9 December 2022

Waka Kotahi NZ Transport Agency
PO Box 1545
Wellington 6140
Via email: Caitlin.Kelly@nzta.govt.nz
Cc: environmentalplanning@nzta.govt.nz

Dear Caitlin,

Resource Consent Application:
Horizons Regional Council - APP-2021203231.00 & Greater Wellington Regional Council - WGN230122

Notice of Requirement:
Horowhenua District Council – 504/2022/22 & Kapiti Coast District Council - RM220254

Thank you for your resource consent application in regards to the Otaki to North of Levin Highway Construction Proposal lodged on 2 November 2022 with the above Councils. The application has been assessed and it has been determined that in order to fully assess the effects of the project additional information is required.

The additional information is listed below and is requested under Section 92(1) of the Resource Management Act (the Act):

MWRC – Surface water takes

1. a) The Applicant has outlined that part of the water demand strategy is to utilise water that becomes available to the project through existing consented takes on land that is acquired to allow construction of the O2NL project. The application has not outlined if and/or how the surface water allocation/abstraction will be reduced if water is acquired through these means. Can the Applicant please provide an estimate of how much water is expected to become available through this process? (The regional council can supply consents information to assist with this assessment)

   b) If additional water is expected to become available to the Applicant through the utilisation of existing consented takes on land that is acquired to allow construction of the O2NL project, can the Applicant please outline a strategy to reduce the amount of water taken and/or consented to be taken from the rivers to ensure an efficient allocation of water?

2. An audit of the allocation information for the Ōhau River has revealed that there is no water remaining in the core allocation. This change is due to uncertainty around the degree of surface water connection of a bore that is currently going through the renewal process. Until the degree of connection can be established, it is necessary to take a cautious view and assume that the bore will have a degree of connection to surface water that would result in the bore being managed under the surface water allocation framework, and the Ōhau River becoming fully allocated. Therefore, any proposed abstraction from the Ōhau River at this time will be treated as a proposed over allocation, and a non-complying activity (Rule 16-8). Can the Applicant please advise how they would like to proceed? Please note that there is currently capacity within the Waikawa Stream core allocation to accommodate an additional 409 m^3/day (i.e. the amount initially proposed to be taken from the Ōhau River). If the Applicant wishes to proceed with the application to take water from the Ōhau River, a full assessment of effects will be required.

3. How is the Applicant intending to manage and comply with the proposed condition RWT1? The response to this question should address:

    a. Will the Applicant install flow monitoring sites at the proposed abstraction points? Please note these will need to be up to NEMS standard.

    b. If monitoring sites will not be located at the point of abstraction (i.e. if the Applicant is going to rely on existing flow monitoring sites), can the Applicant please illustrate how the flows measured at the respective flow monitoring sites are representative of the flows at the points of abstraction? The response to this should consider the points highlighted under point 3.

    c. Will the rate of abstraction be scaled automatically or manually?

4. Can the Applicant please outline the proposed rate of take from each of the two abstraction points in the Manakau subzone? Is the proposed rate of take to be split evenly between the two abstraction points, or is the proposal to be able to abstract this full volume from either of the two abstraction points?

5. Section 14.4.8.2 of Volume II Supporting Information and Assessment of Effects on the Environment outlines that the water will be taken on a 'continuous trickle' basis. Presumably, this would mean that the maximum daily volume is abstracted evenly over a 24 hour period. Section 4.7.6.8 of Appendix Four DCR states that the daily volume will be taken over the course of 12 hours. However, in some rivers, the maximum abstraction rates sought allow the water to be taken in much less time. Given that storage will buffer the timing of the supply of and demand for construction water, can the Applicant please explain why the

water cannot be taken continuously over a 24-hour period (when the storage ponds aren't full), rather than sporadically in <12 hour periods as requested?

6. Appendix 4.7 of Appendix 4 (Design and Construction Report) states that '*the Project Aquatic Ecologist should provide advice as to the maximum rates of abstraction that can be sustained at any specific site without affecting instream values significantly*'. Has this information been provided? If not, could this be provided please? The assessment should consider the effects of the maximum rates of take sought in the wider context of the level of allocation in the relevant water management subzone and existing takes. This assessment should be done at the point(s) of abstraction and at the most sensitive downstream environment.

7. Further to point 6, can the Applicant please provide an assessment of the effects of the proposed abstractions on other water takes? This assessment should pay careful attention to the potential effects on other water takes in highly allocated areas, where the proposed instantaneous rate of take as a proportion of river flow is disproportional to the proportion of the core allocation being sought, and where there are losses to groundwater downstream of the abstraction point.

8. Can the Applicant please provide an assessment of the proposed supplementary allocation against Policy 5-17(b)?

9. Can the Applicant please illustrate how the proposed regime represents an efficient allocation of water? This should take into account all sources of water being sought (i.e. from all river systems and from both the core and supplementary allocation), the amount of proposed storage, and the amount of time expected to be in minimum flow restrictions (based on historical records).

10. Table 11 of Appendix 4.7 of Appendix 4 (Design and Construction Report) states that the core allocation will be limited to 3,900 m^3/day across all rivers and streams. Can the Applicant please explain how this will be managed, given the total volume being sought across all rivers systems is 5,900 m^3/day? This issue should also be considered in the response to question 9.

