 98.

⁴ See paragraphs 98 to 102 below.

- ii. The cross section of the proposed north-south minor arterial north of Chalmers Road Extension may not have sufficient road width to cater for emergencies or traffic incidents.⁵
- iii. The lane widths and median treatments of the existing section of the north-south minor arterial (Rotokauri Road and Taiatea Drive) and the proposed sections are highly inconsistent. This is likely to frustrate or confuse drivers.⁶
- iv. Appendices B and J of the NOR indicate inconsistent transport corridor crosssection designs for the same sections of corridor.⁷
- b. Although the 2051 traffic modelling⁸ for most of the proposed arterial network intersections demonstrates sufficient efficiency under full development, the Te Kowhai East Road / The Boulevard intersection shows very poor service levels during peak hours. This is a significant adverse transportation effect of the Works.
- c. The evaluation lacks assessment of key intersections with Te Rapa Road, Te Wetini Drive, Arthur Porter Drive and Te Kowhai Road (SH39); in particular, Te Kowhai Road East / Te Rapa Road / Church Road roundabout. The effects on the key intersections are currently unknown due to insufficient information. This information was included in the S92 request for further information, but the Requiring Authority elected not to provide it at that time.
- d. The overland flow that is predicted to occur during the 1-in-100-year event where the minor arterial crosses the Rotokauri Greenway.⁹
- 11. I note that some of the works are located outside of the designation on Waikato-Tainui owned land at the Te Kowhai Road East / The Boulevard / Maahanga Drive intersection. The Requiring Authority will require a landuse consent for these works to be carried out. The concept design of the works that require land use consent is appropriate in transportation engineering terms. From a project constructability and risk point of view it would be ideal if the required land use consent for the works had been obtained prior to the construction works in other parts of the project being started. If the land use consent is not obtained and a re-design is necessary to avoid work on the Waikato-Tainui property adverse effects on the efficiency and level of service of the adjacent intersection will increase but not to a level that is a fatal flaw to the overall functioning and appropriateness of the project.
- 12. I have addressed 14 submissions that raised transportation-related matters, including about property access, design, and construction effects.
- 13. This memorandum presents my conclusions regarding the:
 - a. Adequacy of the Requiring Authority's assessment of alternatives,
 - b. Extent of the Designation's footprint,
 - c. Necessity for the Works,

⁵ See paragraphs 20 to 27 below.

⁶ See paragraphs 32 to 40 below.

⁷ See paragraphs 104 and 105 below.

⁸ See Appendix N to NOR – Transport Assessment Report

⁹ See paragraphs 28 to 31 above.

- d. The Works' overall effects on transportation, and
- e. The Works' consistency with transport-related statutory requirements.
- 14. My recommendations identify the following:
 - a. Matters that I recommend the Requiring Authority addresses in primary evidence, including the need for an assessment of the effects of the proposed access to 40 Te Kowhai Road East on the operation of that site.
 - b. Matters to be addressed during Detailed Design,
 - c. Matters to be included in any relevant outline plan, and
 - d. Amendments or additions to the proposed designation conditions.

Documents considered

- 15. I have considered the following documents when preparing this assessment:
 - a. The NOR.
 - b. Section 92 response letter (Part 1) dated 31 January 2024 from Melissa Slatter on behalf of the Requiring Authority.
 - c. Section 92 response letter (Part 2) dated 24 April 2024 from Tony Denton on behalf of the Requiring Authority, updated NOR and Appendices A O.
 - d. Hamilton Operative District Plan (Appendix 2 Rotokauri Structure Plan, Appendix 15 Transportation)
 - e. EPA Rotokauri greenway and minor arterial transport corridor Fast Track consent application (Appendix 5 Infrastructure report)
 - f. The submissions listed in Table 1.

Table 1: Submissions that raise transportation matters

Number	Submitter
2	Michael Jamieson
3	Waikato Regional Council
4	Watson Lands Limited
5	New Zealand Transport Agency
6	Te Rapa Gateway Limited
7	Steve Godley & Adam Marsh
8	KiwiRail Holdings Limited
9	Steve Nuich, Sophia Anne Nuich, Gibson Nominees Limited, Ivan Selak
10	Allister Henry Gillam
13	Hounsell Holdings Ltd, Rotokauri Farming No3 Ltd and Hamilton JV (N3) Ltd
14	Rotokauri Development Limited

Number	Submitter	
15	Pragma Holdings Limited	
16	Phillip Ross Laird and Franklaw Trust Ltd	
17	Ministry of Education	

g. Summary of submissions provided by Hamilton City Council.

Site Visit

16. I attended a site walkover on 31 October 2023. I am very familiar with the area and transport infrastructure therein.

Analysis

- 17. The NOR provides a good analysis of the effects of the Works on transportation matters, and I largely agree with and adopt that analysis for the purposes of this memorandum. However, I note that:
 - a. The Design Report does not include the latest Fast Track consented design approved in July 2024 with respect to the section of minor arterial transport corridor adjacent to the Greenway.
 - b. The Design Report does not include the effects of additional population growth within the WRTM used to establish traffic flows¹⁰. A proxy value of adding 30% to modelled traffic volumes has been used to simulate the effect of housing growth in 2051. I consider this to provide a reasonable representation of the transport effects.
 - c. The NOR recommends that further traffic modelling is carried out during Detailed Design to assess the impacts of Plan Change 12 (intensification) on the intersection form and function, and I agree with this recommendation.
 - d. The traffic lane width on the proposed minor arterial transport corridor identified in the NOR is likely to be insufficient for its safe and efficient function being only 3.5m between kerbs. (Refer to paragraphs 21 to 27 below).
 - e. The minor arterial transport corridor design presented in the application for the fast-track consents differs from that included in the NOR: the overall corridor width of the latter is 1.0m wider than the former. I consider this to be a relatively minor difference and assume the Requiring Authority will resolve this at the Detail Design stage by confirming the preferred cross section to be applied consistently along this section of transport corridor. (Refer to paragraphs 28 to 31 below).
 - f. The submission regarding 79 Burbush Road (submission 16) has highlighted an issue with the consistency of the drawings within Appendix B of The NOR. In the District Plan, Burbush Road is proposed to be urbanised as a collector road in the future, although no cross section is presented in the NOR other than a tie into the existing road shown on the drawings. I assume this is a drafting error rather than a specific design flaw and anticipate that it will be resolved during Detailed Design and shown in an Outline Plan for the Works.

