

13 December 2023

**Beca Limited**

By email: Melissa.Slatter@beca.com

Attn: Melissa Slatter

Dear Melissa

**Rotokauri Arterial Network Designation Notice of Requirement – Further information request**

**Reference number:** A121  
**Requiring Authority:** Hamilton City Council

Hamilton City Council (HCC) City Planning Unit have requested that Tonkin & Taylor Limited assess the Rotokauri Arterial Network Designation Notice of Requirement (NoR) on their behalf.

In accordance with section 92 of the Resource Management Act 1991 (RMA), the following information is requested to make an accurate and informed assessment of the NoR.

**General/Planning**

Request Number	Section	Further Information Requested
1	NOR 2.1 Extent of designation	<b>What alternatives are proposed should the 536m<sup>2</sup> of Waikato-Tainui land that is required for the upgrade of the Te Kowhai East Road, Maahanga Drive and The Boulevard intersection be unable to be legally secured?</b>
2	NOR 2.2 Purpose of the Designation	Section 2.2 of the Notice of Requirement document states that the <i>“Designation Purpose incorporates the following outcome:”</i> .  <b>Please confirm if the text within the blue box in this section is the proposed purpose of the designation to go into the District Plan.</b>
3	NOR 2.4.4 Project Objectives	<b>Please confirm if the public spaces objective refers to the public spaces adjoining the road corridor or the corridor itself which is the subject of the NoR.</b>
4	NOR Section 3 Designation Description Figure 14	<b>Please confirm if the description of Zone 3 Collector Road is correct as it repeats the description for Zone 2 and Figure 14 does not include a shared path as described in the text. Please update Figure 14 if necessary.</b>
5	NOR 9.3.2 National Policy Statement for Freshwater	<b>Please provide further information to explain why the project has a functional need to be in the location of the natural inland wetlands.</b>

	Management 2020	
6	Appendix C	<b>Please provide further information to detail how option 3A-5 was determined to be the preferred option.</b>
7	Appendix E	<b>Please provide the Records of Title for Part Lot 2 DP 15254, Lot 2003 DP 576817, Lot 4003 DP 576817, Lot 4004 DP 576817, Lot 57 DP 572424, Lot 802 DP 572424, Lot 803 DP 572424.</b>
8	Appendix E	<b>Please provide details of the Consent Notices registered on the titles for Lot 53 DP 471831 and Lot 2 DP 330304.</b>
9	Appendix E	<b>Please provide details of the Part 4A Conservation Act 1987 (marginal strip) on Lot 1 DP 540282.</b>
10	Appendix E	<b>Please provide details of the land covenants registered on the titles for Lot 50 DP 471831 and Lot 100 DP 542000.</b>

## Transport

Request Number	Section	Further Information Requested
11	NOR 1.4.2 Future Growth	<p>The NOR states that the Rotokauri area will provide around 6,500 properties, with a likelihood of more due to intensification initiatives. This will generate in the region of 65,000 vehicles per day, and even with an extremely high proportion of modal shift indicated in the Metro Spatial Plan this will still be around 40,000 vpd in 2051. With three main linkages to the existing transport network (SH39, Te Kowhai East Road and Wairere Drive – either from Arthur Porter Drive or via Te Wetini Drive) there should be at least 10,000 vpd on each, although given the location of the key attractors, it is more likely that the central and southern connections would take the majority of trips.</p> <p><b>Please confirm how the new trips have been loaded into the model and how the trips distribute into the network.</b></p>
12	NOR Table 6 Reference 3.2 and Appendix N Table 8-1	<b>Please confirm if the proposed local and collector roads will meet the minimum design criteria for road width.</b>
13	NOR Table 6 Reference 3.10 and Appendix N Table 8-1	<b>Please confirm the width of the shared paths.</b>
14	Appendix N 4.4 Other Considerations	<b>Please confirm why the design of the major arterial Te Kowhai East Road widening is constrained to the existing corridor width.</b>
15	Appendix N 5.3.3 Sheet 3 Zones 5, 6 and 7	<b>If an alternative intersection design/s is required for the Te Kowhai East Road, Maahanga Drive and The Boulevard intersection in the event the Waikato-Tainui land cannot be secured, please provide an assessment of the transport</b>