GWRC – Surface water takes

11. How is the Applicant intending to manage the operation of the abstraction to comply with the proposed condition RWT1? Can the Applicant please provide details on:

    a. What streamflow monitoring site is proposed to be used?

b. Will the rate of abstraction be scaled automatically or manually?

c. How frequently will abstraction settings be reviewed and changed if necessary to adjust for natural flow changes?

d. Is it intended that the take operate as a 24 hour trickle feed or at a higher intermittent (e.g. 12 hour on/off) rate? (refer to Q5 from MWRC for context)

12. What is the Applicant's assessment of the natural flow rates (L/sec) at SH1 and at Taylor's Road Bridge when flow at the GWRC monitoring site is measuring between 140 L/sec (the minimum flow) and about 500 L/sec (median flow)?

13. Can the take regime be operated and scaled in such a way that abstraction rate at SH1 does not exceed 10 per cent of stream flow at the most sensitive downstream reach (indicatively considered to be in the Taylor's Road Bridge area)?

14. Can the Applicant please provide any existing advice from the Project Ecologist about the impacts of the proposed regime in order to demonstrate no more than minor effects? This should be made with reference to:

a. the most sensitive downstream reaches where flows are naturally lower than at the point of abstraction;

b. flow depletion associated with the take operating at maximum proposed instantaneous rates and daily volumes;

c. how the change in the frequency, magnitude and duration of flows downstream would impact flow-dependent stream values and functions?

MWRC and GWRC – Terrestrial Ecology

15. Can the Applicant please describe the present state and condition of the areas to be restored within Te Ripo o Hinemata?

16. A draft Ecological Management Plan (EMP) was not included in the material lodged. Does the absence of the draft EMP impact on the conclusions reached by the bird and invertebrate experts as to adequacy of the mitigations discussed in their reports?

17. There appears to be an inconsistency between, (as an example) the high value of Kohekohe-titoki-karamu forest for lizards Table 4, Appendix J.6 versus a moderate value for the same forest reported in Table J.1a Appendix J.0. Is this apparent inconsistency as to the level of ecological value of habitats material to the magnitude of effects assessment and the degree offsetting required, material to the assessment?

18. What is the residual effect for the loss of "Gravelfield" habitat (TG1) and how will this loss be offset (if it is above the "low" threshold)?

19. For wetland transfers, if the transfer is unable to take place (as potentially implied by "*where needed and practicable*" per Para 203, Appendix J.0), does this increase the threshold of loss above "irreplaceable"?

20. How does the Applicant propose to manage pest plants across all lands under the jurisdiction of the Project at time of construction, including all potential pest plant species (environmental, agricultural, and amenity) where incursion or spread is exacerbated by the Project's activity (including inactivity on acquired lands or loss of control intensity as a result of the change in tenure)?

21. With reference to Para 205, Appendix J.0, how are the opportunities to maximise connectivity and quality to be implemented and is there a threshold of "maximise" below which the ecological mitigations are less than anticipated?

22. Why has percent survivorship been used for natural character and landscape plantings in preference to the simpler approach to using percent cover across all planting plans, particularly when it appears the intent is to integrate as much planting as possible to "maximise" connectivity?

23. A planting specification has not been provided as part of the application, therefore it is difficult to assess whether the statement that the proposed tree land offset (by number of trees) is the more conservative approach (as opposed to offset by area) (Para 269). Could the Applicant please provide additional information on this matter, including the anticipated planting spacing for tree and shrub species across the project?

24. The residual effect on the Australian bittern is assessed as "moderate" and includes potential ongoing mortality effects (Para 227, Appendix J.0). How are the potential ongoing mortality effects on Australasian bittern catered for in the proposed offsets?

25. Para 273, Appendix J.0 states "*Prior to the commencement of construction works, it is proposed to use compensation to achieve Net Gain...*" Is this intended to

imply that the planting at the offset sites will commence prior to construction, or that offsets will demonstrate net gain prior to construction?

26. What is the level of risk that the accidental discovery of contaminated land will affect the instigation of ecological mitigation, ecological offset, natural character and landscape planting?

27. How will it be ensured that there is sufficient retention of water in the open water offset area to achieve the biodiversity outcomes proposed?

MWRC and GWRC Water Quality

Technical Assessment K – Freshwater Ecology

28. Could the Applicant please provide further information/clarification on the linkage between the proposed clarity standard/trigger at the end of the sediment treatment devices (100 mms) and how this proposed clarity standard/trigger links to the proposed instream standard of no greater than a QMCI change of 15% during the operation of the project or greater than 20% at the completion of the project?

29. The proposed consent condition RFE4 requires if there is a decrease in the receiving environment of greater than 15% for QMCI that response action(s) set out in the EMP and ESCP are implemented so the trigger levels are no longer exceeded. Can the Applicant please advise:

    a. Is the implementation of the action(s) timebound? At what time period should we see an improvement above the trigger level? If this improvement is not meet, what options then become available in terms of managing or offsetting the effect?

    b. The condition requires a comparison to baseline data for the sites. Over what time period is this baseline data to be collected and how will assessment against the trigger be assessed i.e. how does the applicant propose to assess the monitoring data results against the baseline information collected? Given the proposed road placement, has the Applicant considered the use of upstream vs downstream monitoring sites to potentially account for different climatic conditions and the associated effects on macroinvertebrate communities during the baseline collection period vs the proposed construction period?

