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24 April 2024

Hamilton City Council
By email: Steve.Denize@hcc.govt.nz

Attn: Steve Denize

Tēnā koe Steve

Rotokauri Strategic Infrastructure Notice of Requirement – Part 2 response to Section 92 further information request

Thank you for providing Hamilton City Council (HCC) as Requiring Authority the further information request dated 13 December 2023.

The Requiring Authority has provided a two-part response to the further information request. Part 1 was provided on 31 January 2024.

This is the Part 2 response. The Requiring Authority has considered the remaining 44 questions of the s92 further information request from Hamilton City Council as set out below.

Response	Question	Timeframe
Part 1	1, 2, 3, 14, 18, 28, 42, 67 and 68.	Complete
Part 2	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 19, 23, 24, 25, 26, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 46, 47, 50, 51, 57, 59, 60, 69, 70, 71, 72, 74, 75, 76, 77, 78 and 79.	by 26 April 2024

Below sets out the Part 2 response to your further information request.

General/Planning

Question 4 NOR Section 3 Designation Description Figure 14
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.

Response: The Zone 3 description is not correct, please refer Section 3, Page 27 of the NOR document which now includes the correct Zone 3 description. Figure 14 does not require updating as the Zone 3 description text has been rectified.

Question 5 NOR 9.3.2 National Policy Statement for Freshwater Management 2020
Please provide further information to explain why the project has a functional need to be in the location of the natural inland wetlands.

Response: As defined by the National Policy Statement for Freshwater Management 2020 (NPS-FM), functional need means:
"*the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment*".

Under the NPS-FM, the Project meets the definition of specified infrastructure. This Project is regionally significant infrastructure which will provide significant regional benefits. There is a functional and operational need for the Project to locate in this particular environment. Transport and infrastructure networks must be continuous and relatively linear in order to perform their function and safely and efficiently connect to an existing transport and stormwater network. As a result, the proposed designation necessarily intersects with existing watercourses. The legal tests for the exemption under the NPS-FM, and in particular the 'functional need' tests as set out in *Poutama Kaitiaki Charitable Trust v Taranaki Regional Council and Ors* [2022] NZHC 629 and *Te Rūnanga o Ngāti Awa v Bay of Plenty Regional Council* [2020] NZHC 3388 are met.

Notably, several of the wetlands will be removed as a result of the suite of Greenway regional consents and therefore effects on those wetlands are disregarded for this Project. The effects on the remaining wetlands have been addressed in Section 4.3.3 of the updated Ecological Impacts Assessment of **Appendix G**.

Question 6 Appendix C
Please provide further information to detail how option 3A-5 was determined to be the preferred option.

Response: The identification of the preferred option was subject to a Detailed Business Case process which included a long-list to short-list assessment against agreed Project and Investment objectives. This process is set out in Figure 4 in Appendix C. The assessment was conducted and agreed with key stakeholders. A copy of the MCA assessment was not originally included in the Notice of Requirement documentation due to the level of detail it covered. However, is attached to this letter as **Appendix C** for your information.

Question 7 Appendix E
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.

Response: These Records of Title have been included in Appendix E.

Please note that Lot 802 DP 572424 has no title issued against it. The title plan on DP 572424 shows that the lot has been vested in Hamilton City Council. Due to the Lot 802 being Road, no title has been issued. The record of survey has been provided in Appendix E.

Question 8 Appendix E

Please provide details of the Consent Notices registered on the titles for Lot 53 DP 471831 and Lot 2 DP 330304.

Response:

- Lot 53 DP 471831 – The consent notice registered on Lot 53 DP 471831 was imposed as a condition on the resource consent to subdivide. There are two consent notice conditions:

    1. Imposes restricted use of Lots 50-53, 58 and 59 DP 471831 to the rural use existing at the time of application lodgement including the construction of any new dwelling.
    2. Requires a consent notice be registered on Lots 24, 64, 68, 69, 70 DP 471831 advising that development be in accordance with the Development Concept Plans forming part of the land use consent approved by HCC (Ref 010/2008/19195/2).

- Lot 2 DP 330304 – The consent notice registered on Lot 2 DP 330304 has imposed as a condition of resource consent to subdivide Part Lot 1 DP 89885. There are two consent notice conditions which relate to the requirement to register a consent notice on new Lots 1 and 2 advising the following:

    1. That the owner of the land ensures that areas shown as 'D, E and F' are used solely and exclusively as a landscape amenity area.
    2. That a private sanitary sewage pumping station serving the lots including the pumping station are the responsibility of the property owner(s).

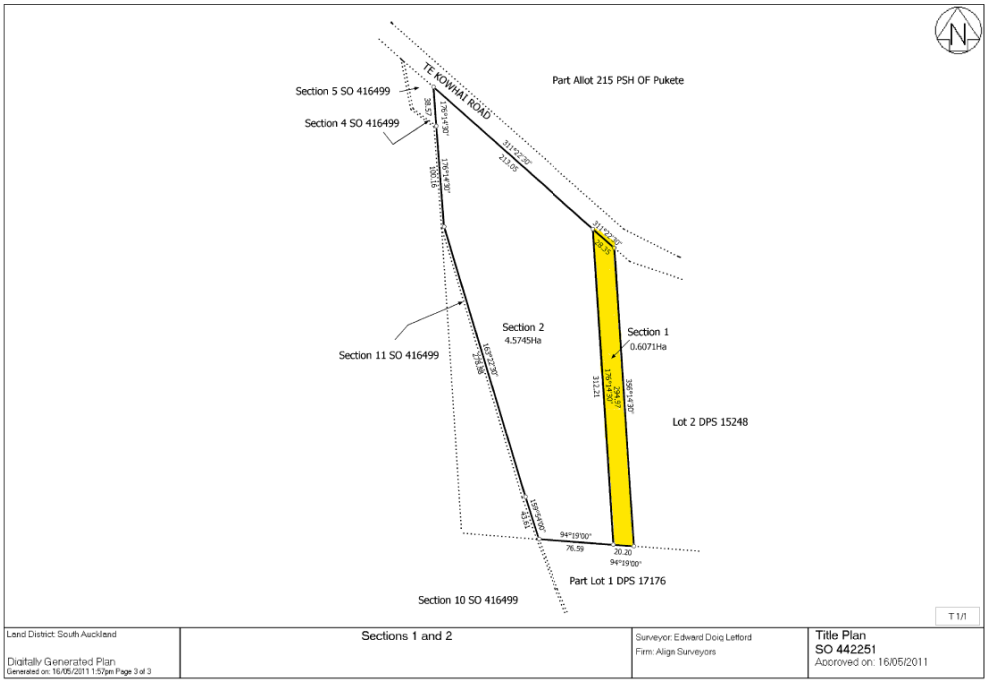
These consent notices have been included in Appendix E.