		related effects for this design/s.
16	Appendix N 6.1.1 Traffic Modelling WRTM	<p>The 2051 Waikato Regional Transport Model (WRTM) is acknowledged as having a potential under estimation of trips as it does not account for recent growth in the area or the possible intensification. A 30% increase in demand has been applied to account for a worst-case scenario in the Intersection models. The traffic flows through intersections are not particularly helpful as it is not possible to determine key through movements and compare them with current flows.</p> <p>For instance, Table 6-1 shows a total AADT at Te Kowhai East Rd /Maahanga intersection to be 3,512 vpd, yet the PM peak is 2,824vph, if this was the TRACKS 2 hour flow then the ADT is approximately 6 times the peak, so at least 16,000 vpd. If it is a one-hour conversion the ADT is going to be in the region of 10 times the hourly flow at 28,000 vpd.</p> <p>The WRTM 2 hour flows on Te Kowhai East Rd for the PM peak (Figure 6-3) is 2,800 (Between Tasman Rd and Maahanga Dr). This represents an ADT of 16,800 vpd. The current AADT on Te Kowhai East Rd is 9,800 vpd, so the growth up to 2051 is approximately 7,000 vpd</p> <p>With a 30% uplift this is around 22,000 vpd or an increase of approximately 12,000 vpd, which is what would be expected in a high modal shift (low yield) scenario.</p> <p>With a low yield total trip generation for Rotokauri being somewhere around 40,000 vpd, this represents 30% of the trip generation. If a typical yield is assessed this represents only 18% of all new trips. This suggests that insufficient trips may have been assessed on some of the key linkages.</p> <p><b>Please confirm the trip generation used in the zone loading for the WRTM and the daily traffic volumes that have applied to key transport linkages.</b></p>
17	Appendix N 6.1.2 SIDRA Intersection Modelling	<p>It appears that individual intersection models have been assessed using SIDRA, some of the models indicate that vehicle queues will exceed the available upstream length (i.e. the queues will extend past the next intersection and impact on its efficiency). For instance: Tasman Road is 147m west of Maahanga Road, but the model indicates that the queue is 296m, similarly it is 155m from Maahanga Road to Te Rapa Road and the queue appears to be 638m.</p> <p><b>With the proximity of intersections on Te Kowhai East Road, has a small network been assessed in SIDRA to determine the impact of blocking back?</b></p>
18	Appendix N 6.1.2 SIDRA Intersection Modelling	<p>The modelling report does not assess traffic impacts on existing intersections, such as SH39, Te Rapa Road, Arthur Porter Drive and Wairere Drive. Given the considerable increase in traffic at these key network connections there is a risk that traffic impacts may have been understated.</p> <p><b>Please provide analysis of existing intersections to demonstrate impact of additional traffic.</b></p>
19	Appendix O	Table 1-2 shows that the future traffic scenario fails both criterion 1 and 2 being

	<p>1.1.2 Te Kowhai East Rd LCSIA</p>	<p>proposed design and future score no greater than medium-low and LCSS lower or equal to the updated existing score respectively. In this case C1 is medium and C2 is 33/60 as compared to 31/60. Whilst the level of significance is not great it will still require a concession from KiwiRail following their “so far as reasonably practicable” assessment.</p> <p>It is unclear from the report what traffic volumes were used for the future score; the report says at least 11,826 vpd although the modelling shows around 22,000 which could change the risk profile.</p> <p>The risks associated with this level crossing are highlighted in the Stantec Road Safety Audit which need to be addressed in the design.</p> <p>The SIDRA models suggest that vehicles will queue across the level crossing from both directions, which represents a significant risk of a vehicle being stranded on the crossing when the barriers close.</p> <p>If KiwiRail do not grant approval for the variation in the level crossing use case, this would likely restrict the traffic volume along Te Kowhai Road.</p> <p>The risk of refusal is potentially high as the concession will be for Criterion 1, meaning that Criterion 2 must be met.</p> <p><b>Please confirm what traffic information has been used during the LCSIA and confirm the status of the approval process.</b></p> <p><b>What alternatives have been considered if an agreement with KiwiRail is not reached? i.e. grade separation or re-routing traffic to an alternative location.</b></p>
20	Appendix B Roading Drawings	<p>Drawing 428856-100-CA-1405 shows the intersection of Te Kowhai East Road and Tasman Road. The hold line for the traffic signals is approximately 13m from the barrier arm of the level crossing and roughly 15m from the minimum clearance from a moving train. The typical truck dimensions from RTS 18 are 17.9m for a semi and 20m for a B train, with an HPMV 3m longer. There is a significant risk of encroachment into the track if a westbound truck is waiting at the traffic signals when the barriers close.</p> <p><b>Please confirm that signal operation will prevent large vehicles from overhanging the track.</b></p>
21	Appendix B Roading Drawings	<p>Drawing 428856-100-CA-1405 shows one of the entries to the service lane that runs behind the Base (also serving Duncan Ebbett and the Stihl Shop). The median is broken in this location which suggests that full movement into and out of this access is permitted. With insufficient width in the median, there is a high risk of conflict for vehicles turning right out of the access onto Te Kowhai East Road across multiple traffic lanes.</p> <p><b>Please confirm the status and likely usage of this access road and how this impacts on the safety and efficiency of the widened Te Kowhai East Road.</b></p>
22	Appendix B Roading	<p>A number of intersections show a free left for vehicles at traffic signals which are crossed by the footway/cycleway. This arrangement can be a significant risk to</p>

	Drawings	<p>vulnerable road users who have been “told” this is a safe place to cross, whilst drivers are seeking a gap in the traffic flow rather than looking for pedestrians or cyclists (this is a particular risk for those approaching from the left who will be out of the driver’s field of vision). The drawings indicate raised crossings but not any form of control.</p> <p><b>Please confirm type of control for these crossings and if it has been accounted for in the modelling.</b></p>
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## Stormwater