30. At Table K11 (Pages 71 – 75) one of the proposed management actions to manage effects is to "*avoid where practical, any instream works or diversion at*

key migration times of the fish species know to be present at a site". Could the Applicant please advise:

a. Does this apply only to upstream migration?

b. Will the information collected through eDNA will be used to define those species, or if surveys will be undertaken at the site?

c. Can the Applicant please also provide a calendar of expected species in the works envelope and what the key migration period is for each of the species?

31. At Paragraph 16 (Page 7), where ephemeral waterways have permanent habitat upstream, the application notes that *"may use a flexible baffle design to facilitate fish passage at times when there is surface water following"*. Is the proposal to allow this?

32. The technical assessment for the Freshwater Ecology uses the EcIAG matrix for the assessment of effects. While this may be a useful tool to inform the effects of the proposal, this method also relies on defining a time period over which effects may be seen and then defining them as temporary, short, medium, or long term. At Para 169 (Page 91) the effect is considered in relation to the effects and associated timescales that have been developed within the EcIAG. In river systems timescales are different to terrestrial environments, timescales for freshwater should be based on those aquatic organisms that would be expected to be found in the receiving such as macroinvertebrates and fish species. For example, redfin bully has an average lifespan 3 years, inanga usually 1 year. A short-term temporary effect can be up to 5 years, and a long-term temporary effect up to 15-25 years with the use of the EcIAG timescales. Does the Applicant consider that these are appropriate for freshwater ecosystems which in general have a shorter timescale over which effects can occur and also recover from? Considering the freshwater species that are expected downstream of the alignment and their lifespan would this change the nature of the assessed effect/s?

33. The offsetting methodology has used the SEV to calculate the value of the lost stream length and the volumes required to offset the effect. In order to fully understand the proposed quantum proposed to be offset and ensure a net gain, could the Applicant please clarify the following points in relation to paragraph 77 of the Freshwater Ecology Assessment:

a. Para 77(c) – the Vshade measure is considered high for planted riparian zones greater than 20 metres, however, anything lower than this was given moderate. Was this same moderate rating applied to the widths that are lower than 5 metres (between the 5 and 3 metre distance)? At a riparian zone of only 3 to 5 metres will the Applicant be able to have

vegetation shading the stream that could be considered moderate especially given the limited space to enable the growth of larger shading trees? Would it be more appropriate for 20 metres to be high, 15 – 20 to be moderate, and then 3- 5 metres to be either low or low-moderate?

b. The same questions also applies to 77 (d), (e), and (h)? In this regard should there be a greater number of categories that reflect the various riparian widths that are proposed to be used? This to reflect that as the riparian width becomes less the benefit to the stream reduces and that at the lower distances especially at three metres the improvement is less than say at 15 metres?

34. Para 142 (d) (Pages 65-67) makes a number of references to meanders being created into the new stream channels and that these are included through into the Volume III drawings. Some of the wording in this section of the report infers that they should occur. Can the Applicant please advise as to sections 142 (d) (i to vii), which are proposed to definitely occur and for the others which require more detailed design to occur?

35. Table K12 (Pages 77-81) - refers to works for a number of the ephemeral channels with the wording *"undertake works when no water is present to minimize risk of sediment being transported to downstream freshwater habitats"*. While this is an effective way to avoid the associated effect, can the Applicant please advise if this is taken through into the proposed consent conditions, the ESC measures, and is possible in a project of this scale?

36. In relation to fish passage there appears to be some disconnect between Technical Assessment K and the reference to the "Catchment Culvert, Swale and Pond/Wetland Schedule" VIII in the proposed consent conditions? Technical Assessment K refers to stream name/code 39.2, 34.5, 27.1, 9, 6.1. This does not appear to be referenced in Catchment Culvert, Swale and Pond/Wetland Schedule" VIII. Can the Applicant please clarify?

37. For fish passage at temporary structures, it is observed that fish passage will only be provided if the structure/diversion is in place for a period more than seven days. Technical Assessment K does not mention a timeframe which fish passage cannot be provided for. Can the Applicant please expand on why seven days is considered appropriate?

38. Para 158 (Page 82) refers to a discussion in the next para – the para is missing, could this please be provided?

39. At Para 168 (Page 91) it is noted that deposited sediment effects after effects management will be moderate for Stream 17 and 19. Does the Applicant propose

to undertake additional Sediment and Erosion Control measures within these catchments to further reduce these effects?

40. Para 173 (Page 192) states that pre-construction, baseline monitoring should begin as soon as possible to capture potential site variability. Does the applicant have a timeframe around when this monitoring will start? The proposed consent conditions rely on this information in the development of triggers/standards for effects in stream so having the natural variability accounted for in these triggers/standards will be important.