Question 9 Appendix E

Please provide details of the Part 4A Conservation Act 1987 (marginal strip) on Lot 1 DP 540282.

Response: Record of Title 905540 states that it affects part formerly Section 1 on SO 442251 which is now incorporated into Lot 1 DP 540282. SO 442251 was created as part of the Waikato Expressway (Te Rapa Bypass). The Marginal Strip reservation and restriction extends over 6071m^2 of land as highlighted in the Title plan shown below and included in Appendix E. This area is in place to maintain access to the Mangaheka drainage network (and where the Project's road/drain diversion is).

A copy of the Certificate has been included in Appendix E.



Question 10 Appendix E

Please provide details of the land covenants registered on the titles for Lot 50 DP 471831 and Lot 100 DP 542000.

Response:

- Lot 50 DP 471831 – There are two land covenants registered on Lot 50 DP 471831 which relate to:

    1. Servient Lot 13 DP 489151 and restricts / stipulates certain land uses and requires development to be in accordance with design guidelines set by the Grantee, Hamilton JV Investment Company Limited and Hamilton Porter JV Company Limited.
    2. Servient Lot 14 DP 489151 and restricts / stipulates certain land uses and requires development to be in accordance with design guidelines set by the Grantee, Hamilton JV Investment Company Limited and Hamilton Porter JV Company Limited.

- Lot 100 DP 542000 – There are two land covenants registered on Lot 100 DP 542000 which relate to:

    1. Servient Lot 52 DP 471831 and allows Hamilton JV Investment Company Limited the right to drain water as set by the Grantee, Hamilton City Council.
    2. Servient Lot 13 DP 489151 and restricts / stipulates certain land uses and requires development to be in accordance with design guidelines set by the Grantee, Hamilton JV Investment Company Limited and Hamilton Porter JV Company Limited.

These land covenants are attached in Appendix E.

Transport

Question 11 NOR 1.4.2 Future Growth

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.

Please confirm how the new trips have been loaded into the model and how the trips distribute into the network.

Response: The Waikato Regional Transportation Model (WRTM) is a strategic traffic model that reflects the growth anticipated within the City (including the Rotokauri Structure Plan). The Project has not altered the Rotokauri Structure Plan land use or network inputs but has worked with the outputs from WRTM.

Question 12 NOR Table 6 Reference 3.2 and Appendix N Table 8-1

Please confirm if the proposed local and collector roads will meet the minimum design criteria for road width.

Response: The local and collector roads meet the Operative Hamilton City District Plan (HCDP) requirements as described below.

The HCDP for 'residential land use' provides the following Legal road widths:

- Legal Local Road width = 20.0m
- Legal Collector Road width = 23.0m

The proposed Legal road width measurements from CAD are:

- Legal Local Road width = 20.0m
- Legal Collector Road width = 23.0m

Table 8.1 of the Transport Assessment – Appendix N has been updated accordingly.

Question 13 NOR Table 6 Reference 3.10 and Appendix N Table 8-1

Please confirm the width of the shared paths.

Response: Measurements for the following proposed path types are measured between the back of kerb:

- Footpath width = 1.8m - 2.0m
- Cycle path width = 2.0m - 2.2m
- Total width for active modes = 3.8 - 4.2m

Question 16 Appendix N 6.1.1 Traffic Modelling WRTM

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.

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.

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.

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.

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.

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.

Response: Based on the conversion of WRTM Model, AM, IP, and PM 2-hour peak values to AADT, the estimated trip generation from the growth cells (new residential areas) is approximately 43,400 vehicles per day. Daily volumes for key linkages are provided in Tables 6-1 and 6-2 of the Transport Assessment.

Question 17 Appendix N 6.1.2 SIDRA Intersection Modelling

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.

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?

Response: A small network assessment between these two intersections has not been undertaken as part of the Transport Assessment. However, a check was

completed in response to the s92 request. The results of the network and Transport Assessments are shown below:

Intersections	Distance between Intersections (m)	Transport Assessment Queue Lengths (m)	Network Assessment Queue Lengths (m)	Comment
Te Kowhai East Road / Tasman Road & Te Kowhai East Road	147	296	71	Queues reduce significantly when assessed as a network.
Te Kowhai East Road / Maahanga Drive / The Boulevard & Te Kowhai East Road	155	638	186	Significantly lower queues as part of the network compared to the individual assessment. Detailed phasing and timing can be determined at Detailed Design to manage queue lengths.

Question 19

Appendix O - 1.1.2 Te Kowhai East Rd LCSIA

Table 1-2 shows that the future traffic scenario fails both criterion 1 and 2 being 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.

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.

The risks associated with this level crossing are highlighted in the Stantec Road Safety Audit which need to be addressed in the design.

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.

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.

The risk of refusal is potentially high as the concession will be for Criterion 1, meaning that Criterion 2 must be met.

Please confirm what traffic information has been used during the LCSIA and confirm the status of the approval process.
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.

Response: Aurecon's LCSIA report (May 2023) and subsequent updated LCSIA based on the Level Crossing Risk Assessment Guidance (LCRAG) changing (December 2023) have been based on the following volumes for the four scenarios.