Request Number	Section	Further Information Requested
23	Appendix D 5.2.3 Mangaheka ICMP	<p><i>The Arthur Porter wetland is sized to manage the catchment upstream (this includes the two proposed property access cul-de-sacs connected to Arther Porter Drive).</i></p> <p><b>Please provide details of the Arthur Porter wetland sizing and location.</b></p>
24	Appendix D 5.2.5 Greenway Designation	<p><i>The wetlands included in the proposed designation have been developed further from that shown in the Greenway NoR based on initial consultation with developers.</i></p> <p><b>Please provide information on what was agreed in this consultation.</b></p> <p><i>A fundamental assumption for the proposed roading designation is that the design assumes the Greenway is in place.</i></p> <p><b>Please confirm that if the Greenway is not in place whether the proposed wetlands will have sufficient volume to self-mitigate just the runoff from the proposed roading.</b></p>
25	Appendix D 5.4.1 Rainfall and Climate Change	<p><i>Future design and consenting stages will need to consider the implications of flooding to climate change RCP 8.5.</i></p> <p><b>How much bigger will the wetlands need to be to accommodate RCP 8.5 and will they fit within the designation boundary as proposed.</b></p>
26	Appendix D 5.5.3 Mangaheka ICMP	<p><i>Attenuation shall be provided to match existing development peak flow for the 2 and 10yr ARI events. 100yr ARI attenuation shall be to 96% of existing peak flows for Device 6 and 73% for Device 7 (called Wetlands D6a, b &amp; c and D7a, b &amp; c on the road designation drawings).</i></p> <p><b>Wetlands D6a and D7c appear to be on land already flooded (refer drawing CA-2103). Do the wetlands also mitigate for this loss of floodplain storage?</b></p> <p><b>Wetlands G4, G6 G7 and G8 are also on land already flooded (refer drawing CA-2103). Do the wetlands also mitigate for this loss of floodplain storage?</b></p>
27	Appendix D 5.6 Assumptions	<p>For the purposes of the designation, the drawings show how raingardens could fit within the designated road cross-section, but do not detail calculated raingarden lengths, numbers and spacings needed.</p>

		<b>How many square metres of raingarden will be needed per square metre of roading? Approximately what percentage of the berm will rain gardens take up?</b>
28	Appendix D 5.6 Assumptions	<p><i>Soakage viability will need to be confirmed as part of subsequent resource consenting. At this stage, it is expected that the post development volume discharged will not therefore match the pre-development volume. Mitigation for this will need to be addressed in future resource consent applications.</i></p> <p><b>Please confirm which resource consents would assess mitigation for soakage viability.</b></p>
29	Appendix D 5.6 Assumptions	<p><i>Stormwater modelling to prove drainage performance will be carried out under future resource consent stages.</i></p> <p><b>We note that no specific stormwater modelling has been undertaken for this designation. Please confirm the approach proposed if subsequent stormwater modelling requires additional land area than what has been designated.</b></p> <p><b>Please advise when stormwater modelling for the Greenway is likely to be completed.</b></p> <p><b>Please advise which resource consents are expected to cover drainage performance for this development.</b></p>
30	Appendix D 5.7.2 Road levels and Flood levels	<p><i>The latter scenario could see the Greenway minor arterial road crossing overflowing (albeit with very shallow depths).</i></p> <p><b>Please confirm depths above the road and likely ARI for this flooding.</b></p>
31	Appendix D 5.7.3 Road Drainage	<p><i>However, there are some areas where pipes are not feasible due to lack of available fall and/or cover and in these areas open channels have been used.</i></p> <p><b>Are these locations limited to adjacent to wetland G4A and wetland 7B. if not where else are they needed?</b></p> <p><i>Where practical the drainage pipes have been sized to receive runoff from future developments upstream of the road.</i></p> <p><b>What solution is envisaged if the drainage pipes are not big enough. How will this solution be fitted within the designation?</b></p>
32	Appendix D 5.7.6 Wetland Footprint	<p>The Mangaheka ICMP states that flood storage “<i>Volumes are indicative and development specific design and/or modelling shall be carried out to meet requirements</i>”.</p> <p>The volumes reported as “<i>flood storage required</i>” have been taken from querying the Greenway NoR earthworks model and reported 100yr ARI flood levels.</p> <p><b>Please provide more details on this process.</b></p> <p><b>Please provide the footprint area for each wetland.</b></p>