¹⁰ See s2.5 of the Design report

18. To provide context on the locality and orientation of the issues I relate to in this memo, I have provided a composite sketch in **Figure 1** below

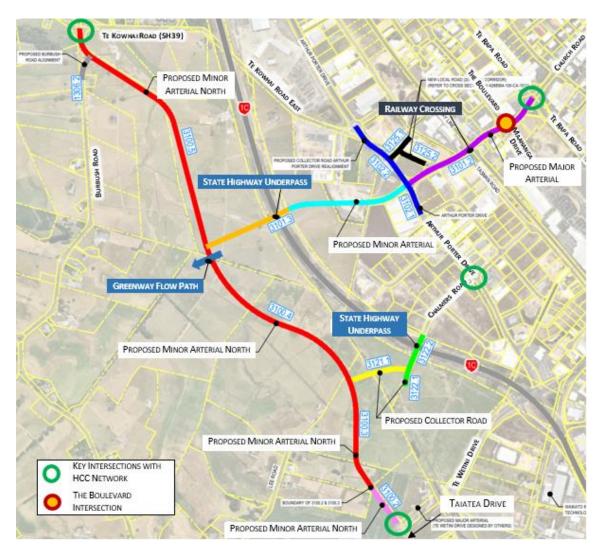


Figure 1: Composite sketch drawing¹¹ showing key transport elements

Environmental Effects

19. The transport effects on the receiving environment that I have considered are limited to safety for all road users, efficiency of operation, and appropriateness of design.

Road safety

North-south minor arterial north of Chalmers Road Extension

20. I consider that the minor arterial indicative design generally offers a safe environment for road users. The Road Safety Audit highlighted concerns regarding safety for pedestrians and cyclists which have been resolved in the latest drawing set accompanying the NOR. The Road Safety Audit also raises concerns regarding the proposed vehicle lane width of the minor arterial that remain unresolved.

¹¹ Figure 1 based on "Road General Arrangement" drawing ref 4288564-000-CA-0003 E in Appendix B to NOR

- 21. The NOR design cross section provides a 3.5m traffic lane with raised median and no shoulder (described in Appendix B of the NOR as Zone 1 road typology 3100.4 and 3100.5¹²). This includes all the north-south minor arterial from the Chalmers Road Extension in the south to the Te Kowhai Road / Koura Drive / minor arterial intersection in the north.¹³
- 22. I am concerned that this may pose access difficulties to Fire and Emergency NZ (FENZ) and other emergency services, especially in the event of a lane blockage as there is insufficient lane width to pass a stationary vehicle.
- 23. This concern has also been highlighted in the Road Safety Audit, Section 2.2.3 (page 11/12) (Appendix C to the Design Report which is Appendix D to the NOR). Whilst the safety rationale for this road section is clear, I consider there is an unacceptable level of residual risk in the event of an emergency where even a minor blockage could prevent emergency services from reaching an incident.
- 24. I acknowledge that in response to Road Safety Audit section 2.2.3, the proposed design in the NOR suggests median openings for emergency vehicles will be included within the detailed design (refer to note on drawings 4288564-100-CA-1005 H to 1010H).
- 25. However, I am concerned that median gaps will be insufficient for emergency access and will, in the event of a lane blockage, require emergency vehicles to travel along the opposing carriageway, which, in turn may be inaccessible due to the opposing traffic flow.
- 26. Further, in my opinion it is highly likely that median openings will be used by other road users to gain access to the opposing carriageway either to access land or to perform U-turns, increasing the level of risk.
- 27. Overall, I consider that the 3.5m kerb to kerb traffic lane width for the section of proposed minor arterial transport corridor (referred to as section 3100.4 and 3100.5 in the NOR¹⁴) is insufficient to provide for effective emergency access and this should be addressed by the Requiring Authority during Detailed Design and shown in an Outline Plan for the Works.

Overland flow at the Rotokauri Greenway crossing

28. During an extreme storm event, the NOR design provides for overland flow across the north-south minor arterial where it crosses the Rotokauri Greenway. This has been highlighted as a risk within section 3.1 of the Road Safety Audit. I note that the Requiring Authority has highlighted that this is only likely with a 1 in 100-year storm event and that the maximum flood depth would be 100mm at the road centre line. Whilst I recognise this is a rare occurrence, the water depth in the traffic lane immediately adjacent to the proposed Te Kowhai Road West Extension intersection with the minor arterial would likely exceed the ability for normal road vehicles to safely pass the flooded area (i.e. exceeding 150mm adjacent to the kerb) because of the combination of the concept design alignment low point and road camber. RITS states 150mm is the flood depth at which vehicles will float. To illustrate this is shown in Figure 2 below.

¹² Refer to **Figure 1** above for locations.

 $^{^{\}rm 13}$ See drawing 4288564-000-CA-0003 in Appendix B to the NOR.

¹⁴ Refer to **Figure 1** above for locations.

 $^{^{15}}$ See Drawing 4288564-100-CA-1007 H in Appendix B to the NOR and **Figure 1** above.

¹⁶ Refer RITS s3.3.14.1 (k)

¹⁷ See Drawing 4288564-100-CA-1007 H

¹⁸ RITS Section 3.3.14.1 k)

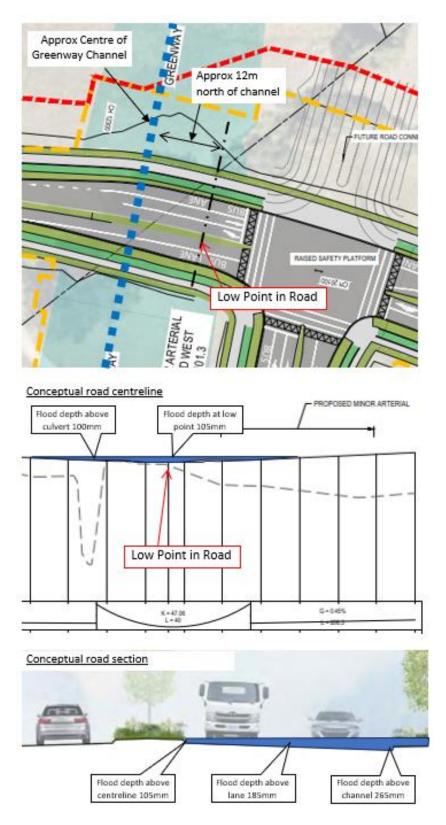


Figure 2: Composite sketch drawing¹⁹ showing key transport elements

 $^{^{19}}$ Figure 2 based on "Road General Arrangement" drawing ref 4288564-000-CA-0007 H in Appendix B to NOR

- 29. I note that in its response to the road safety audit, the Requiring Authority has stated that the SH1C underpasses will also become blocked during this intensity of storm, meaning that the north-south minor arterial will be the only link to the wider transport network as an escape route for residents or for access by emergency vehicles.
- 30. Whilst the storm event is described as a 1 in 100-year occurrence, I consider that the likelihood of this type of storm event could be more frequent in the future, which is discussed in Robert Kelly's memorandum (see his paragraphs 17 and 86 b i) and could result in more frequent road blockages.
- 31. I suggest that, during Detailed Design, the Requiring Authority assesses an alternative to an overland flow at this location.