March 2023

- Updated Existing - 9,690 vpd & 32 trains
- Change in Use - 12,181 vpd and 32 trains
- Proposed Design - 11,826 vpd and 32 trains
- Future Score - 12,181 vpd and 32 trains

December 2023

- Updated Existing - 9,690 vpd and 31 trains
- Change in Use - 12,181 vpd and 38 trains
- Proposed Design - 11,826 vpd and 36 trains
- Future Score - 12,181 vpd and 38 trains

Updated Existing volumes based on the current AADT. Change in Use and Future Score volumes have been based on 2042 traffic volumes with a linear growth estimate between 2019 and 2051. Proposed Design volumes have been based on the opening day being 2032.

The recommendation from Aurecon's May 2023 and December 2023 reports state that if Criterion 1 fails, closure or grade separation must be considered. The Te Kowhai East Road LCSIA entered the SFAIRP process with KiwiRail where Beca provided a Memorandum explaining the effect of full closure of the Te Kowhai East Road roadway level crossing. The result from the SFAIRP process is that Te Kowhai East Road is to be widened to provide four-lanes of traffic and continuing to supply the east-west connection of Hamilton. The cost of four-laning the road and crossing is deemed grossly disproportionate to close this crossing as the cost of upgrading adjacent crossings sums to 4x that of widening. There is the opportunity to stage any proposed upgrades; however, as the 'Future Score' of Te Kowhai East Road is two-points away from meeting Criterion 1, the proposed recommendations do not make the crossing inherently unsafe. Analysis has also been conducted to prove that the proposed upgrades to Te Kowhai East Road are able to be accommodated by the network and adjacent intersections.

In February 2024 HCC progressed discussions with KiwiRail. This has resulted in agreement that the level crossing will continue to remain open for this Project

subject to the required safety mitigations being implemented. The updated SFAIRP report is attached in **Appendix O** KiwiRail Engagement and Deed of Grant.

Stormwater

Question 23 Appendix D - 5.2.3 Mangaheka ICMP

The Arthur Porter wetland is sized to manage the catchment upstream (this includes the two proposed property access cul-de-sacs connected to Arthur Porter Drive).

Please provide details of the Arthur Porter wetland sizing and location.

Response: Drawing CA-2101 has been amended to show the location of the Arthur Porter wetland. This has been included in the Appendix D – Design Report.

Arthur Porter wetland is an existing wetland designed to treat and attenuate runoff from an existing built-up catchment that includes small sections of the designated roads. The wetland is approximately 3.7ha in area and serves a catchment of approximately 69ha in area. This wetland was designed to TP10 and consented and constructed in 2014 prior to the Mangaheka Integrated Catchment Management Plan (ICMP) being prepared. For more details on the performance of this wetland, refer *Section 6, Water Quality Assessment (Beca, 2018),* Appendix C of the Mangaheka ICMP.

There are only approximately 500m of roads being designated within the Arthur Porter wetland catchment, most of which are existing roads. The proposed roading alignment moves significant sections of road into the adjacent catchment therefore, the amount of road carriageway draining to the Arthur Porter wetland will decrease (by approximately 400m^2) relative to the existing.

Section 5.2.3 of the Design Report has been updated accordingly.

Question 24 Appendix D - 5.2.5 Greenway Designation

The wetlands included in the proposed designation have been developed further from that shown in the Greenway NoR based on initial consultation with developers.

Please provide information on what was agreed in this consultation.

A fundamental assumption for the proposed roading designation is that the design assumes the Greenway is in place.

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.

Response: Detailed design and engagement between the Greenway design team and adjacent developers is occurring separately to the Rotokauri Arterials Designation process. Other than any outcomes agreed and made public, details of the

consultation between those parties in relation to the Greenway design is beyond the scope of the Rotokauri Arterial Network designation.

The Rotokauri Greenway is a necessary precursor to the construction of a significant component of the Rotokauri Arterial Network. Construction of the Rotokauri Arterial Network will not commence ahead of the construction of the pre-requisite parts of the Greenway corridor, as it is the first critical piece of infrastructure required to support urbanisation of the Rotokauri area. The Design Report has been prepared on this basis and Section 5.6 – Assumptions has been updated accordingly.

However, given the wetlands are sized to serve much larger catchments than the road corridor, it is confirmed there is sufficient footprint available to mitigate runoff from just the proposed roads should the need for this eventuate.

Section 5.2.5 of the Design Report has been updated accordingly.

Question 25 Appendix D - 5.4.1 Rainfall and Climate Change
Future design and consenting stages will need to consider the implications of flooding to climate change RCP 8.5.
How much bigger will the wetlands need to be to accommodate RCP 8.5 and will they fit within the designation boundary as proposed.

Response: HCC recognises that flooding to climate scenario RCP8.5 may not be fully contained within the designation (or within the associated Greenway designation) and nor is there a requirement for this to occur provided flood effects are appropriately mitigated. A large determining factor in the overall flood performance depends on the characteristics (particularly finished surface levels) of future subdivision / developments that drain to the wetlands. This information will not be available until future developments have been designed and the modelling updated. This will occur and will be required as part of future resource consent processes. It is noted this is currently being assessed as part of the fast-track consenting process for the Rotokauri Greenway and supporting infrastructure. These effects would be further assessed when resource consents are applied for the Rotokauri Strategic Infrastructure and wetlands.

There is no RMA or policy requirement that HCC apply RCP8.5 to be used for infrastructure design. HCC uses RCP8.5 to understand flood hazard across the city but not necessarily for design. Modelling of the Greenway prior to the fast-track process used RCP6 and tested RCP8.5 as a sensitivity scenario. Therefore, HCC will determine whether or not to adopt climate change to RCP8.5 for the purpose of design sizing as part of a future resource consent process.

The wetlands are sufficiently sized for the purposes of the proposed designation. Should future design and modelling show larger wetlands are needed as a result of HCC adopting RCP8.5 this will be negotiated with the adjacent landowner and or/ alteration to the designation as appropriate.

Section 5.4.1 of the Design Report has been updated accordingly.

Question 26 Appendix D - 5.5.3 Mangaheka ICMP

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 & c and D7a, b & c on the road designation drawings).