33	Appendix D 5.7.6 Wetland Flood Storage Volumes	<p><i>The volumes result from either attenuation of peak flows (in the case of the Mangaheka catchment wetlands) or storage that comes from flood inundation backing up from the Greenway basins.</i></p> <p><b>Please provide further information to clarify how water backs up into the Greenway basins. Is it over the top of the wetland bund? How does water back up into wetland G8, as this wetland is not adjacent to the Greenway?</b></p> <p><b>Please explain how overland flow enters wetlands D6C and D7B - does the low point on the road drain into the wetland or directly to channel downstream. If the adjacent culvert (9 and 10 respectively) becomes blocked – does the upstream flow go into the wetland?</b></p> <p><b>Please provide the levels of the wetland bunds and the adjacent flood levels in the Greenway.</b></p>
34	Appendix D Tables 5.3 and 5.4	<p><b>Please confirm the volumes given in Tables 5.3 and 5.4 are the volumes above the permanent water level.</b></p>
35	Appendix D 5.7.6 Emergency Spillways	<p><i>Emergency spillways will provide overflow routes into the downstream watercourses. In some locations these can only be located at the end of the wetland to minimise the land take required. In other locations these can be positioned in the forebay. Similar to the outlet location, the location of the spillway does not tend to impact on the land required for the designation, so these have only been shown indicatively on the drawings.</i></p> <p><b>Please explain why the position of the spillway does not impact on the land required for the designation – but in some instances has been located at the end of wetland to minimise land-take.</b></p> <p><b>Where is the emergency spillway for Wetland G8?</b></p>
36	Appendix D 5.7.6 High flow bypasses	<p><i>High flow bypasses are required where flushing flows in severe storms could damage the wetland or impact its performance by stripping the biofilm from the wetland.</i></p> <p><b>Please clarify whether these will affect the quantity of land required for the designation.</b></p> <p><i>Alternative arrangements will be needed for the Mangaheka wetlands where piped bypasses may not be feasible.</i></p> <p><b>What alternatives are suggested?</b></p>
37	Appendix D 5.7.8 Wetland Swales	<p><i>Wetland Swales 3 and 4 are located downstream of the end of pipe raingardens adjacent Chalmers Road crossing of the Greenway. They sit within the flood berm of the Greenway up against its banks. These provide secondary treatment in place of wetlands.</i></p> <p><b>Does this measure mean the water quality benefits of the Greenway are double counted?</b></p>

38	Appendix D 5.7.11 Overland Flow	Once the area is developed it is understood that the arterial road will likely become the overland flow path.  <b>Please confirm how much carriageway width would be under water to convey the 100yr flow.</b>
39	Appendix D 5.7.11 Overland Flow	<i>Overland flow from the road corridor follows the road alignment down the carriageway to low points at culverts where flooding would then pool on the road before overtopping the kerb and discharging into the receiving watercourse/floodplain.</i>  <b>Where will the road corridor discharge to the floodplain and how will this be controlled?</b>
40	Appendix D 5.8 External Review	<i>The stormwater design has been independently reviewed by Morphum Environmental Ltd. It is noted that some of issues raised remain items that will be addressed in future design stages.</i>  <b>Please confirm which issues will be addressed in future design stages. Are any additional designation conditions required to ensure these are addressed?</b>
41	Appendix D 5.9 Future Design Tasks	<i>Confirm WRC Scheme Drain performance. Given the nature of the underlying land and its unsuitability for large scale soakage, increased volume will be discharged to downstream WRC Scheme Drains. WRC 10yr ARI extended detention to WRC's drainage scheme requirements need to be provided within the stormwater management areas. Any additional measures to mitigate this will be negotiated with WRC and HCC separately.</i>  <b>Please provide a map showing the potentially affected WRC scheme drains. How will any extra mitigation negotiated between WRC and HCC requirements be incorporated into the designation?</b>
42	Appendix B Stormwater Drawings	<b>Please provide an updated stormwater drawing set to include the proposed designation boundary.</b>  <b>Drawing CA-2400. The sheet layout is not very clear/visible. Please provide a legible sheet.</b>  <b>Drawing CA-2602 – The roading east of wetland 7b is not shown as being in any wetland catchment. How is this area being treated?</b>

### Geotechnical/Hydrogeology

Request Number	Section	Further Information Requested
43	Appendix D	Further detail is required regarding the underpass excavations. However it is expected this will be available within the document requested below.  <b>Please provide the Rotokauri NOR Arterial Roads Geotechnical Review letter dated 22 July 2021 for review.</b>



		<p>If the following details regarding the underpass excavations are not contained within this document, please provide:</p> <ul style="list-style-type: none"> <li>• volume to be excavated;</li> <li>• cut height;</li> <li>• batter slope;</li> <li>• <b>effects on embankments and proposed mitigation (if required);</b></li> <li>• <b>effects on piles and proposed mitigation (if required);</b></li> <li>• <b>assessment of stormwater issues associated with the proposed undercuts.</b></li> </ul>
44	Appendix D	<p><b>Please provide an assessment of the effects on parties within the zone of influence of the expected settlements related to the construction of the proposed road embankments.</b></p>
45	Appendix D	<p>No hydrogeological assessment is provided in the NoR and it is noted that regional council consents will be sought for temporary dewatering of the groundwater table as outlined in section 9.7 of the NoR. Permanent changes to groundwater levels and flows can result from the permanent structure of the proposed roads and associated infrastructure.</p> <p><b>Please provide further information to demonstrate whether the proposed roads and associated infrastructure will result in any permanent changes in groundwater levels and flows and the effects of any such changes including settlement effects. Please include any ICMP documents relied on in your response.</b></p>