41. Para 194 (Page 105) states that culverts that have been designed based on the stream stimulation culvert design will also have a riparian zone upstream and downstream that is planted. This is proposed to be for the length of stream within the designation. Would the Applicant please identify the condition that addresses the intent of Para 194?

42. Para 209 (Page 117) refers to the potential for offsetting for outlet structures which discharge stormwater from treatment facilities, but that this will not be confirmed until detailed design. However, the linkage to ensure this occurs within the conditions is not clear. The revision of offset measures in proposed condition REM11 allows for revision though conditions ROC18 (which is assumed to be REM18) however, the condition does not specifically include the potential offsetting of the outlet structures. Could the Applicant please expand on how this proposal in para 209 is reflected in the conditions?

43. Para 214 (Page 118), in relation to the creation of diversion channels could the Applicant please provide information on how they will ensure that any stream channels created as a part of the project will ensure that flows especially during low flows remain at the bed level and that flows do not completely go below the upper bed layer?

44. Para 228 (Page 121), refers to riparian planting of the streams to mitigate light pollutions effects, and in particular the four streams in close proximity to the artificial lighting. Could the Applicant please provide the reference in the proposed consent conditions that reflect this riparian planting to help manage this effect on flying insects?

Technical Assessment H – Water Quality

45. Regarding Para 50 (Page 26), as all of the appeals have been determined by consent order and are deemed operative, could the Applicant please undertake an assessment of:

a) The current state of the waterways affected by this proposal within the Greater Wellington Region in comparison to the attribute states (objectives) in Table 3.4 River and Streams, in Objective O19 of the Proposed Natural Resources Plan (PNRP)?

b) How the attribute states will potentially change in comparison to Table 3.4 as a result of the proposal?

c) Policy P79 of the PNRP, noting that this policy excludes discharges from operational stormwater, but not from other works such as earthworks.

46. At Para 52 (Page 27) it states, "*Based on monitoring results, we have assumed a lower hardness value of 20 mg/L for the Manakau, Waiuiti, Waikawa, Kuku Streams and Ohau River*." Referring to the monitoring data provided with the application, could the Applicant please advise if the Manakau and Waiuiti more closely align with the default of 30 mg/L?

47. Figure H.3 (Page 40) would the applicant please be able to clarify which of the colours in the graph represent flows vs turbidity?

48. Building on the capture of baseline information identified in Technical Assessment K at Para 118 it is noted that catchments B (Waitohu), C (Waitohu), I (Mangahuia) are identified as a high priority for monitoring due to the risk of sediment release from earthworks and high ecological values. Has this recommendation been carried through into any proposed monitoring regime for the proposal?

49. At Para 155 (Page 59) it is noted "*for receiving tributaries in catchment P, M and I the total impermeable area indicates a potential risk of adverse ecological effects from changes in hydrology or temperature for these streams. The risk is partially mitigated with the use of the proposed stormwater treatment devices and could be further mitigated with infiltration*". Is this further mitigation proposed to be undertaken?

MWRC and GWRC Water Sensitive Design

50. Section 20 of the Technical Assessment H (Water Quality) states that over 95% of the highway will receive some form of treatment, the drawings provided do not clearly show the areas that are not receiving treatment. Could the Applicant please provide a clear plan(s) showing areas of the proposed road which will not receive full stormwater treatment and comment where these may be in proximity to freshwater receiving environments?

51. Could the Applicant please confirm that the "*Total Pond facility footprint area*" column from the relevant table on Drawing number: 310203848-01-300-C3001 correlates directly with the light blue stormwater wetland polygons from the drainage layout plans?

52. Could the Applicant please confirm that space for batter slopes (which reflect topography), bunds and maintenance access has been allowed for in the nominated treatment areas and that the polygons will support a functional wetland form (shape).

53. Could the Applicant please confirm that no proposed stormwater infrastructure where infiltration may occur (unlined swales and infiltration systems) will be intersecting any area of contaminated soil which could mobilize hazardous substances into groundwater?

54. Could the Applicant please clarify the sizing methodology for wetlands and comment on target rainfall events and inclusion of extended detention to support intended wetland function?

55. Could the Applicant please advise as to what consideration has been given to the influence of vegetated swales on stormwater volumes (retention of runoff in small rainfall events) and whether this has implications for the detailed design and operation of downstream constructed wetlands?

56. Could the Applicant please confirm that shallow groundwater levels will not impact the construction or operation of proposed lined treatment wetlands?

57. Could the Applicant please confirm whether the wetland forebays will be lined and could therefore draw down between rainfall events which could lead to further flows not reaching the wetland and potentially infiltration of dissolved contaminants to groundwater?

58. Could the Applicant please provide additional information on the current typical online arrangement which shows the forebay being online to all inflows which is likely to result in accumulated contaminates being re suspended and flushed through to soakage area?

59. Could the Applicant please provide additional information on the reasoning for including attenuation of runoff to predevelopment flowrates in locations where discharge is directly to soakage? It appears that attenuation could be required where infiltration rates limit the overall infiltration volumes during rainfall events but it appears there is no requirement for infiltration to align with a pre

developed flowrate such as is required where discharge is to an open stream or similar receiving environment?