Wetlands D6a and D7c appear to be on land already flooded (refer drawing CA2103). Do the wetlands also mitigate for this loss of floodplain storage? Wetlands G4, G6 G7 and G8 are also on land already flooded (refer drawing CA2103). Do the wetlands also mitigate for this loss of floodplain storage?

Response: The volumes listed on the drawings CA-2602 and CA-2706 are based on modelling that does not incorporate the ground surface and changes to it (1D modelling) undertaken for the Mangaheka ICMP. Therefore, these wetlands do not account for floodplain volume lost.

Wetland D6a is large enough to accommodate the volume lost from the floodplain by its construction. This volume is 953m^3. Conservatively, if this volume were added onto the 100yr water level in the wetland then the depth would increase to 30.92mRL, 300mm below the top of bank level around the wetland.

Wetland D7C is outside the proposed designation, and it is expected that future developers will address flooding / loss of flood storage as part of their design and resource consenting.

The volumes shown on the drawings for the Greenway wetlands (G4, 6, 7, 8) are based on modelling that does include the ground surface (2D modelling) carried out for the Greenway designation. These wetlands therefore do accommodate the loss of volume on the floodplain.

Question 31 Appendix D 5.7.3 Road Drainage

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.

Are these locations limited to adjacent to wetland G4A and wetland 7B. if not where else are they needed?

Where practical the drainage pipes have been sized to receive runoff from future developments upstream of the road.

What solution is envisaged if the drainage pipes are not big enough. How will this solution be fitted within the designation?

Response: The use of open channels is consistent with the principle of providing naturalised drainage corridors where practical to do so. The use of channels adjacent to wetlands G4A and D7B are from a combination of this, the large flows involved, and the routes having very limited (flat) longitudinal gradients available. This means piping is not suitable in these locations. The only other location where pipes are not feasible is the upstream drain leading into wetland D7B.

The sizing of the pipes is subject to the design of development areas that they serve as well as the design of the arterial roads (in terms of finished surface levels, internal roading layouts, routing of network drainage, imperviousness, etc). If future design determines that the pipes are not large enough, then the options are:

i. Install larger pipes.
ii. Provide additional attenuation within the development (as has been done already in the RDL development opposite the Te Wetini intersection indicated on drawing CA-2604); or
iii. additional drainage pipes installed (twin systems); or
iv. use of open channels that are not within the designation but are part of the subdivision design with agreement between the developer and HCC; or
v. a combination of the above.

This will be agreed between the developer and HCC at the time of design. Section 5.7.2 and 5.7.3 of the Design Report has been updated accordingly.

Question 32 Appendix D 5.7.6 Wetland Footprint

The Mangaheka ICMP states that flood storage "*Volumes are indicative and development specific design and/or modelling shall be carried out to meet requirements*".
The volumes reported as "*flood storage required*" have been taken from querying the Greenway NoR earthworks model and reported 100yr ARI flood levels.
Please provide more details on this process.
Please provide the footprint area for each wetland.

Response: The term "indicative" recognises the modelling was representative of the status of the design done for the ICMP. This did not include subdivision and development layouts and terrain surfaces. Therefore, the modelling will need to be updated at a time when the subdivision is designed and resource consents applied for. Flood performance and the resulting volumes will need to be re-evaluated at that time.

The required volumes for the Greenway wetlands are not explicitly stated in the Greenway NoR report. Therefore, they were extracted from the Greenway NoR terrain model once the 100yr flood levels were overlaid. These volumes were then used to determine the wetland footprints for the designation designs.

It is also noted that the plan position of the wetlands may vary provided they remain attached to the same Greenway basin (i.e. the wetlands can move in plan, to a certain extent, along the Greenway and be aggregated or divided etc but must still link to the same Greenway basin and provide at least the same total volume as per the Greenway NOR). Therefore, the volume for Wetland G6 on the arterials drawings is a combination of Wetland G6 and 5 from the Greenway designation.

The base footprint of each wetland being designated is shown on the wetland drawings series CA-2701 through 2707. These are the areas at the permanent water level taken from the earthworks design surface. Beyond this, the overall wetland footprint areas, as contained by the "top of bank" are:

G4a = 8,270 m^2 (excluding the watercourse between 4a and 4b)
G4b = 4,935 m^2 (excluding the watercourse 4a and 4b)
G6 = 14,481 m^2
G7 = 16,470 m^2
G8 = 13,510 m^2
D6a = 8,672 m^2
D6c = 11,409 m^2
D7b = 10,713 m^2

Section 5.7.6(c) of the Design Report has been updated accordingly.

Question 33 Appendix D 5.7.6 Wetland Flood Storage Volumes

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.

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?
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?
Please provide the levels of the wetland bunds and the adjacent flood levels in the Greenway.

Response: The process will depend on the different hydrological timings involved. Runoff from the local catchment will likely fill the wetlands before the water level in the Greenway rises enough to inundate back over them. The Greenway basins are controlled by culverts at the downstream end of each basin. The restricted capacity of these culverts causes water to back up in the Greenway basins, filling from the downstream end in each basin and eventually water levels will spread over wetlands.

In terms of wetland G8, floodwater will back up/balance via the outlet pipe connecting the Wetland 8 to the Greenway as well as filling with its own catchment runoff. The pipe sizing and performance of this process will need to be proven in the future Greenway or wetland resource consenting process. However, needing a larger pipe to achieve this will not impact the land required, given the two features adjoin each other and the Greenway is relatively deep.

Flow will enter wetlands D6C and D7B by a mix of piped and overland flow down roads serving the wider subdivision areas. These have not been designed yet as the adjacent developments have not been designed. There is a low point upstream of wetland D7B. Drainage from this low point is provided by an open channel that can capture overflows from the road and convey it to the wetland. Alternatively, higher capacity catchpits could be used to capture runoff from the carriageway. This is subject to detailed design and does not affect the land required for the designation.

It is noted that final performance of the wetlands (including balancing 100yr flows captured and routed through the wetland and those not) is subject to future design and testing with hydraulic modelling as part of a resource consent application.

If culverts 9 or 10 become blocked, then water will back up and potentially overflow the road. Such overflows would not be directed into the wetlands. However, the earthworks grading to achieve this remains to be done in a future detailed design.