Inconsistent corridor design

- 32. I am concerned that the proposed north-south minor arterial has an inconsistent cross section along its length which could result in driver confusion and inconsistent driving behaviours.
- 33. The Project includes, amongst other things, construction of 2 minor arterial transport corridors:
 - a. A north-south minor arterial corridor which connects from the Te Kowhai Road / Koura Drive roundabout in the north to the intersection of Taiatea Drive and Te Wetini Drive in the south, and
 - b. An east-west minor arterial corridor which connects from the intersection of Te Kowhai Road East and Arthur Porter Drive in the east to the north-south corridor in the west.
- 34. Each of these corridors is divided into zones. The extent of these zones is shown on Drawing No. 4288564-000-CA-0003 in Appendix B to the NOR.
- 35. With regard to the proposed north-south corridor, each of these zones has a different typology as noted in **Figure 1** above, which relates to the form, function, and typical cross-section configuration (e.g., 3100.4).
- 36. Further, the cross-section configurations of the existing minor arterial further south, being Taiatea Drive and Rotokauri Road, are different again.
- 37. This results in a north south corridor which has four variations in cross section along its length, with different traffic lane widths, shoulder widths and median types. These cross-section configurations for the existing and proposed minor arterial on the north-south corridor are summarised in **Table 2** below.

Table 2: Summary of minor arterial cross-sections on the north-south transport corridor

Corridor	Zone ²⁰	Road Schedule Number ²¹	Locality	Number of Drawing in Appendix B to the NOR that shows the proposed cross-section	Vehicle Lanes	Median	Proposed or existing land use adjoining the Minor Arterial	Proposed or existing access between the minor arterial transport corridor and adjoining property
Proposed north – south	1	3100.5 3100.4	From SH 39 (Te Kowhai Road) to Te Kowhai Road West extension From Te Kowhai Road West extension to the link to Chalmers Road	- 4288564-100-CA-2000	2 x 3.5m No shoulder	3.0m planted	Eastern side: Employment/Industrial Western side: Residential/Open Space	
minor arterial transport		3100.3	From the link to Chalmers Road to suburban centre	4288564-100-CA-2001	Silouider		Residential both sides	Limited
corridor	8	3100.2	Suburban centre up to Te Wetini Drive	4288564-100-CA-2005	2 x 3.5m No shoulder	none	Eastern side: Commercial Western side: Residential	
Existing	NA	NA	Te Wetini Drive to Pukenga Ave	NA		3.0m flush		
Taiatea Drive	NA	NA	Pukenga Ave to Rotokauri Road/Iwi Road	NA	2 x 4.5m	3.0m planted		
Existing Rotokauri	NA	NA	Iwi Road to Kawariki Drive	NA		3.0m flush	Residential both sides	Direct access
Drive	NA	NA	Kawariki Drive to Baverstock Road	NA	2 x 3.5m with 1.2m shoulder	3.0m approx. flush		

²⁰ This is shown on in Figure 1 above and on Drawing 4288564-000-CA-0003 in Appendix B to the NOR.

²¹ Ibid

- 38. Fundamentally, my main concern is that the existing minor arterial has a minimum 4.5m of traffic lane width which exceeds the minimum requirement in NZS4404:2010²² whereas the proposed corridor has a lane width of 3.5m which does not meet this minimum requirement. With the variety of lane widths and median treatments along the route, there is a high degree of inconsistency within the road environment which is likely to frustrate or confuse drivers.
- 39. I consider that a minimum lane width of 4.2m is necessary for the safe and efficient operation of an arterial road. I recommend that the cross section for Zone 1 minor arterial (referred to as typology 3100.3 to 3100.5) be amended to provide a minimum traffic lane (including shoulder) of 4.2m and consistently applied during Detailed Design to reduce the risk of blockage and for the safe and efficient operation of the minor arterial transport corridor.

40. I further recommend that:

- a. During Detailed Design, the Requiring Authority consults FENZ, NZ Police and St John over emergency access provision, and
- b. Their responses (and how the Requiring Authority has addressed those responses in the detailed design) be included in an Outline Plan for the Works.

Network Efficiency

- 41. The design assessment confirms that the proposed minor arterial network operates to an appropriate level of service under full development with intersections and roadway capacities meeting Council design requirements.
- 42. The traffic modelling²³ for Te Kowhai Road East, Maahanga Drive and The Boulevard proposed signalised intersection (this is currently a roundabout leading to The Base) indicates a particularly poor level of service (F) during the 2051 evening peak with average delays over 5 minutes and traffic queues virtually extending for the length of The Boulevard to the cul-de-sac. I note that there is an existing congestion problem at this intersection during the evening peak which is expected to be made significantly worse by the increase in traffic from the development of the Rotokauri Structure Plan area.
- 43. I strongly recommend that the Requiring Authority considers providing an enhanced, alternative, or additional access to The Boulevard, as part of the implementation of the Works, to alleviate existing congestion at this intersection and to reduce the scale of congestion resulting from the increase in traffic when the Rotokauri Structure Plan areas is developed. The Requiring Authority should demonstrate an appropriate mitigation for this effect as part of their primary evidence.
- 44. No evaluation has been provided for the following key intersections to which the proposed arterial roads will connect: Te Rapa Road, Te Wetini Drive, Arthur Porter Drive (at Chalmers Road), and Te Kowhai Road (SH39).
- 45. I have particular concerns regarding the intersection at Te Kowhai East Road, Church Road and Te Rapa Road. Although this is part of the wider network WRTM model, which has been developed based on Futureproof growth patterns for Hamilton, the model indicates that this

²² Table 3.2 of NZS4404:2010 recommends a minimum traffic lane width of 4.2m for a collector road and above within a suburban area with a traffic volume in the region of 8,000vpd

²³ See Appendix N to NOR – Transport Assessment Report

- intersection may be signalised in the future from its current roundabout alignment. Network congestion and associated risks have been highlighted in Section 2.5 the Road Safety Audit.
- 46. Further evaluation is necessary during Detailed Design to establish the trigger volume for Rotokauri development traffic which will dictate the timing for capacity and safety upgrade of this intersection.
- 47. I note that some of the works are located outside of the designation on Waikato-Tainui owned land at the Te Kowhai Road East / The Boulevard / Maahanga Drive intersection. To construct the works as detailed in the concept design, the Requiring Authority will require a land use consent.
- 48. If the land use consent is not obtained, Te Kowhai Road East will still be available for use as an existing transport corridor, meaning that the ability to connect to the Rotokauri Structure Plan Area is not prevented by this consent requirement. However, I consider that progressing the works without upgrade of this corridor will compromise the efficiency and result in a lower level of service for road users which will likely necessitate a re-design to avoid work on the Waikato-Tainui property.
- 49. The concept design of the works that require land use consent is appropriate in transportation engineering terms. From a project constructability and risk point of view it would be ideal if the required land use consent for the works had been obtained prior to the construction works in other parts of the Project being started although I do not consider it to be a fatal flaw.