60. Could the Applicant please provide justification for wetland design arrangement which separates the sediment forebay, wetland body and detention basin using bunds and pipe connections, these features could be better configured to reduce maintenance requirements and the risk of blockages?

MWRC and GWRC – Hydrogeology and Groundwater

Technical Assessment G - Hydrogeology and Groundwater

61. The Technical Assessment G at Paras 188 and 189 states;

188. The modelling indicates that dewatering to install Culvert 4 would potentially lower the groundwater below the seasonal lowest level in two wetlands, one of which is expected to have a high dependence on groundwater.

189. Dewatering to install Culvert 11 is unlikely to reach depths that would result in a more than minor drop of the seasonal lowest groundwater level beneath the wetland. Consequently, any effects of dewatering can, in my opinion, be considered 'less than minor'.

62. Could the Applicant please clarify on what basis the conclusion in Para 189 was reached, and is this conclusion in relation to both Culvert 4 and Culvert 11? The question is asked considering the predicted drawdown in addition to seasonal oscillation of groundwater on the identified wetlands (EWG5 and EWG4) of 0.8 m and 0.5 m, respectively (ref. Appendix H)). If the response to the question is because the effect is transitory (such as inferred in Paras 230 and 231), please provide further information on the maximum timeframe that the maximum anticipated drawdown could occur, and coordinate a joint response with the project ecologists?

63. <u>Groundwater levels in the soakage sites</u> – A key aspect for groundwater soakage is whether the sites have capacity to take more groundwater during periods of high groundwater levels, noting that the 2022 winter has been one of the wettest on record. Could the Applicant please conduct Eigen modelling for each of the soakage site including climate data through this 2022 winter?

64. <u>Groundwater levels this winter</u> – Could the Applicant please update the Eigen model to include this winter and present the same plots as shown in Appendix G.1.B?

MWRC and GWRC – Erosion and Sediment Control

65. Auckland Council Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region (GD05) provides 'best practice' erosion and sediment control tools for earthworks sites and has been adopted by Horizons Regional Council and Greater Wellington Regional Council (through updates to the Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region) as the best practice guidance document for erosion and sediment control. Any deviation from GD05 standard requires sound technical justification as to why the deviation could be considered best practice. Could the Applicant please provide further technical justification around the use of the Waka Kotahi Erosion and Sediment Control Guidelines for State Highway Infrastructure, September 2014 (Waka Kotahi Guidelines) including an assessment of how expected infiltration will impact on erosion and sediment control devices?

66. Could the Applicant please provide further information on how devices constructed in accordance with Waka Kotahi Guidelines are going to be monitored for performance and how erosion and sediment control measures are going to be adjusted if there is poor performance below what is being achieved with GD05 compliant devices? This may include a change from the Waka Kotahi Guideline's devices to GD05 measures as best practice.

67. Could the Applicant please provide further information and justification on the use of clarity as a performance measure on site, and how this relates to actual potential sediment discharge (as calculated in the USLE and relied upon when assessing sediment discharge effects) as opposed to actual measurements through turbidity and total suspended solids?

MWRC and GWRC – Air Quality

68. To provide a better understanding of how discharges from construction activities will be managed and the potential for residual effects on nearby receptors, could Applicant please provide a copy of the draft Construction Air Quality Management Plan (CAQMP)?

69. Could the Applicant please clarify how much water will be required for dust management and whether sufficient supply is available for the project?

70. Could the Applicant please identify the properties that could potentially require upgrades to the roof-water collection system to mitigate the effects of dust deposition?

71. Could the Applicant please provide further information on the procedures and mitigation measures that will be used to manage air discharges from contaminated material, should it be encountered during construction?

MWRC and GWRC – Natural Character

72. Offset and natural character planting is '*subject to landowner approva*l' as describe in the Legend on the Planting Concept Plan: Indicative Typology Sheets 1 -18 and Planting Concept Plan RMA Purpose Type 1 -18. Could the Applicant please provide additional information as to how '*subject to landowner approva*l' is factored into the assessment and how does it relate to the mitigation of effects?

73. A draft Ecological Management Plan (EMP) was not included in the material lodged. Could the Applicant please provide a copy of a draft Ecology Management Plan and Landscape Management Plan (or a combined plan) to address the question raised in Question 72. above?

MWRC and GWRC – Hydrology and Flooding

<u>Modelling of the 0.5% Annual Exceedance Probability (1 in 200-year Average Return Interval) Flood Event</u>

74. Could the Applicant please provide information (including a plan of the extent of the modelled flooding) on the effects of the works on flooding during a 0.5% AEP (1 in 200-year) flood event, including the impacts of climate change?

75. Could the Applicant please provide information to support the statement in Para 55 of Technical Assessment F, that "*The 1:100 AEP RCP 6.0 to 2130 is significantly larger than the 1:200 AEP current climate…*"?

<u>Quantification of Effects Outside the Designation</u>

76. Could the Applicant please provide information on the distance beyond the designation that effects have a non-zero quantity?

77. Could the Applicant please provide additional information on the changes in flooding outside the designation for all of the events modelled? This should include:

a) The maximum increase or decrease in flood depth or level at each area of flooding?
b) The quantum of the area flooded under the existing configuration, the quantum of the area flooded with the concept design in place, and the increase or decrease in the quantum of the area flooded. If there are "overs and unders" at any particular location where flooding occurs, then these should be quantified and reported?
c) The maximum increase or decrease in velocity at each area of flooding?