The levels of the Greenway will be determined during detailed design and not currently available to the Rotokauri Strategic Infrastructure designation process (the bund levels in the Greenway designation will likely be superseded during detailed design). The flood levels at the time of designing the Arterial Network within each Greenway Basin adjacent the wetlands are listed in Table 5-2 of the Design Report.

Section 5.7.6(d) of the Design Report has been updated accordingly.

Question 34 Appendix D Tables 5.3 and 5.4

Please confirm the volumes given in Tables 5.3 and 5.4 are the volumes above the permanent water level.

Response: The volumes given are the volumes above the permanent water level.

Question 35 Appendix D 5.7.6 Emergency Spillways

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.

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.

Where is the emergency spillway for Wetland G8?

Response: The spillway locations have been specifically positioned to minimise the significant footprint already needed to be set aside for the wetland areas.

Given wetland G8 is isolated and not directly adjacent to a watercourse (the nearest being the Greenway on the other side of the road), its overflow cannot be via a traditional broad crested weir type spillway. The overflow can be provided by a scruffy dome riser (potentially with a reserve, secondary riser) and with overflows beyond this spilling onto the road, overtopping this and flowing into the Greenway.

Section 5.7.6(d) of the Design Report has been updated accordingly.

Question 36 Appendix D 5.7.6 High flow bypasses

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.
Please clarify whether these will affect the quantity of land required for the designation.
Alternative arrangements will be needed for the Mangaheka wetlands where piped bypasses may not be feasible.
What alternatives are suggested?

Response: Provision of high flow bypasses will not affect the land required for the designation. This is based on the following points:

i. Referring to the Waikato Regional Council's Stormwater Management Guideline (TR2020/07), Section 8.5.7.2, 3rd bullet notes:

"Situations where there is no requirement for extended detention must consider velocities through the wetland such that biological function is not adversely impacted. In those situations, the maximum velocity of stormwater through the wetland shall not exceed 0.1 m/s for up to the 2 year ARI event and 0.5 m/s for larger storm events. Where extended detention is required there is no need for velocity reduction consideration as the 24 hour discharge time period ensures low velocities."

Extended detention is being provided in these wetlands therefore additional internal velocity considerations are not required.

ii. The RITS design guide, Section 4.2.17.17 notes:

"Peak flow assuming a water level 1/3 of the way between NWL and EDL should be less than 0.05 ms^{-1} in the WQV event to avoid sediment resuspension and stripping of biofilms".

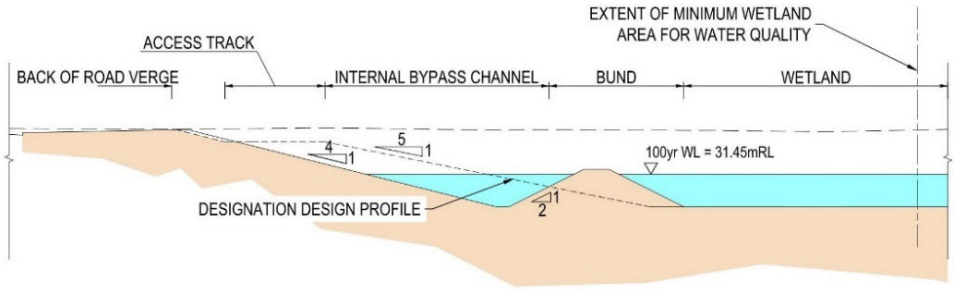
NWL is the normal water level and EDL is the extended detention level. Using wetland D6C as a test case, the velocity in the water quality event is very low (0.01m/s) due to the width of the wetland relative to the size of the water quality event.

iii. As reported the average velocity through the wetland G6C in a 100yr event is 0.48m/s as it crosses the forebay weir which is less than the 0.5m/s limit in WRC's guideline noted above for severe events.

However, there are options to provide for wetland bypasses should future design determine these are required. External bypasses can be provided by pipes for the Greenway wetlands (as the depth of the Greenway can provide suitable longitudinal fall) should the detailed design conclude these are needed.

For the wetlands in the Mangaheka catchment, these are designed as dual attenuation and treatment wetlands so bypasses have to be internal. Each of the Mangaheka wetlands D6C, D7B and D6A have been assessed for how an internal bypass could be provided. If the maintenance track were removed from one side of the wetland; and the 1V:5H batters in the current design steepened to 1V:4H,

then there is enough space freed up to provide an internal bypass channel running between the forebay and the outlet pool. This arrangement does not impact on the overall wetland footprint from a water quality design perspective and does not reduce the storage available in the wetland. A typical arrangement for D7B is shown below.



Based on the above, it is concluded there is sufficient land within the designation to address this issue. The above has been included in the updated Design Report in Section 5.7.6(d).

Question 37 Appendix D 5.7.8 Wetland Swales

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.

Does this measure mean the water quality benefits of the Greenway are double counted?

Response: Water quality measures are not double counted as there are no water quality measures within the Greenway itself. These are provided by the wetlands in combination with upstream devices (such as raingardens).

Question 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.

Please confirm how much carriageway width would be under water to convey the 100yr flow.

Response: This level of design is not available as it will be an output of the detailed design and flow width modelling. However, it is noted the RITS Section 4.2.3.4 states:

"The design must not result in ponding greater than 150mm deep and a velocity greater than 1m/s."

For 150mm depth at a 3% crossfall gives a maximum potential width of 5m.