Assessment of Alternatives

- 50. The Rotokauri Structure Plan has been published in the Hamilton District Plan since 2007, and, in my opinion, is substantively like the layout within the NOR. Section 5.5 of the NOR (pages 40 to 45) provides an overview of the steps subsequently taken to assess and confirm the final layout for the roads within the Designation. This is discussed in further detail in Appendix C to the NOR and includes the development and high-level assessment of 14 options, through a prescribed process of increasing levels of detail and scrutiny which results in the preferred option as submitted in the NOR.
- 51. I note that in development of the options, several key dependencies are considered such as the fixed points within the Hamilton transport network where the Rotokauri minor arterial is obliged to connect. (i.e., Chalmers Road via the SH1C underpass, Te Rapa Road via the NIMT level crossing and the roundabout at SH39).
- 52. I consider that the assessment of alternatives has been conducted in a logical and replicable manner which results in an appropriately optimised road layout which rationalises intersections and minimises the extent of the infrastructure whilst providing a genuine attempt to reduce the impact on landowners and existing properties.

Form and Function

53. Appendix J describes how the form and function of the proposed arterial corridor has been assessed within the context of its environment (i.e., residential density, commercial, and industrial, etc). This provides the basis for the alignment and cross sections proposed within the NOR, and I generally agree that the outcome is appropriately scaled to its intended purpose. However, the lane widths will require review as detailed in paragraphs 21 to 27 above.

Extent of the Designation Area

54. Having reviewed the NOR and its appendices, I consider that the Designation footprint extent is generally appropriate to accommodate the Works.

Matters raised in submissions

- 55. Fourteen submissions raise transportation matters. I set out below any recommended actions in response to these matters.
- 56. Within my response to individual submissions, I have generally excluded further discussion on the choice of route, assessment of alternative routes, and the extent of the Designation area because these matters are discussed in paragraphs 50 to 54 above. However, where necessary, I comment on other transport-related points raised by submitters.

Submission 2 - Michael Jamieson

- 57. The submitter requests continuation of direct access from Te Kowhai Road East to the property at 40 Te Kowhai Road East.
- 58. The property currently has two direct accesses. The eastern one will be within a proposed signalised intersection between Te Kowhai East Road and Tasman Road, making it a significant safety risk to remain in its current form. The Western access is on a section of median divided arterial road close to the same signalised intersection which again poses a high degree of road safety risk.
- 59. The NOR includes an alternative access via the realigned Arthur Porter Drive.
- 60. Because of the safety risk of uncontrolled access at a high-volume intersection, I consider direct access to 40 Te Kowhai Road to represent an unreasonable level of risk to road users.

61. I recommend that:

- a. No further consideration is given to retaining the current access, and
- b. The Requiring Authority further discusses the alternative access arrangement with the landowner with the aim of optimising access for the existing activities at the site and reports the outcomes of this further consultation within its evidence.

Submission 3 - Waikato Regional Council (the WRC)

- 62. The submitter raises issues related to public transport provisions and the road safety risk relating to overland flow crossing the road from the Greenway, in particular the frequency of occurrence and depth of flow.
- 63. I have addressed the risk of stormwater and overland flow across the proposed carriageways in paragraphs 28 to 31 above and in my recommendation below.
- 64. I recommend that the Requiring Authority:
 - a. During the Detailed Design:

- i. Consults the WRC regarding bus servicing and public transport infrastructure provision.
- ii. Reviews the overland flow provision where the Greenway crosses the Minor Arterial transport corridor (at the intersection with the proposed Te Kowhai Road West extension) to minimise or prevent flooding that would make the corridor impassible and includes this design information in the Outline Plan for the Works.
- b. During development of the Construction Traffic Management Plan (CTMP), consults the WRC regarding methods to minimise disruption or delays to bus services and the procedures to be included in the CTMP to give the WRC advanced notice of work programme, construction activities, and restrictions to the road network that will impact public transport services.

Submission 4 - Watson Lands Limited

- 65. The submitter raises concerns over the access to residual land should the whole parcel indicated in the NOR not be acquired for road.
- 66. Access to the northern half of the submitters site via Roger Kaui Place will remain unchanged and, in the event of any residual land being returned to the landowner north of the Designation, would utilise this access.
- 67. Access to land south of the new arterial will be dependent on the timing and location of the future Hounsell Road extension.

68. I recommend that:

a. The Requiring Authority consults with the landowner and confirms in primary evidence the land requirement and access provisions for the submitter's property.

Submission 5 - New Zealand Transport Agency (the NZTA)

- 69. The NZTA has raised concerns which can be resolved during Detailed Design, including concerns about protection of existing structures and cycle infrastructure on SH1C.
- 70. The NZTA is also concerned that construction activities, and their traffic management may adversely impact the operation of the State highway network.
- 71. I recommend that the Requiring Authority consults the NZTA:
 - a. During Detailed Design, about the construction detail and temporary works necessary to protect the SH1C overbridge and cycle facilities.
 - b. During development of the CTMP, about measures to minimise or appropriately mitigate the effects of the Works on the state highway network.

Submission 6 - Te Rapa Gateway Limited

- 72. The submitter considers that inadequate consideration has been given to alternative sites, routes or methods.
- 73. I disagree with this as the Requiring Authority has expended significant effort in this regard when developing the final layout. See paragraphs 50 to 53 above.
- 74. The submitter considers that the area of land within the Designation is excessive and raises concern about the impact the Works will have on access to their frontage to Te Kowhai East Road.
- 75. In my view, whilst the Designation footprint has, in general, been optimised to suit the footprint of the road and its ancillary infrastructure, I consider that the Requiring Authority should clarify through Primary Evidence the factors that have influenced the extent of the land requirement in the vicinity of the submitter's property.
- 76. The submitter does not consider that the NOR sufficiently considers safety, efficiency, and effective access to their property during construction. I address this concern in the recommendations below.
- 77. I recommend that the Requiring Authority:
 - a. Reviews the Designation boundary and land requirement in this area and confirms in Primary Evidence the rationale for the extent of land required.
 - b. During development of the CTMP, consults the submitter to confirm access provision to the submitter's property.

Submission 7 - Steve Godley & Adam Marsh

- 78. The submitter considers that inadequate consideration has been given to alternative sites, routes or methods.
- 79. I disagree with this as a significant level of effort has been given within the NOR for the development of the final layout (refer to paragraphs 50 to 53)
- 80. The submitter is concerned that the Designation does not accurately reflect the Rotokauri North Structure Plan within the Hamilton District Plan, including the locations of collector transport corridors and their intersections with the minor arterial.
- 81. I consider that the Designation and the associated infrastructure follows alignments which are consistent with that shown for the collector, minor arterial, and major arterial transport corridors in the Rotokauri North Structure Plan.
- 82. At this stage of the development process, I would not expect to see all lower hierarchy roads to be included within the proposed layout as most of these would generally be developer led and located during the subdivision process. The proposed design in the NOR does not preclude future road connections.
- 83. The submitter is concerned that the proposed minor arterial road cross section does not reflect that in the fast-tracked "Greenway Consent".

- 84. I agree with this statement and have addressed this in my response to submission 13 below.
- 85. The submitter is also concerned that there is inadequate provision for any affected landowners to provide input to management plans prior to their approval.
- 86. I address this concern in the recommendations below.
- 87. I recommend that the Requiring Authority:
 - a. Confirms in primary evidence that the Designation does not preclude future provision of collector transport corridors and their connection to the minor arterial, as shown within the Rotokauri North Structure Plan.
 - b. Confirms that landowners will be consulted regarding property access as follows:
 - During Detailed Design, in relation to permanent access following construction, and
 - ii. During development of the CTMP, in relation to access during construction.