78. Could the Applicant please provide information on the assessment of the changes to flooding of buildings? Where the model results show any change to flooding depth or extent at a building whose perimeter intersects the floodplain extent for any of the events and scenarios modelled, up to and including the 0.5% AEP (1 in 200-year) flood event + climate change, please provide:

a) the maximum flood level at the building under the existing configuration, with the concept design in place, and the increase or decrease in the maximum flood level at the building?
b) the percentage of the perimeter of each building that overlaps the floodplain under the existing configuration, with the concept design in place, and the increase or decrease in the percentage of the perimeter of the building that intersects the floodplain?

<u>Flood Hazard – depth and velocity</u>

79. Could the Applicant please advise where the changes in flooding that are referenced as best practice in Para 90 of Technical Assessment F are placed with respect to the designation applicable to each project referenced?, i.e. are the changes upstream of the designation, within the designation, or downstream of the designation?

80. Could the Applicant please confirm the basis for referring to the examples provided in Para 90 of Technical Assessment F as "best practice"?

81. Could the Applicant please provide an assessment of flood hazard (which is a function of depth and velocity)?

Geomorphological Assessment

82. Could the Applicant please provide a geomorphological assessment of the relevant watercourses to assess compliance with Policy 25 (f) of the PNRP?

Threshold for Changes in Velocity

83. Could the Applicant please provide additional information on the method used to determine that changes in velocity are minor and, if applicable, please provide quantification of the threshold values?

Freeboard

84. For all bridges, culverts, stock underpasses, pedestrian and cycleway underpasses, possible property access routes, and Shared User Path bridges and culverts, could the Applicant please provide information on the quantum of freeboard achieved and the extent to which the individual component complies with the requirements of the current Bridge Manual or other applicable standard?

Effects at Te Ripo o Hinemata

85. Could the Applicant please provide an assessment of the effects of the works at Te Ripo o Hinemata on flooding?

Surface Roughness

86. Could the Applicant please provide plans showing the surface roughness applied to the "Baseline" and "With-Scheme" Models in more detail? The plan provided in Appendix E of the "Baseline" report is of too greater scale to confirm the modifications made for the "With-Scheme" model are appropriate for describing the effects. This should include information on the locations of scour protection.

87. Could the Applicant please provide further information to support the statement in section 2.8, Para 3 (Page 16, Appendix F.2) of the "With-Scheme Report", that the impact of scour protection on modelled water levels is expected to be minimal, or provide an assessment of effects that explicitly includes scour protection works?

Blockage (Page 16, Appendix F.2)

88. Could the Applicant please provide the findings of the blockage risk assessment described in section 3.3 of the "With-Scheme" report?

89. Could the Applicant please describe the method that was used to assess the effects of the debris arrestors on flooding, and the outcomes of the assessment?

90. Could the Applicant please provide further information on the effects of blockage on water levels, velocities, and flood extents, to supplement and provide further detail for the information in Para 3 of Section 3.3 of the "With-Scheme" report?

Version of Bridge Manual

91. Could the Applicant please provide information on the differences between the version of the Bridge Manual used for the assessment and the current version that are material to the project, and updated information for the assessment of effects that is consistent with the current version of the Bridge Manual?

Borrow and Fill Sites

92. It appears that some of the borrow and fill sites are located within floodplains. Could the Applicant please provide further information on the effects of the borrow and fill sites on flooding; especially as it pertains to the damming and diversion of flows; including:

- The areal extent to which the floodplain overlaps each borrow site;
- The areal extent to which the floodplain overlaps each fill site;
- Current estimates of borrow volumes for each borrow site; and
- Current estimates of the volume of fill that is below the flood level for each fill site.

Shared Pathway

93. Could the Applicant please advise as to the basis for determining the appropriate level of service for locations where the Shared User Path crosses a transverse drainage feature?

94. Could the Applicant please confirm the level of service for each location where the Shared User Path crosses a transverse drainage feature?

MWRC and GWRC – Contaminated Land

95. Could the Applicant please provide further information on the procedures and mitigation measures that will be used to manage discharges to water, and to land that may enter water, from contaminated material, should it be encountered during construction?

96. Could the Applicant please advise how any additional consenting requirements for this matter will be reflected in the relevant management plans?

HDC – Traffic and Transport

97. Section 18.6 of the AEE notes that the works to relocate and improve the Tararua Road and existing State Highway 1 intersection are partly within the existing SH1 designation (Designation D2, 'State Highway 1). Paragraph 21 of the Final Technical Assessment A – Transport confirms that the project includes improvements at this location, however, there is no detail provided in the geometric design of the proposed intersection/level crossing upgrade works at this location.

    Could the Applicant please provide details of the geometric design for the (existing) SH1 / Tararua Road intersection?

98. At paragraph 3.3.3, Final Technical Assessment A – Transport, reference is made to the East West Arterial (EWA) which is acknowledged to provide additional capacity in the transport network.