Question 40 Appendix D 5.8 External Review

The stormwater design has been independently reviewed by Morphum

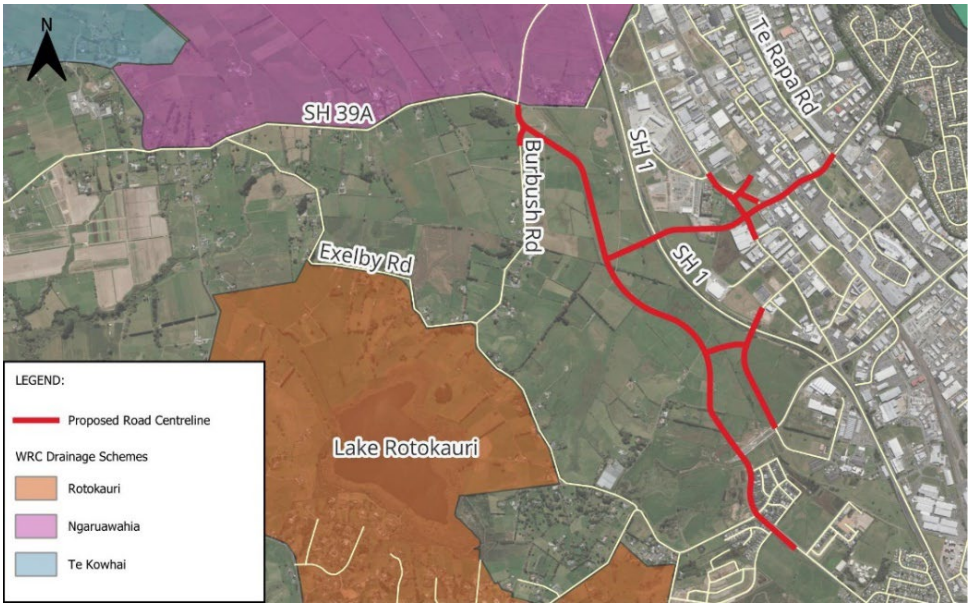
Environmental Ltd. It is noted that some of the issues raised remain items that will be addressed in future design stages.
Please confirm which issues will be addressed in future design stages. Are any additional designation conditions required to ensure these are addressed?

Response: The issues that will be addressed are centred on recognition that an effects assessment remains to be completed under a future regional resource consent process. These issues are listed in Section 5.9 of the Design Report.

No additional designation conditions are required to address these.

Question 41 Appendix D 5.9 Future Design Tasks
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.
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?

Response: Refer the below figure that show the WRC schemes downstream of the roads in both the Rotokauri/Greenway catchment and the Mangaheka catchment. This has been included in Section 5.7.13 of the Design Report.



No additional mitigation is required to be incorporated into the designation at this time. Additional discharge resulting from the change in surrounding land use will need to be assessed at the time of regional consenting between the landowner(s) and WRC.

Ecology

Question 46 Appendix G Sections 3, 4.1, 5.1, 6.1.2

Modified watercourses, farm drains and open water drains are referred to in various sections and shown on various figures in the EcIA 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.
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.
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 and WRP for existing watercourses, include the proposed designation, the proposed Greenway alignment and where watercourses were assessed. Please also provide the requested drawing as GIS shape files.

Response: Figure 3 has been updated to show the proposed Arterial designation and the existing Greenway designation.

Figure 5 of the updated EcIA now provides a comprehensive map that shows the artificial and modified watercourse alignments in, and within, 100m of the proposed designation alignment taking into account the proposed Greenway alignment.

Indicative watercourse classifications under the WRP are also shown in Figure 5. It is anticipated that these water course classifications will be revised as part of the regional consenting process for the construction of the Greenway and arterial network which will result in changes to the classifications in the future.

The GIS shapefiles will be provided electronically and are referred to as **Attachment 1** to this s92 response.

Question 47 Appendix G 6.1.3

Noting request 44 above, we are unsure of the interaction with the future Greenway with respect to the assessment of ecological effects.
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)?

Response: Sections 1.2 and 1.3 (new) of the EcIA have been updated to clarify the environment against which effects must be assessed. This includes clarification of the relevance and status of the Greenway at the time of construction of the Arterial network and which effects have been assessed.

Sections 3.1, 3.2.1 (including Table 2), 3.2.3 (including Table 4) and 4.3 have been updated to clarify that the "High" ecological values and effects relating to the Rotokauri Drain applies to the Greenway which will be constructed in place of the present Rotokauri Drain, prior to the construction of the Project. Any relevant adverse effects on these High ecological values arise from the Greenway, not the Project.

Question 50 Appendix G Sections 6.1.6 and 6.2.1 Wetlands, Paragraph 2 Avifauna assessment

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 Waiwhakareke, it was noted that Australasian bittern have been recorded from both habitats.

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.

Please also include an assessment of the NPS-IB provisions with respect to highly mobile fauna.

Response: Section 3.3.1 of the EcIA has been updated to reflect the likely presence and habitat preferences of Australasian Bittern within the project corridor.

Table 8 has also been updated to focus on species found within the alignment during the site visit and species record search as well as those found outside of the alignment near the lakes. A new Appendix 4 – 'Avifauna list' contains the remaining record of all other species not found to be present in the corridor or at the lakes.

A new column has been added to Table 8 which indicates whether species found within the alignment during the site visit and species record search as well as those found outside of the alignment near the lakes are deemed highly mobile fauna based on the NPS-IB.

Section 4.3.8 of the EcIA has been updated to address adverse effects on avifauna and includes an assessment of the NPS-IB provisions with respect to highly mobile fauna.

Question 51 Appendix G 7.1

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.

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. 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?

Response: A Zone of Influence and Scale of Assessment of bat effects is provided in Section 4.2 of the updated EcIA.

Long-tailed bat survey results (single bat pass) indicate that bats have no more than a transitory presence (commuter pass) in the Project footprint with no evidence to suggest that they are foraging above the rural drain network at present. Section 4.3.6 of the EcIA has been updated to include potential adverse effects on bat roosting, foraging and commuting based on this survey evidence. Section 4.3.9 has been updated to reflect operational effects.

Recommendations for management are set out in Section 5 of the EcIA.

Question 57 Appendix G 7.1.6 Loss of terrestrial and riparian vegetation

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.

How will the loss of terrestrial and riparian margin vegetation impact habitat availability and quality for lizards, bats, and birds?

Response: Section 3.2 of the EcIA has been updated to reflect the fauna values of the vegetation present within the corridor and is further discussed in Section 3.3.

Section 4.3 provides a revised effects assessment pertaining to the loss of native fauna habitat with recommendations included in Section 5.

Question 59 Appendix G - 8.1.9

Installing bat boxes has been proposed as a mitigation measure for the loss of potential bat roost trees.