Submission 8 - KiwiRail Holdings Limited (KiwiRail)

- 88. KiwiRail requires a Level Crossing Safety Impact Assessment (LCSIA) to be submitted, and any necessary amendments made to the level crossing on Te Kowhai East Road as part of the design.
- 89. I understand that an LCSIA was undertaken during the early stages of the concept design when the at grade vs grade separation of the rail crossing was being assessed.
- 90. I also note that the Requiring Authority will require the written approval of KiwiRail (as the incumbent requiring authority holding the designation for the NIMT line) before construction of the Works that traverse the NIMT line can commence.

91. I recommend that:

a. During Detailed Design, the Requiring Authority consults with KiwiRail to confirm that specific safety requirements are incorporated into the final design of the level crossing. (Including any additional LCSIA if necessary).

Submission 9 - Steve Nuich, Sophia Anne Nuich, Gibson Nominees Limited, Ivan Selak

- 92. The submitter requests better integration with their properties at 153 and 173 Te Kowhai Road and has suggested an alternative alignment of the minor arterial.
- 93. The submitter has proposed a change in alignment moving the Designation further towards the western boundary of their site which in turn impacts on the adjacent landowner (submitter 7). In my opinion, there are no fundamental transport safety or efficiency reasons for this change and the proposed change in alignment is likely to reduce the curve radii where it ties into the NOR alignment, potentially having a negative impact on visibility and road safety.

94. I recommend that:

- a. The alignment remains in its current location with regards to 153 and 173 Te Kowhai Road, and
- b. the Requiring Authority consults with the submitter and confirms in primary evidence the access provision to the submitter's properties.

Submission 10 - Allister Henry Gillam

- 95. The submitter believes that the road can be constructed without acquiring land from their property at 79 Te Kowhai Road East.
- 96. The property lies within the Designation for realignment of Arthur Porter Drive to provide a safer and more efficient signalised crossroad with Te Kowhai Road West. I consider it unlikely that the alignment can be appropriately achieved without property acquisition from 79 Te Kowhai Road East.

97. I recommend that:

a. The alignment remains unchanged.

Submission 13 - Hounsell Holdings Ltd, Rotokauri Farming No3 Ltd and Hamilton JV (N3) Ltd

98. The submitter is seeking for the proposed transport corridor cross sections shown in the NOR to be updated to reflect the cross-sections in the proposed detailed design that the submitter is developing, on behalf of the Requiring Authority, for the southern section of the Requirement, the extent of which is shown in **Figure 3** below.²⁴

²⁴ While Hounsell Holdings Ltd has applied to Hamilton City Council for a resource consent for a Comprehensive Development Plan that includes for, amongst other things, construction of a portion of the north-south minor arterial, that consent has yet to be granted.

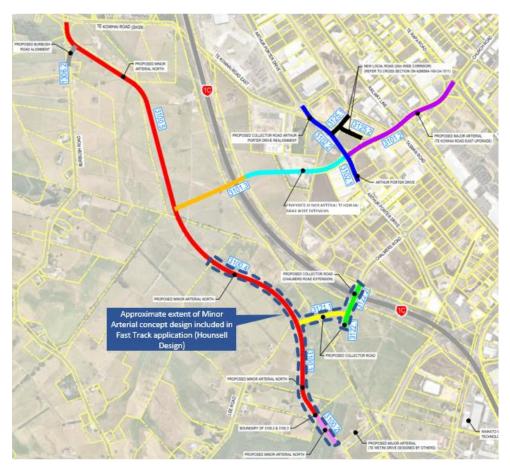


Figure 3: Extent of the Requirement covered by Hounsell Holdings Ltd's Fast-Track concept design²⁵

99. The cross sections are compared in Table 3 below.

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²⁵ Maven Associates Drawing C300-00 Rev B in Attachment 1 to Submission No.13 by Hounsell Holdings Ltd, Rotokauri Farming No3 Ltd, and Hamilton JV (N3) Ltd.

Table 3: Comparison of the cross-sections shown in Maven Associates' Fast-Track concept design with the cross-sections shown in the NOR

Minor Arterial Centreline distance from Te Wetini Drive Intersection ²⁶	Locality	Document	Zone ²⁷	Road Schedule Number ²⁸	Source of the cross-section dimensions	Rear Berm	Footpath	Cycleway	Front Berm	Traffic lane	Median	Total width
0 to 180	Te Wetini Drive to Wetlands 4A and 4B ²⁹	Attachment 2 to Submission 13	n/a	n/a	Rotokauri Greenway & Minor Arterial Infrastructure Report (Maven Associates, 2023, p12, s.3.2)	3.3m west	5.7m east 2.5m west	2 x 1.8m	2 x 2.5m to 2.65m grass berm/trees with indented parking	2 x 3.5m	n/a	28.4m
		NOR	8	3100.2	Appendix B to the NOR – Drawing No 4288564-100-CA-2005 Option A	1.0m west	5.7m east 2.5m west	2 x 1.8m	West: 2.5m planted / indented parking East: 2.5m planted	2 x 3.5m	n/a	24.8m
180 to 700	Wetlands 4A and 4B to Chalmers Rd Extension	Attachment 2 to Submission 13	n/a	n/a	Rotokauri Greenway & Minor Arterial Infrastructure Report (Maven Associates, 2023, p13, s.3.2)	2 x 3.3m	2 x 2.0m	2 x 2.2m	2 x 3.0m grass berm/trees with indented parking	2 x 3.5m	n/a	28.4m
		NOR	1	3100.3	Appendix B to the NOR – Drawing No 4288564-100-CA-2001 Option A	2 x 3.0m	2.0 m east 3.0m west	2 x 2.2m	2 x 3.0m with raised planted strip / indented parking	2 x 3.5m	n/a	28.4m
700 to 1277	From Chalmers Rd Extension to north- western boundary of Submitter 13's land	Attachment 2 to Submission 13	n/a	n/a	Rotokauri Greenway & Minor Arterial Infrastructure Report (Maven Associates, 2023, p13, s.3.2)	2 x 1.8m	2 x 2.0m	2 x 2.2m	2 x 3.0m grass berm/trees with indented parking	2 x 3.5m	3.0m planted	28.4m
		NOR	1	3100.4	Appendix B to the NOR – Drawing No 4288564-100-CA-2000 Option A	2 x 2.0m	3.0m east 2.0m west	2 x 2.2m	2 x 3.0m planted with indented parking	2 x 3.5m	3.0m planted	29.4m ³⁰

 $^{^{26}}$ Centreline distance is shown on Maven Associates Drawing Nos.C3000-00A and C3000-00B included in Attachment 1 to Submission 13.

²⁷ This is shown on Drawing 4288564-000-CA-003 in Appendix B to the NOR

²⁸ This is shown on Drawing 4288564-000-CA-003 in Appendix B to the NOR.