## Ecology

Request Number	Section	Further Information Requested
46	Appendix G Sections 3, 4.1, 5.1, 6.1.2	<p>Modified watercourses, farm drains and open water drains are referred to in various sections and shown on various figures in the EclA and supporting reports. There is no comprehensive map that clearly shows the interaction of the proposed arterial road designation/ footprint with watercourses. Figure 3 is poor resolution. Some mapping appears to have been done by Ecology NZ (ENZ) but the designation shown on ENZ maps differ from the Beca report. The report at Section 6.1.2 refers to the proposed arterial designation intersecting with rural drains, at 18 points along the length of the corridor, but this is not clearly mapped.</p> <p>Further to the above, there is no clear watercourse classification with respect to the RMA, NPS-FM or the Waikato Regional Plan (WRP), which would help to inform values and effects management assessments.</p> <p><b>Please provide a comprehensive map that clearly shows the watercourse alignments in and around the proposed designation. Please include classification with respect to RMA, NPS-FM or WRP for existing watercourses, include the proposed designation, the proposed Greenway alignment and where watercourses were assessed. Please also provide the</b></p>

		requested drawing as GIS shape files.
47	Appendix G 6.1.3	<p>Noting request 44 above, we are unsure of the interaction with the future Greenway with respect to the assessment of ecological effects.</p> <p><b>Further to information request 44, please clarify relevance of the Greenway in terms of effects at the proposed crossing. Please clarify if the “High” ecological value judgement for Rotokauri Drain also applies to the Greenway (Rotokauri Drain replacement habitat)?</b></p>
48	Appendix G 6.1.6 Wetlands, Paragraph 1	<p>Only eight ‘natural’ wetlands were identified within, or within 100m of, the proposed arterial designation. Based on observations during the site visit, inspection of aerial photography, and available information, we are not confident that all wetlands have been identified.</p> <p><b>Please provide supplementary information showing the location of all wetland areas assessed, all wetland plots measured, the raw data from the wetland plot measurement (cover classes, hydrology tests, and hydric soils tests), and the rationale for plot placement.</b></p>
49	Appendix G 6.1.6 Wetlands, Paragraph 1	<p>It is noted that further wetland assessment will be required.</p> <p><b>When will this assessment be undertaken?</b></p> <p><b>What is the scope for this assessment?</b></p> <p><b>Please identify where the Greenway project impacts overlap with this project to clarify the relative impact of any stand-alone and cumulative effects for the roading project. For example, stormwater ponds are proposed to be constructed for the Greenway project but also may be used as mitigation for the roading project. How many wetlands are outside of the Greenway project area? How much wetland area will be impacted by the road construction only?</b></p>
50	Appendix G Sections 6.1.6 and 6.2.1 Wetlands, Paragraph 2 Avifauna assessment	<p>Pied stilt were recorded from within the designation area. However, in preceding sections relating to site context, in particular the ecological values of Lake Rotokauri and Lake Waiwharakeke, it was noted that Australasian bittern have been recorded from both habitats.</p> <p><b>Given the large home range of Australasian bittern and their known use of marginal wetland habitat including rank grassland at wetland/pasture margins and farm drains, please comment on the potential for bittern to utilise habitats within the designation and re-evaluate the avifauna section and potential impacts to include habitat use by bittern.</b></p> <p><b>Please also include an assessment of the NPS-IB provisions with respect to highly mobile fauna.</b></p>
51	Appendix G 7.1	<p>Risk of injury or mortality of bats and potential effects of lighting have been assessed. However there does not appear to have been much consideration around changes to feeding and/or roosting habitat quality. For example, reduction in stream and wetland habitats, and potential changes to wetland hydrology have implications for bat feeding.</p> <p><b>Please update the effects assessment section to include all potential impacts on bats and bat habitat and provide a zone of influence effects analysis for bats.</b></p>

		<b>How far from the roading designation will potential effects on bats extend due to changes to roading noise, lighting, and construction? And will this zone of influence analysis inform the additional bat surveys required prior to construction?</b>
52	Appendix G 7.1.1 8.1.8 8.2	<p>Loss and modification of aquatic habitats. Impacts are discussed in Section 7.1.1 and management of these effects in Section 8.1.8. Section 8.1.8 refers to culverting, while earlier sections refer to culverting, diversion and reclamation. There is also a reference to piping later in the report.</p> <p>While these matters will be further addressed at consenting stage, if the designation is granted it is important to understand the scale of the potential effect and if the effects management solutions proposed are workable. Further, the effects management approach appears to leap straight to offset/compensation and some comment with respect to the effects management hierarchy in NPS-FM is needed.</p> <p>We currently disagree with the effects conclusion in Section 8.2 as it relates to loss and/or modification of aquatic habitat. At this stage there is insufficient information to adequately assess the scale of loss and/or modification of aquatic habitat and to be confident the effects management proposed is adequate, including offsetting.</p> <p><b>Please provide further information on the scale of stream/watercourse impacts and how these can be managed as follows:</b></p> <ul style="list-style-type: none"> <li>• <b>Confirm where culverts, diversions, reclamation and piping will potentially occur and show these locations on a drawing.</b></li> <li>• <b>Provide an indication of the worst-case quantum of potential stream/watercourse habitat loss and modification that will result from the project.</b></li> <li>• <b>Provide commentary on how stream/watercourse loss and/or modification effects will effects be avoided, or minimised prior to offsetting?</b></li> <li>• <b>Confirm why is 5 m riparian planting is considered appropriate to address stream loss impacts? This is narrow and unlikely to be self-sustaining in the long-term.</b></li> <li>• <b>The report refers to the Greenway as an option to address stream loss and/or modification impacts for the project. How can this meet the additionality principal if the Greenway is to provide an ecological offset or compensation for Rotokauri Drain?</b></li> </ul>
53	Appendix G 7.1.2	<p>Fish passage and connectivity is covered in Section 7.1.1 (High magnitude of effect) and then again in Section 7.1.2 (moderate magnitude of effect).</p> <p><b>Please review and confirm the magnitude of effects assessment for fish passage and connectivity effects.</b></p>
54	Appendix G	The commentary on the degree of wetland habitat loss does not sufficiently list