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).

Response: Long-tailed bats do not roost within the Project corridor at present based on the bat survey. Specific mitigation measures for the loss of roosting habitat are currently not recommended however, a precautionary approach is applied whereby a bat survey and roost tree risk assessment should occur to inform the preparation of a Bat Management Plan to be included within the EMP. This will include measures to address any significant adverse effects on bat populations at the time of construction. Roost tree replacement and the interim use of bat boxes (if necessary) typically forms part of a Bat Management Plan suite of actions, however, based on the bat survey undertaken, this is not a measure expected to be implemented at this stage.

Question 60 Appendix G - 8.2

Section 8.2 incudes 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.
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.

Response: The EcIA has been updated to further clarify how the effects management hierarchy has been applied to this Project. This incorporates effects management terminology as defined in the NPS-IB and NPS-FM. The Ecological Effects Management can now be found in Section 5 of the EcIA.

Landscape/Visual

Question 69 Appendix H - Proposal/construction information
The sequence of construction is described in Section 3 as *"anticipated to progress in a staged approach from south to north, in conjunction with private land development through the Rotokauri area, rather than as one large piece of infrastructure works."*
In 5.2.1 of the assessment it is stated that "*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 being either under construction or having been constructed*". However, it is also included elsewhere in the assessment (5.3) that "*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*".
Between these three statements it seems that there is not a set assumption for the anticipated progress of surrounding development and the Greenway.
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.

Response: For the purpose of assessing the landscape and visual effects of the Project on the environment, the 'environment' embraces not just the existing environment, but also the future state of the environment as it:

a) might be modified by the utilisation of rights to carry out permitted activity under a district plan; and
b) as it might be modified by the implementation of resources consents where it appears likely that those consents will be implemented.

Accordingly, the assessment acknowledges the enabled land use changes that are expected to occur over the next decade or so. An exact understanding of that future environment cannot be determined, but there are strong directives, as described below, which can be relied on.

The Rotokauri Structure Plan requires the advanced or concurrent development of critical infrastructure to unlock the urbanisation planned in the catchment, including the designated Rotokauri Greenway corridor and the proposed Rotokauri Arterial Network. The Rotokauri Greenway is a necessary precursor to the construction of a significant component of the Rotokauri Arterial Network.

Urbanisation is under way in the growth cell with various consents lodged and several obtained by adjacent landowners and developers. Particularly relevant to the Rotokauri Arterial Network are the subdivision consents granted to RDL (197 lots) and Te Wetini Developments (5 lots). It is acknowledged that a degree of integration between HCC as the requiring authority and the development community is necessary during this transitional development phase. As such, it is anticipated the Rotokauri Arterial Network may be refined in co-ordination with adjacent landowners in the future.

The Landscape and Visual Assessment has therefore been prepared on the basis that the Greenway is under way or completed and urbanisation is occurring at the time the Rotokauri Arterial Network construction commences. Exact locations, extents, and staging of urban development cannot be determined at this point in time. Therefore, the exact influence of future development on landscape and visual effects of the arterial network cannot be determined but is assumed to broadly form part of the surrounding landscape context.

Section 4.2 of the Landscape and Visual Assessment has been updated to reflect this position. Supplementary details about the future environment for this assessment has been added in Section 4.6.

Landscape character effects, and Visual Effects, described in the revised Landscape and Visual Assessment remain valid and unchanged.

Changes to wording to reflect the expanded existing environment description has been included in the Visual Effects Analysis in Section 6.3. Where the existing rural character was previously described as *"likely to be <u>largely</u> intact"* has been changed to *"likely to be <u>partly</u> intact".*

Question 70 <u>Appendix H - 4 Existing Environment</u>
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.
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.

Response: Further details of the landscape features are provided in Section 4.4 of the revised Landscape and Visual Assessment.

Question 71 <u>Appendix H - 5.2.1 Temporary Landscape Effects on the Existing Rural Landscape</u>
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 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.
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.

Response: Further details about landscape features being removed, retained or altered prior to commencement of implementation of the arterial network has been included in the revised Landscape and Visual Assessment Section 4.6 *Future Environment.*

Section 6.2.1 *Temporary Landscape Effects on the Existing Landscape* and Section 6.2.2 *Landscape Effects on the Future Urban Character* have been updated to reflect the inclusion of the future environment description and expands on the construction effects on residual landscape features, and effects from implementation of stormwater infrastructure.

Landscape and visual effects described in the revised Landscape and Visual Assessment remain valid and unchanged.

Question 72 Appendix H - Natural Character Effects
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.
Please undertake a natural character assessment which assesses the anticipated impacts on the stream and watercourses that are likely to affected by the proposal.

Response: An assessment of Natural Character effects has been included in Section 5 of the revised Landscape and Visual Assessment.

Acoustic

Question 74 Appendix K
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.
Please provide confirmation on the source of the predicted traffic flows and if the traffic flows reflect the latest available data.

Response: The 'predicted traffic flows for 2030 (future existing scenario)' and the 'predicted traffic flows for 2050 design year (Do Nothing – future flow without project)' have been calculated based on publicly available data on mobileroad.org, including, measured traffic flow, road surface and speed limits. A 3% non-compounding increase per annum has been applied to traffic flow. This is typical practice.
The measured traffic data used to calculate the 2030 (future existing scenario) and 2050 design year (Do Nothing – future flow without project) in the assessment is

from various dates (depending on when the traffic flow was measured). It was the latest available data in 2020. Some traffic flow data may have changed since undertaking the assessment. Where the measured flow may have changed since 2020 it is highly unlikely that it would have changed to an extent that yields a significant difference. A doubling of traffic volume would be required to cause a 3 decibel increase, likewise a halving of traffic volume would be required to cause a 3 decibel decrease. A 3dB change (increase or decrease) would not result in any different outcome than is predicted in the assessment.

The 'Do Minimum – future flow with project traffic' was based on the flows provided by Beca for the Rotokauri Arterial. The data does not align with what is in the traffic report because the traffic report looks at flows through the intersection – whereas the acoustic assessment considers flows on sections of road between intersections.