²⁹ The wetland numberings is taken from the Maven Associates drawings included in Attachment 1 to Submission 13.

 $^{^{30}}$ The total width shown on Drawing No 4288564-100-CA-2000 for Option A, viz, 28.4 is incorrect. It should be 29.4m.

- 100. The main difference between the NOR and the Fast-Track concept design is the cross-section width north of the intersection with the Chalmers Road Extension. The Greenway consent design³¹ shows an overall width of 28.4m, whereas the NOR Appendix D³² indicates a width of 29.4m. This difference arises from differences in the proposed footpath and berm widths.
- 101. I consider that the Fast-Track concept design does not necessarily represent the optimum cross section or alignment, as detailed in the NOR, and as such may not achieve the NOR objectives for integration and place making.
- 102. The total width of the minor arterial transport corridor over the first 180m north of Te Wetini Drive is another discrepancy between the NOR and the Fast-Track concept design. While the NOR is proposing a total width of 24.8m,³³ the submitter is proposing it be 28.4m wide.³⁴
- 103. The proposed vertical alignments for the minor arterial and the collector transport corridor connecting to Chalmers Road are a further variance between the NOR and the Fast-Track concept design.³⁵
- 104. Submission 13 also identifies³⁶ that the cross section for Zone 4 in Appendix J to the NOR³⁷ is inconsistent with that shown in Appendix B to the NOR³⁸. The former shows a 7m wide carriageway and 2.2m wide separators on both sides of the collector road, while the latter provides for a 2m wide median and 1.2m wide separators on both sides.
- 105. I have noted, also, that the cross section for Zone 1 Option A in Appendix B to the NOR³⁹ is inconsistent with that shown in Appendix J to the NOR (p40). The former shows a 3m wide back berm on both sides, whereas in the latter the width of each back berm is reduced to 2m.
- 106. In my opinion, the aforementioned discrepancies between the different design proposals are not significant in terms of transportation effects. Both the NOR and the Fast-Track concept designs provide the same level of service for all modes of transport.
- 107. I recommend that the Requiring Authority:
 - a. In primary evidence, addresses and eliminates the inconsistency in cross sections between Appendix B and Appendix J⁴⁰, and
 - b. Resolves the following issue during Detailed Design and presents in an outline plan a design which avoids, remedies, or mitigates the effects of concern:

³¹ Refer to *Rotokauri Greenway & Minor Arterial Infrastructure Report* (Maven Associates Ltd, 1 December 2023), which is appended to Submission 13.

³² See NOR Appendix D Rotokauri Arterial Designation – Design Report (Beca Ltd 8 September 2023)

³³ See Drawing Number 4288564-100-CA-2005, Option A, in Appendix B to the NOR.

³⁴ See *Rotokauri Greenway & Minor Arterial Infrastructure Report* (Maven Associates, 2023, p12, s.3.2). This report is attached to Submission 13.

³⁵ See the longitudinal sections on Maven Associates Drawing Numbers C300-01 to C300-13 in Attachment 1 to Submission

³⁶ Refer Paragraph 19 in Form 21 attached to Submission 13.

³⁷ See The Urban and Landscape Design Framework, p36

³⁸ See Drawing 4288564-100-CA-2003.

³⁹ See Drawing 4288564-100-CA-2001 re Road Schedule Number 3100.3.

⁴⁰ See paragraphs 104 and 105 above.

 The cross section of the minor arterial between Chalmers Road Extension and Te Kowhai Road with respect to achieving the NOR objectives for integration and place-making⁴¹.

Submission 14 - Rotokauri Development Limited

- 108. The submitter has raised concerns over the vertical alignment of the minor arterial and requests an opportunity to provide feedback on its integration with their property.
- 109. Whilst the primary concern over levels relates to overland flow path and minimising earthworks for development, I consider that minor arterial transport corridor level will have an impact on the safety of any site access if not appropriately designed.

110. I recommend that:

a. The Requiring Authority consults with the submitter about proposed levels, design criteria and access provision during Detailed Design.

Submission 15 - Pragma Holdings Limited

111. The submitter is in the process of designing and submitting a Resource Consent for their site and would like to understand the topography of the final design and determine access provision.

112. I recommend that:

a. The Requiring Authority consults with the submitter regarding proposed levels, design criteria and access provision at the Detail Design stage.

Submission 16 - Phillip Ross Laird and Franklaw Trust Ltd

- 113. The submitters have a dwelling at 29 Burbush Road, which was built on the boundary of the road corridor and are concerned that the future urbanisation of Burbush Road will place transport infrastructure within a few metres of the dwelling resulting in loss of amenity, dust, and vibration. They request that the road alignment is modified to avoid these effects on their property⁴².
- 114. The issues of vibration and dust are normally addressed through conditions placed on the Contractor in the Construction Management Plan and I anticipate this will be confirmed during Detailed Design.
- 115. The property utilises part of the road reserve to form its frontage, this is likely to be completely lost when Burbush Road is converted to a collector road. I note that the drawing detailing the collector road (4288564-100-CA-1601 rev H in Appendix B) states that the realignment of Burbush Road will tie into the existing road but shows a significant difference between the respective road widths.

⁴¹ See paragraphs 98 to 101 above.

⁴² Noting that no land is required from these properties for the Designation.

- 116. I have not been able to determine the cross section for Burbush Road (referenced as Road Schedule Number 1306.2 on Drawing 4288564-000-CA-0003 in Appendix B to the NOR), however, the carriageway width on the NOR layout appears to be in the region of 10 m which would be excessively wide for this location. However, I consider this width to be a drafting error rather than a design issue and I anticipate it will be corrected during Detailed Design.
- 117. At present, the road is approximately 7.5m from the front wall of the dwelling at 29 Burbush Road. With a wider cross section for the road, it is likely that the distance will reduce to somewhere between 4 and 6m from the building.
- 118. I consider that the Requiring Authority should be able to appropriately mitigate the submitters' concerns about the proximity of Burbush Road.
- 119. The submitter also raises the risk of overhead powerlines that follow the line of the hedgerow within the road reserve.
- 120. I anticipate that construction impacts on utilities and their protection, diversion and modification will be appropriately managed during Detailed Design.
- 121. I recommend that, prior to the hearing, the Requiring Authority:
- Reviews the proposed road cross section for Burbush Road, confirms the road layout adjacent to 27 and 29 Burbush Road, and updates drawing 4288564-100-CA-1601 rev H to better represent the appropriate cross section and the tie-in to the current alignment,
- b. Consults with the submitters prior to the Hearing to determine the most appropriate solution to the proximity of their dwelling to the proposed alignment, and
- c. Reports in primary evidence the outcomes of these actions.