	7.1.3 8.1.7 Modification/ loss of wetland habitat	<p>the potential impacts or potential drivers of wetland character and function change that could occur following construction of the roading within the designation.</p> <p><b>What are the other change factors with respect to total or partial loss of wetland systems (e.g. changes to groundwater and flow-on effects from this) that could occur as a result of road infrastructure construction and operation? How will these be avoided, remedied and/or mitigated?</b></p>
55	Appendix G 7.1.4 Water and habitat quality changes due to sedimentation	<p>The commentary in this section only focuses on changes to water quality within drains/streams and impacts on instream fauna. The wetland commentary regarding sedimentation is lacking and has been underestimated.</p> <p><b>Please include an assessment/consideration of how unsuitable sediment controls, or lack of sediment controls, could result in changes to wetland habitats and characteristics. Please also include an assessment of how modified water quality could impact the availability of prey for bats and birds.</b></p>
56	Appendix G 7.1.5 8.1.1 8.2	<p>Injury and mortality of freshwater species during construction. Direct effects on fish are covered in Section 7.1.5. Management is covered in Section 8.1.1. We seek further clarification specifically in relation to management of black mudfish.</p> <p>The Greenway Mudfish Management Plan (MMP) evaluates several ecological offset site options for impacts on mudfish habitat and specifically identifies Lake Waiwhakareke as a preferred site. Other land development consent holders are already utilising this option on the back of the Greenway MMP.</p> <p>Section 8.2 proposes the creation of a plan as the management measure for this effect. Creation of a plan is not a management measure and more certainty is needed in terms of the proposed management measures for impacts on black mudfish.</p> <p><b>Please clarify the following:</b></p> <ul style="list-style-type: none"> <li>• <b>Is further work/survey required to identify mudfish habitat within the project area?</b></li> <li>• <b>Clarify the proposed relocation site options for black mudfish and where offsetting for impacts on black mudfish can be provided.</b></li> <li>• <b>If proposing Lake Waiwhakareke, please clarify if there is likely to be carrying capacity and or scope for further offsetting in this location.</b></li> <li>• <b>What are the adaptive management measures that would be implemented should relocated At Risk native fish populations fail to establish?</b></li> </ul>
57	Appendix G 7.1.6 Loss of terrestrial and riparian vegetation	<p>The preceding sections relating to bats and lizards state that bat habitat value is Very High and lizard habitat value is High within the project corridor. Although the magnitude of effect following loss of terrestrial and riparian vegetation may be Low for fauna habitat values in spite of the High and Very High values assessment, this subtle consideration is not reflected in the commentary.</p> <p><b>How will the loss of terrestrial and riparian margin vegetation impact habitat</b></p>

		<b>availability and quality for lizards, bats, and birds?</b>
58	Appendix G 8.1.2	<p>Areas where lizards have been found have been identified within all areas for which access was able to be gained. However there has been no further relative assessment of habitat that would inform potential additional habitat for lizards within the designation c.f. high, medium, and low risk areas identified for bats.</p> <p><b>Based on the lizard survey results, how and at what stage will other potential lizard habitat be identified, and which areas will be targeted for additional lizard surveys? How would subsequent surveys inform the EMP, and would a Lizard Management Plan be contained within the EMP?</b></p>
59	Appendix G 8.1.9	<p>Installing bat boxes has been proposed as a mitigation measure for the loss of potential bat roost trees.</p> <p><b>What other mitigation and/or remediation options exist for the loss of potential bat habitat? And how would these be incorporated into the EMP? (e.g. tree selection within any landscape/ecological planting plans, particularly the selection of tall specimen trees that will eventually provide suitable habitat for shags and bats).</b></p>
60	Appendix G 8.2	<p>Section 8.2 includes reference to reclamation and piping of streams and reaches a conclusion that residual effects can be managed to low levels. But this seems to be based on an offsetting solution. Residual effects are those remaining after measures to avoid, minimise and remedy. This doesn't include offsetting.</p> <p><b>Please clarify the effects management hierarchy applied to terrestrial and freshwater effects assessments. For example, NPS-FM doesn't include mitigation yet mitigation is referred to consistently with respect to freshwater ecology effects.</b></p>
61	Appendix G 8.2	<p>Cumulative effects – the report refers to similarities and differences relative to the Greenway and proposes some integration in terms of effects management. For example, a proposed effects management measure for mudfish is "Creation of a mudfish management plan in conjunction with Rotokauri Greenways development". However there is no explicit commentary on cumulative ecological effects.</p> <p><b>Please provide an assessment of cumulative effects, considering the proposed Greenway and the general development of the Rotokauri area.</b></p>
62	Appendix G Wetland Classification Report Section 4 Wetland methodology	<p>Nineteen potential wetland sites were identified based on the datasets described in Section 4.1. Most of these appear to be located within the southern half of the designation. Based on observations during the site visit, inspection of aerial photography, and available information, we are not confident that all wetlands, or potential wetlands were identified. Particularly for the northern half of the designation.</p> <p><b>Please provide supplementary information showing the location of wetland plots measured, the rationale for plot placement, and more information on detailed methodology. Were 2x2 m plots used? Were there any instances where transects were used due to wetland size?</b></p>