Land Contamination

Question 75 Appendix L

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.

Please review HCC's HAIL register for additional relevant information and update the PSI report if necessary.

Response: The HCC HAIL register information has now been reviewed. HCCs HAIL register is held on a property address basis therefore some information provided by HCC was not relevant to the Project's alignment (i.e. where parts of property fell outside of the alignment). The review of HCC information was specifically for anything that was new or additional to the information held by WRC.

No new HAIL sites were recorded on the HCC HAIL register; however, HCC did hold additional relevant information against already identified properties where HAIL activities have occurred.

Sections 1.2 and 6.1 of the Report has been updated accordingly.

This additional information is set out in an updated Appendix C of the Preliminary Site Investigation (Contamination) report (Appendix L) (PSI). The additional relevant information held by HCC has also been incorporated into the HAIL map in Appendix A of the PSI.

Question 76 Appendix L

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.

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 Option 1 is adopted (i.e. separate NESCS contests and likely individual DSI's for specific areas) to ensure that a DSI is undertaken for all properties/HAIL areas

which the requiring authority considers may present a ground contamination risk.

Response: Generally, all identified HAIL or potentially contaminated land identified by the early-stage PSI proposed to be disturbed as part of the Project (and has not been investigated fully to date) will require further investigation in the form of soil sampling/DSI. It is also recommended that prior to scoping the DSI a review of the early-stage PSI is undertaken and depending on time lapsed, that a further desktop review be undertaken. A Suitably Qualified and Experienced Practitioner (SQEP) will confirm investigation requirements of the area of proposed works at the time detailed design is confirmed.

The PSI has not established any likely contaminated land areas that would not be able to be easily managed through industry standard and best practice investigation and management procedures. The PSI has not identified any contaminated sites or potential contaminated sites that are likely to be at a scale that would affect the design or placement of the alignment.

Section 8 of the Report has been updated to reflect this.

Question 77 Appendix L

The PSI states that the walkover/drive-through was limited by access in some areas.

Please confirm if a site walkover inspection along previously inaccessible portions of alignment is proposed as a later phase of works.

Response: An opportunity to view the general alignment area was undertaken as part of a multi-disciplinary site visit in December 2019. Most of the proposed alignment is rural farmland and was able to be viewed from vantage points during the site visit. A site walkover in line with Contaminated Land Management Guidelines (CLMG) (including previously inaccessible portions of alignment that were not able to be accessed as part of this PSI) will need to be undertaken during the detailed investigation scoping stage.

Section 3.4 of the Report has been updated to reflect this.

Question 78 Appendix L

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.

Please provide commentary as to whether Sites 18 to 22 should be included in the PSI.

Response: Sites 18 to 22 were originally included in the PSI based on the original alignment at the time of assessment. As the alignment has been refined through Project development, these sites no longer fall within the alignment, or within 100m of the alignment. Sites 18 and 22 have been removed from the HAIL map in Appendix A and associated tables of the PSI which now only reflects sites within, or within 100m of the alignment.

Section 3.2.1 of the Report has been updated accordingly.

Question 79 Appendix L

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.

Please provide commentary as to whether the following have been considered and whether investigation of these land uses is warranted:

- **A suspected farm dump located between 'Site 1 and 'Site 17'.**
- **A facility located at 71A Te Kowhai East Road.**
- **A Christmas tree farm located at 71A Te Kowhai East Road.**

Response: The suspected farm dump located between 'Site 1' and 'Site 17' has been assessed based on aerial photography review and recent information provided by HCC HAIL register. This site is now included on the HAIL map in Appendix A and identified as Site 12 in the PSI.

The facility located at 71A Te Kowhai East Road has been reviewed on Google Earth Imagery and Google Street view and has not been considered further in the early-stage PSI. Google Street view indicates it is a warehouse style building and it is understood more recent activities undertaken at this location include industrial training courses such as workplace health and safety i.e., working at heights.

The Christmas Tree farm is considered to not require further investigation as it is not a horticultural activity as intended by the HAIL classification A10. It is not 'more likely than not' that the Christmas Tree farm activity involves spraying or storage/usage of persistent pesticide chemicals.

In working through the s92 response, HCC has taken the opportunity to make several consequential changes to the NoR and supporting technical reports as set out above and including:

1. An update to the information relating to the most recent Hamilton's Urban Growth Strategy (2023) document:
    - Figure 1 of the Notice of Requirement.
    - Section 1.1.3 of the Notice of Requirements: Hamilton City Growth.
    - Figure 1-1 of Appendix D: Design Report.
    - Figure 1 of Appendix L: Preliminary Site Investigation (contamination).

2. The existing environment description in which effects must be assessed has been refined for clarity in the following documents:
    - Notice of Requirement.
    - Ecological Impact Assessment.
    - Landscape and Visual Assessment.
    - Design Report.
    - Preliminary Site Investigation (Contamination).

3. Due to time lapsed, an opportunity has been taken to check whether any changes have occurred to the Waikato Regional Council (WRC) Land Use Information Register (LUIR) since information was last reviewed. Appendix B of the Preliminary Site Investigation has been updated to reflect the most up to date information held by WRC LUIR.

4. Consequential amendments to Appendix D – Design Report (in particular, Section 1.6).

5. Significant amendments to Appendix G – Ecological Impact Assessment to reflect the updated existing environment and assessment in response to the s.92 request and improve the structure and readability of the report.

6. Appendix M – Consultation summary: Appendix B – Communications Register has been updated to include stakeholder engagement records since June 2023.

Conversations with Waikato Tainui will continue in relation to access over the undesignated 536m^2 of land required for the Project. This may result in further refinements to the drawing set and the NOR documentation which will be made prior to notification. Public notification should not proceed until the Requiring Authority confirms otherwise.

Nei aku mihi,

On behalf of Hamilton City Council as the Requiring Authority:
Tony Denton
Strategic Transport and Planning Manager
Infrastructure and Assets Group

Attachments

Attachment 1: Watercourse map – GIS Shapefiles (to be provided electronically)
Attachment 2: MCA spreadsheets (to be provided electronically)