Submission 17 - Ministry of Education (the MOE)

- 122. The MOE has existing and potential land interests near the Designation and has made a lengthy submission on the need for a land use integration process as well as the need to minimise construction traffic impacts on nearby operational schools.
- 123. I consider that during the development of a CTMP, all the concerns the MOE raised about construction traffic can be appropriately addressed.
- 124. I consider that the Requirement's proposed transport corridors appropriately cater for walking, cycling and public transport along the corridors for all future land uses within the Structure Plan areas.
- 125. However, transport corridor crossing facilities and property access may need to be located, and be of a particular type, to optimise the integration of the Designation and adjacent land use.
- 126. There would be an opportunity to optimise the integration of the Works and any existing or proposed education facility, especially one adjoining the Designation, if the Requiring Authority were to consult the MOE during Detailed Design.

- 127. I recommend that the Requiring Authority consults the MOE:
 - a. During Detailed Design, to identify any provisions that could be included in the Project, at the Requiring Authority's discretion, to integrate the Works and any existing or proposed education facility.
 - b. During development of the CTMP, to minimise impacts on schools and other educational facilities that will be operating when the Project is constructed.

Statutory Considerations

- 128. I have reviewed s9 of the NOR (pp69 to 103) and consider the following statutory requirements are relevant to my area of expertise:
 - a. RMA S168A (3) (a) policy statements and plans; (b) consideration of alternatives; (c) reasonably necessary for achieving objectives; (d) any other matter reasonably necessary to make a decision,
 - b. National Policy Statement on Urban Development 2020: Objectives, 1, 3, 4, 8 and Policy 1,
 - c. Outcomes within the Ministry of Transport Outcome Framework inclusive access, healthy and safe people, economic prosperity and environmental sustainability,
 - d. Government Policy Statement on Land Transport 2021-2031 strategic priorities safety, better travel options, improving freight connections and climate change,
 - e. Waikato Regional Policy Statement s3.12 and Policy 6.3, and
 - f. Hamilton City Operative District Plan:
 - i. Section 3.6,
 - ii. Section 2.2.1b,
 - iii. Appendix 2: Rotokauri Structure Plan, including Figures 2-8 to 2-13, and
 - iv. Appendix 15, as assessed in Table 6 in section 9.8.2 of the NOR (pp93 to 94).
- 129. In my opinion, the NOR is generally consistent with the policy provisions set out above.
- 130. However, as set out above, there are some matters of design detail that need to be resolved at or before the Detailed Design stage. 43
- 131. I also consider that the NOR is generally consistent with the relevant transport-related requirements and provisions of the following documents, which the NOR identifies are other matters that are reasonably necessary for the territorial authority to consider when deciding on the Requirement:
 - a. Access Hamilton 2022,

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⁴³ See paragraph 140.

- b. Future Proof,
- c. Hamilton-Waikato Metro Spatial Plan, and
- d. Hamilton Urban Growth Strategy.
- 132. Notwithstanding the Requirement's general consistency with these documents, as set out in Paragraphs 32 to 40 above, I consider that some of the provisions of NZS 4404:2010 related to vehicle lane widths have not been met, and I recommend that this inconsistency be remedied during Detailed Design.

Necessity of works for achieving the objectives

133. Section 168A(3)(c) of the RMA requires an assessment as to whether the work is reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought. My assessment of those requirements is set out in Table 4.

Table 4: Assessment of the Requirement against s168A of the RMA

	uiring Authority ectives ⁴⁴	My Assessment
1.	Network and Function	The work facilitates this objective through providing an integrated multi-modal network. Without the overall work that will be authorised by the NOR, this objective would not be achieved. There are some matters of design detail that need to be resolved at or before Detailed Design.
2.	Infrastructure	The work is necessary to achieve this objective as it provides the necessary infrastructure to facilitate an integrated transport system, allows for service provision within its cross section, and provides an approach to corridor delineation that I consider is consistent with the RMA.
3.	Integration	The work is necessary to provide an appropriate level of connectivity throughout the Structure Plan area, to facilitate integration of land use and transport and promote a people-focussed streetscape.
4.	Cultural values, character, and amenity	The work is necessary to develop a sense of place and provide safe, attractive, and efficient linkages for people to access services and community facilities.

134. Based on the above assessment, I consider that the test of s168A(3)(c) is met.

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⁴⁴ As stated in section 2.4 of the NOR

Conclusions

135. In my opinion:

- a. The Requiring Authority's assessment of alternatives is adequate,
- b. The Designation footprint extent is generally appropriate,
- c. The Works:
 - i. Are reasonably necessary for achieving the relevant objectives of the Requiring Authority for which the Designation is sought,
 - Are generally consistent with the relevant statutory requirements, but some issues related to cross-section design need to be resolved during Detailed Design, and
 - iii. Managed by appropriate designation conditions, including the new or modified conditions I recommend below, or similar conditions, will have adverse effects on transportation that are at worst minor.

Recommendations

- 136. The purposes of these recommendations are to:
 - a. Improve transport network safety and efficiency, or
 - b. Avoid, remedy, or mitigate potential adverse effects of the Works, or
 - c. To provide clarity to all parties about the proposed design or designation conditions.

Recommended modifications to the Requirement

- 137. The following sections set out my recommendations relating to potential modifications to the concept design presented in the NOR.
- 138. Some of these potential modifications need to be confirmed in primary evidence to the hearing, while others could be confirmed during Detailed Design and be subject to designation conditions and outline plan approval.

Potential modifications to be confirmed in primary evidence to the hearing

- 139. I recommend that the Requiring Authority confirms the following in primary evidence:
 - a. An assessment of the effects of the proposed access to 40 Te Kowhai Road East on the operation of that site.⁴⁵
 - b. The land requirement and access provisions for Submitter 4's property.⁴⁶

⁴⁵ See paragraphs 57 to 61 above.

⁴⁶ See paragraphs 65 to 68 above.

- c. The factors that have influenced the extent of the land requirement affecting the property owned by Te Rapa Gateway Ltd (Submission 6).⁴⁷
- d. That the Designation does not preclude future provision of collector transport corridors and their connection to the minor arterial, as shown in the relevant structure plan.⁴⁸
- e. The proposed access provisions for Submitter 9's property.⁴⁹
- f. Measures and the proposed timing of their implementation to maintain an acceptable level of service at the Te Kowhai East Road / Maahanga Drive / The Boulevard intersection.⁵⁰
- g. Any updates to the land requirement plans in NOR Appendix A and the concept design, roading, and stormwater drawings in NOR Appendix B to align with any confirmed detailed design completed for any part of the Project.