63	Appendix G Wetland Classification Report Section 5 Wetland classification, hydrology	<p>The hydrological comments relating to the infield wetland protocols only comment on rainfall in the two weeks prior to the site visits. To accurately provide a picture of the hydrological conditions of the site, particularly if hydrological considerations are required for inconclusive wetland results, comment also needs to be made regarding rainfall relative to ‘normal’ conditions in the two to three months prior to the site visit.</p> <p>It also appears as though the no ground-truthing of hydrological conditions or hydric soils was undertaken as part of the field methodology which brings into question the accuracy of the wetland delineation process.</p> <p><b>Please provide further detail on the hydrological methodology and any rationale if no infield hydrology or hydric soils methods were undertaken. What was the rainfall volume in the 2 to 3 months prior to the site visit compared with historical averages for the same months? If the volume was higher/lower than historical averages, how could this have impacted the wetland delineation assessment?</b></p>
64	Appendix G Wetland Classification Report Section 5 Wetland classification	<p>Only eight ‘natural’ wetlands were identified within, or within 100m of, the proposed arterial designation. We are not confident that all wetlands were identified.</p> <p><b>Please provide the raw data from the wetland plot measurement (plant species cover classes, hydrology tests, and hydric soils tests).</b></p>
65	Appendix G Wetland Classification Report Table 1 Wetland classification	<p>Three plots (14c, 15a, and 17a) have been listed as being constructed. This appears to be because they are present within/beside a drain(s) however no commentary or descriptive information has been presented to support or provide rationale for this assessment. Drains are not generally considered to fall within the accepted definition of constructed wetland habitat.</p> <p><b>Is there any other additional information that would better explain the rationale behind classifying these areas as constructed wetlands?</b></p>
66	Appendix G Wetland Classification Report Section 5 Wetland classification	<p>Several areas that have been identified as natural inland wetlands (albeit degraded examples) appear to meet the pasture exclusion test (Plots 10a, 11a, 11b, 14a). In spite of this, these areas have been included within natural inland wetlands on the basis of hydrology. The MfE guidance document indicates that, if vegetation within a potential wetland area meets the pasture exclusion test (&gt;50% pasture species cover from the pasture species list), then no further investigation is required.</p> <p><b>The tests applied to all plots that meet the pasture exclusion test, but which have been identified as natural inland wetlands needs to be reapplied, and further commentary or discussion needs to be provided on their inclusion/exclusion.</b></p>
67	Appendix G Wetland Classification Report	<p><b>Site # 3 is not represented on Figure 8. Where is this located? Please update.</b></p>

	Site Photographs	
68	Appendix G Ecology NZ Supplementary Fauna Report Appendix C Bat habitat assessment table	The table of the bat roost assessments appears to be incomplete, with roost tree numbers 48-53 appearing on page 14 rather than page 39 or 40.  <b>Please move to the appropriate location.</b>

## Landscape/Visual

Request Number	Section	Further Information Requested
69	Appendix H Proposal/construction information	<p>The sequence of construction is described in Section 3 as <i>“anticipated to progress in a staged approach from south to north, <u>in conjunction with private land development</u> through the Rotokauri area, rather than as one large piece of infrastructure works.”</i></p> <p>In 5.2.1 of the assessment is stated that <i>“The Greenway and its associated stormwater wetlands will require large-scale earthworks which will create a highly modified rural landscape context, therefore, in the context of the greenway <u>being either under construction or having been constructed</u>”</i>. However, it is also included elsewhere in the assessment (5.3) that <i>“<u>construction is still likely to take place prior to other associated land development and building construction, and the existing rural landscape character is likely to be partly intact</u>”</i>.</p> <p>Between these three statements it seems that there is not a set assumption for the anticipated progress of surrounding development and the Greenway.</p> <p><b>Please clarify what the assumption is regarding surrounding development. In particular what the assumptions are regarding intervening development and whether it will screen/interrupt views of the proposed works? In clarifying the assumptions regarding the progress/staging of the construction please reassess the landscape and visual effects assessment to ensure that there is continuity between the landscape and visual construction effects assessments.</b></p>
70	Appendix H 4 Existing Environment	<p>The existing environment description provides a high-level assessment, but currently does not describe or identify landscape features (vegetation, streams, wetlands, landscape features and patterns etc.) within the proposed designation boundary and wider landscape. The western extents of the site and the Rotokauri Hills in particular are not well defined.</p> <p><b>Please provide further background information in order to understand the borders, qualities, elements and features that characterise the landscape the designated works will sit within.</b></p>
71	Appendix H 5.2.1 Temporary	As noted in request 67 above, details regarding the construction process are very brief and do not describe landscape features (trees, vegetation, streams, wetlands, landscape features etc.) being removed, retained or altered. Although