    Could the Applicant please confirm that the EWA could occur without Ō2NL? What are the traffic and transportation effects that would flow from the EWA not being established once O2NL is constructed?

99. The Final Technical Assessment A – Transport (paragraph 46) indicates that the East West Arterial (EWA) connecting the central part of Tara-Ika to Arapaepae Road has only been assumed to be in place with Ō2NL and is not part of the Do-Minimum, however this appears inconsistent with the demand assumptions (at paragraph 196, the Transport Assessment states that side road delays could restrict the amount of development that could occur within Tara-Ika).

    Additionally, the Final Technical Assessment A – Transport (paragraph 164) describes infrastructure upgrades assumed to take place in the Do-Minimum and

specifically states (paragraph 164g) that this includes local road improvements associated with Tara-Ika.

Could the Applicant please explain why the East West Arterial (EWA) connecting the central part of Tara-Ika to Arapaepae Road has only been assumed to be in place with Ō2NL and is not part of the Do-Minimum?

100. Could the Applicant please confirm that the Tara-Ika development can occur irrespective of or prior to Ō2NL, albeit with potential restrictions upon development if assessments identify capacity / safety issues on the road network?

101. The Final Technical Assessment A – Transport (paragraph 113) provides a breakdown of trip patterns for vehicle trips heading north along SH1 from a point to the north of Ōtaki. This is based on TomTom GPS data.

Could the Applicant please provide sampling rates for the TomTom travel time data, and a comparison provided between the TomTom data and the modelled travel times (for 2018)?

102. Could the Applicant also please provide further information and detail with regard to existing patterns of travel through and within the area?

103. The Final Technical Assessment A – Transport (paragraphs 188 – 193) suggests that travel times will increase significantly in the Do-Minimum scenario. Table A.7 compares observed TomTom travel time data for 2018 with modelled data for 2039. Such a comparison may introduce differences which are attributable solely to the reliability of the observations (sampling rates etc) and/or the reliability of the modelling.

Could the Applicant please provided information with regard to the TomTom sampling rates, or the comparison should be between modelled data for 2018 and that for 2039?

104. Could the Applicant please provide information in relation to the overall changes in travel distances and CO_2 emissions as a result of Ō2NL?

105. The Final Technical Assessment A – Transport (paragraph 219) describes walking and cycling facilities to be provided associated with Ō2NL but the only references to Tara-Ika are to connections at Queen Street East and Tararua Road, and there is no reference to the pedestrian/cycle overbridges shown by the Tara-Ika Masterplan. Furthermore, the walking and cycling benefits of the SUP (Transport Assessment paragraphs 263 – 266) make no mention of the connectivity to Tara-Ika and the proposed E-W connections across Ō2NL.

Could the Applicant please comment on the treatment of Tara-Ika and the provision of east-west connectivity (vehicular, walking, cycling) both with and without/prior to Ō2NL?

106. Could the Applicant please provide further information and detail with regard to existing patterns of travel through and within this area?

107. The modelling indicates that movements between the south and the Levin CBD will route via Tararua Road (rather than exit at the Taylors Road intersection and travel by means of the existing SH1).

Could the Applicant please clarify that the route which traffic is expected to take between the Levin central area and Ōtaki / South will be via Tararua Road and that this will be the new point of entry to Levin from the south?

108. It is understood that the baseline growth assumption relates to the adoption of the 75th percentile growth scenario. The Final Technical Assessment A – Transport states (paragraph 44) that sensitivity testing has been undertaken for a 95th percentile growth scenario, but no results have been presented.

Could the Applicant please provide information in relation the 95th percentile growth sensitivity tests?

109. The Final Technical Assessment A – Transport (paragraph 112) suggests that current volumes have recovered close to pre-Covid (2018) levels and therefore the 'existing' volumes remain relevant.

Could the Applicant please provide a more detailed analysis of changes in traffic volumes through this period and also comment on the effects of Covid upon forecast traffic volumes for 2039, and whether these will be lower as the result of losing two years of growth?

110. The Final Technical Assessment A – Transport (paragraph 256) indicates that modelling of conditions at the (old) SH1/Tararua Road intersection using SIDRA rather than SATURN, changed the forecast level of service from E to B.

Could the Applicant please comment upon the reliability of intersection modelling in SATURN, given the use of SIDRA to identify a lower level of service for the (existing) SH1 / Tararua Road intersection?

111. Could the Applicant also please provide more information in relation to what this means for the reliability of the SATURN-based delay forecasts elsewhere and for queue lengths and delays at this critical intersection?

112. The Final Technical Assessment A – Transport (paragraphs 27 and 268) claims that *'investment in more frequent and attractive public transport options for surrounding communities'* may arise from the 'old highway' being quieter.

Could the Applicant please provide evidence that existing public transport services are constrained by travel conditions within the existing road network?

113. The Final Technical Assessment A – Transport (paragraph 32) suggests that a detailed construction methodology will be provided with a Construction Traffic Management Plan (CTMP). Some further information is provided at paragraphs 282 – 300. While it is acknowledged that construction logistics are necessarily coarse at this stage of project development, it is expected that further information should be provided in the form of a draft CTMP as part of the application, to provide a reasonable assurance that effects during the construction phase are able to be managed.