Matters to be addressed during Detailed Design

- 140. I recommend that the following matters must be assessed during Detailed Design:
 - a. Traffic modelling must be carried out to assess the impacts of the residential intensification enabled by Plan Change 12 on the form and function of intersections in the proposed transport corridor network in the Rotokauri and Rotokauri North Structure Plan Areas.⁵¹
 - Assessment of the timing for a capacity and safety upgrade of the Te Kowhai Road East / Church Road / Te Rapa Road intersection and any other key intersections that might be affected by the Project and development in Rotokauri, including at least:⁵²
 - i. Minor Arterial North / Te Kowhai Road (including SH39) / Koura Drive (SH39),
 - ii. Chalmers Road / Arthur Porter Drive, and
 - iii. Minor Arterial North / Te Wetini Drive / Taiatea Drive.
 - c. Te Kowhai East Road/Maahanga Drive/The Boulevard intersection The form and function of this intersection will require resolution to provide an acceptable level of service. The Requiring Authority should identify alternative or additional access to be provided to The Boulevard as part of construction of the Project, if the level of service deficiency at this intersection cannot be resolved by other means.
 - d. Assessment of amendments to the design to achieve a consistent cross-section for the north-south minor arterial.⁵³
 - e. Assessment of alternatives to the overland flow over the minor arterial transport corridor where it crosses the Greenway.⁵⁴

⁴⁷ See paragraphs 74, 75, and 77 a above.

⁴⁸ See paragraphs 80 and 87 a above.

⁴⁹ See paragraph 94 b above.

⁴⁷ See paragraph 43 above.

⁵¹ See paragraph 17 c above.

⁵² See paragraphs 44 to 46 above.

⁵³ See paragraphs 32 to 40 above.

⁵⁴ See paragraphs 28 to 31 above.

- f. The design of the tie-in to Burbush Road near 27 and 29 Burbush Road, including the horizontal and vertical alignments and cross-section⁵⁵.
- g. The transport corridor cross sections and typologies to address safety issues relating to the cross section described as road typology 3100.4 and 3100.5 for Zone 1 as shown in Appendix B to the NOR.⁵⁶
- 141. I recommend that, during Detailed Design, the Requiring Authority undertakes the consultation described in Table 5.

Table 5: Consultation the Requiring Authority must undertake during the Detailed Design

Parties to be consulted	Subject of the consultation
FENZ, NZ Police, and St John	Provisions for emergency access ⁵⁷
KiwiRail	The specific level crossing safety requirements to be incorporated into the Works ⁵⁸
Ministry of Education	Access requirements for any educational facility development within the Rotokauri or Rotokauri North Structure Plan areas that is confirmed at that time. 59
NZ Transport Agency	Construction detail and temporary works necessary to protect the SH1C overbridge and cycle facilities ⁶⁰
Pragma Holdings Ltd ⁶¹ and Rotokauri Development Ltd ⁶²	Proposed levels, design criteria, and access provision
Waikato Regional Council	Bus servicing and public transport infrastructure provision ⁶³
	Resolution of road flooding safety issues ⁶⁴
Owners of each directly affected property	Permanent access provision after construction ⁶⁵

Matters to be included in any relevant outline plan

- 142. I recommend that the following matters be included in any relevant outline plan:
 - a. The relevant assessments listed in paragraph 140.
 - b. Details of any consultation undertaken during Detailed Design or preparation of the CTMP.
 - c. Details of the permanent access to be provided to all properties whose current access will be affected by the works described in that outline plan.
- 143. The outline plan for the proposed major arterial transport corridor upgrade of Te Kowhai Road East, between Arthur Porter Drive and Te Rapa Road, must include the following:

⁵⁵ See paragraphs 113 to 121 above.

⁵⁶ See paragraphs 20 to 27 above.

⁵⁷ See paragraphs 21 to 27 and 40 above.

⁵⁸ See paragraph 91 above.

⁵⁹ See paragraphs 122 to 127 a above.

⁶⁰ See paragraphs 69 and 71 a above.

⁶¹ See paragraphs 111 to 112 above.

⁶² See paragraphs 108 to 110 above.

⁶³ See paragraphs 62 and 64 a i above.

⁶⁴ See paragraphs 62, 63, and 28 to 31 above.

⁶⁵ See paragraph 87 b i above.

a. The outcome of the analyses specified in paragraphs 140 a, 140 b, and 140 c above and the traffic volumes or conditions that will trigger the need for implementation of each intersection upgrade.

Designation conditions

- 144. I recommend the following amendments or additions to the proposed designation conditions⁶⁶:
 - a. Any amendments to the NOR, including changes to drawings, resulting from addressing the matters set out in paragraph 139 above.
 - b. Additional conditions setting out the matters listed in paragraphs 140 and 141 above that are recommended to be addressed during Detailed Design.
 - c. Additional conditions to cover the matters set out in paragraphs 142143 and 143 above that must be included in any relevant outline plan.
 - d. A condition requiring the Requiring Authority to notify the Waikato Regional Council, in advance, of any road restrictions resulting from construction activities that would affect bus services.⁶⁷

Conditions relating to preparation of the CTMP

145. I recommend that a designation condition be included that requires the Requiring Authority to consult parties in relation to the proposed CTMP in accordance with the following table.

Table 6: Consultation the Requiring Authority must undertake during preparation of the CTMP

Parties to be consulted	Subject of the consultation
FENZ, NZ Police, and St John	Provisions for emergency access during construction
KiwiRail	The effects of temporary traffic management during construction
Ministry of Education	Measures to minimise the effects of construction- related traffic on schools and other educational facilities in use during the proposed construction period. ⁶⁸
NZ Transport Agency	Measures to minimise or appropriately mitigate the effects on the state highway network of constructing the Works. ⁶⁹
Steve Godley and Adam Marsh ⁷⁰	Property access during construction
Te Rapa Gateway Ltd ⁷¹	
Waikato Regional Council	The effects of construction activities on bus services
Owners and occupiers of each property whose existing access will be directly affected during construction	Property access during construction ⁷²

⁶⁶ See s10 of the NOR.

⁶⁷ See paragraphs 62 and 64 b above.

⁶⁸ See paragraphs 122 and 127 b above.

⁶⁹ See paragraphs 70 and 71 b above.

⁷⁰ See paragraphs 85 and 87 b ii above.

⁷¹ See paragraphs 76 and 77 b above.

⁷² See paragraph 87 b ii above.

Appendix A Terms and Abbreviations used in this Memorandum

Term or Abbreviation	Definition
СТМР	Construction Traffic Management Plan
The Designation	The proposed designation that is the subject of the NOR
Detailed Design	Means the period when the Works construction drawings and
	relevant management plans are prepared, and any further statutory
	approvals obtained, prior to construction of the Works commencing.
FENZ	Fire and Emergency NZ
HCC	Hamilton City Council
LCSIA	Level Crossing Safety Impact Assessment
MOE	Ministry of Education
The NOR	Rotokauri Strategic Infrastructure Designation Notice of Requirement
	September 2024 Prepared by Beca Limited for Hamilton City Council
NZS	New Zealand Standard
NZTA	New Zealand Transport Agency
The Project	Means all the physical works, measures, and processes that are
	necessary to give effect to the NOR, including the measures to avoid,
	remedy, mitigate, minimise, offset, or compensate for, its actual or
	potential adverse environmental effects.
The Requirement	The requirement for the Designation that is set out in the NOR
The Requiring Authority	Hamilton City Council
RMA	Resource Management Act 1991
The Works	The physical works to be undertaken to give effect to the NOR and
	manage their environmental effects
WRC	Waikato Regional Council
WRTM	Waikato Regional Transportation Model

21-May-25

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