	Landscape Effects on the Existing Rural Landscape	<p>it is understood that the area is zoned to be urban and the Greenway will be constructed. This does not imply that it a blank canvas per se.</p> <p><b>Please re-address the landscape effects assessment in relation to the anticipated construction of the Arterial Network including stormwater collection, detention and conveyance and associated stormwater wetland treatment areas in light of the greater details regarding the site context and construction activities.</b></p>
72	Appendix H Natural Character Effects	<p>The ecological assessment discusses wetlands and modified watercourses that the LVA has not addressed. It is understood that the NPS-FM was introduced after the initial draft assessment in 2020. The Rotokauri drain and Mangaheka tributary and 6-8 wetlands will have natural character qualities.</p> <p><b>Please undertake a natural character assessment which assesses the anticipated impacts on the stream and watercourses that are likely to be affected by the proposal.</b></p>
73	Appendix H Appendix 1 Figure 1	<p>The appendices referenced in the assessment and the Rotokauri Arterials Designation do not identify construction compounds or laydown areas. Construction compounds are likely to be key areas that are likely to create adverse landscape and visual effects, including impacts related to:</p> <ul style="list-style-type: none"> <li>- Timings</li> <li>- Construction plant required</li> <li>- Lighting</li> </ul> <p><b>Please confirm the likely location of construction compounds and assess the effects of these.</b></p>

### Acoustic

Request Number	Section	Further Information Requested
74	Appendix K	<p>The assessment relies heavily on predicted traffic flows for 2030 (future existing scenario) and 2050 design year (Do Nothing – future flow without project / Do Minimum – future flow with project). There is no reference to where the traffic flows have been sourced and cross review of the Transport report does not provide the same AADT as used in the Acoustic report.</p> <p><b>Please provide confirmation on the source of the predicted traffic flows and if the traffic flows reflect the latest available data.</b></p>

### Land Contamination

Request Number	Section	Further Information Requested
75	Appendix L	<p>The PSI includes a review of information provided by Waikato Regional Council from their Land Use Information Register. No review of HCC's equivalent HAIL register appears to have been carried out. We understand that HCC's records are the most complete for land within the Hamilton City boundary and therefore may include information that WRC's register does not.</p>



		<b>Please review HCC's HAIL register for additional relevant information and update the PSI report if necessary.</b>
76	Appendix L	<p>The PSI recommends that a DSI (or multiple DSIs) is required. However, the PSI does not state which specific properties/HAIL areas will be subject to a DSI.</p> <p><b>Please confirm how, and at what stage, the findings of the PSI will be used to justify which properties do/do not require further assessment of ground contamination risks as part of a DSI. This is particularly relevant if consenting <i>Option 1</i> is adopted (i.e. separate NESCS contests and likely individual DSI's for specific areas) to ensure that a DSI is undertaken for <u>all</u> properties/HAIL areas which the requiring authority considers may present a ground contamination risk.</b></p>
77	Appendix L	<p>The PSI states that the walkover/drive-through was limited by access in some areas.</p> <p><b>Please confirm if a site walkover inspection along previously inaccessible portions of alignment is proposed as a later phase of works.</b></p>
78	Appendix L	<p>The WRC LUI request area does not appear to match up with the proposed designation. In particular, the LUI request area appears to extend approximately 1 km further south of the proposed designation. As a result, the PSI identifies HAIL areas which are located a considerable distance from the designation.</p> <p><b>Please provide commentary as to whether Sites 18 to 22 should be included in the PSI.</b></p>
79	Appendix L	<p>Based on a high-level review of Google Earth imagery, it appears that HAIL activities/areas that have not been specifically identified in the PSI may be present within the alignment.</p> <p><b>Please provide commentary as to whether the following have been considered and whether investigation of these land uses is warranted:</b></p> <ul style="list-style-type: none"> <li>○ <b>A suspected farm dump located between 'Site 1 and 'Site 17'.</b></li> <li>○ <b>A facility located at 71A Te Kowhai East Road.</b></li> <li>○ <b>A Christmas tree farm located at 71A Te Kowhai East Road.</b></li> </ul>

### Next Steps

Within 15 working days from the date of this request you must either:

1. Provide the information requested, or
2. Advise Council in writing of the alternative date that you will provide the information by, or
3. Advise council in writing that you refuse to provide the information requested.

When all of the information requested has been provided we will review it to make sure it adequately addresses all of the points of this request. Please note that if council has to seek clarification on matters in the further information you provide, then this will be considered as information required under this letter. As such the notice will remain on hold.

If you are not sure how to respond, please call me on 07 838 6472 and we can discuss your options.

Yours sincerely,

A handwritten signature in black ink that reads "K. O'Dwyer". The signature is written in a cursive, slightly slanted style.

**Kylie O'Dwyer**  
**Consultant Planner**

On behalf of:  
**Mark Roberts**  
**City Planning Unit**