Could the Applicant please provide a draft CTMP as part of the application material?

KCDC – Traffic and Transport

114. Could the Applicant please explain why the decision has been made to provide one option for Taylors Road (southern interchange) when discussions and communication with KCDC have not been closed out?

115. Could the Applicant please provide more information on the problem that the Taylors Road interchange is trying to solve, the alternatives assessment undertaken for the Taylors Road location and the basis for decision making?

116. Could the Applicant please provide evidence of how the community and stakeholders were engaged with in reaching the proposal for Taylor Road access that has been presented in General Arrangement Plan – Indicative Sheet 18?

117. Could the Applicant please comment on the safety, operations, and maintenance requirements for the Taylors Road linkage as the alternative arterial to the proposed Expressway?

118. There is no Transport System Plan displaying the transport linkages and integration (Local Traffic, Expressway Traffic, PT, and Active Modes) with the PP2Ō project and Ōtaki community and no detailed traffic / active mode volumes for the roads / links around Ōtaki to allow for consideration of the assessment of effects (Transport, Economics and Community/Social).

Could the Applicant provide a Transport System Plan to demonstrate the integration and outcomes of the Ō2NL and PP2Ō projects?

119. Could the Applicant please provide details for the cross section and configuration of the proposed shared path south of the Pukehou Rail Overbridge and the standard of the shared path and describe how it will be consistent with the KCDC Cycleways, Walkways and Bridleways Strategy?

120. The Final Technical Assessment A – Transport (paragraph 32) suggests that a detailed construction methodology will be provided with a Construction Traffic Management Plan (CTMP). Some further information is provided at paragraphs 282 – 300.

Could the Applicant please provide more detailed access plans and a draft CTMP as part of the application material?

121. Volume III 01 - General Plan Set contains limited detail on the layout of the Active Modes cross section and design, specifically:
   a. Integration plan with Ōtaki and the PP2Ō Shared Path
   b. Cross section south of the Pukehou Rail Bridge to avoid it being hard up against the existing state highway.
   c. Connections from the shared path to local roads e.g. Forest Lakes Road

Could the Applicant please provide this detail?

122. Could the Applicant explain how road user legibility and understanding for Ōtaki has been addressed from a legibility and transport user perspective given there are 3 interchanges within 3.5km of each other?

HDC and KCDC - Landscape and Visual

123. The Final Technical Assessment J - Terrestrial Ecology, Appendix J.1, refers to properties with a numerical ID, however there is no table or plan provided that links the numerical ID to a specific property address. Could the Applicant please provide either a plan or table?

The Technical Assessment D - Landscape Visual and Natural Character has a table of properties using the Stantec ID number (refer Appendix D.3 Visual Effects pgs. 127-215). Could the Applicant please clarify if the Stantec ID number is the same as the numerical number that is referred to in the Terrestrial Ecology Technical Assessment?

124. Could the Applicant please explain how the Councils will be involved in the Design Audit process from a stakeholder perspective, as described in section 4.1 CEDF?

125. While condition DLV1 requires the implementation of the landscaping planting shown on the Planting Concept Plans, could the Applicant please advise what the process they propose to be used to certify or amend the planting Concept Plans (e.g. a similar approach as proposed in conditions REM2 & REM3 for the Ecology Management Plan for Regional Councils?

126. Condition DLV1 addresses Landscape Planting. DLV1 b) states that:
Landscape planting must be implemented, maintained, monitored and replaced to achieve a 90% survival rate at five (5) years following the date that initial planting commenced;

Could the Applicant please comment on whether a percentage canopy cover rather than a percentage of plant survival would be a better tool for measuring planting success at the time of Final Completion? For example, if a mass plant failure occurred in Year 4 after planting, and replacement using small grade plants occurred, does it consider this as satisfying the 90% survival rate where the aim in terms of planting success is to create a self-sustaining plant community that is sufficiently established to shade and fend off weed species?

127. Could the Applicant please comment on the consistency of the proposed conditions across Ecological and Landscape conditions in terms of post installation maintenance and management regimes and the criteria for measuring planting success?

128. Could the Applicant please comment on how weed infestation in the rehabilitation, restoration and landscape plantings, particularly where they adjoin ecological mitigation and off-setting sites, is to be managed and how this is addressed in consent conditions?

129. Could the Applicant please comment on how pests and weeds on Waka Kotahi land that lies outside the designation that potentially will lie idle /not farmed until practical completion of the works will be controlled?

HDC and KCDC – Economics

130. The Final Technical Assessment O - Economics and Town Centre Impacts does not consider or assess the effects of points of access and egress on Ōtaki businesses.

Could the Applicant please provide an assessment of the economic effects of the north of Ōtaki interchange on the Ōtaki town centre?

131. The north of Ōtaki interchange does not provide direct access to the communities of Manakau or Ohau and the Final Technical Assessment O - Economics and Town Centre Impacts does not consider alternative alignment options and the economic effects that alternatives may present in relation to growing the local communities of Manakau and Ohau, provide more resources locally and reduce trips and trip distances that alternatives which enabling direct access would provide.

Could the Applicant please provide an assessment of alternative alignment options and the economic effects of alternatives on the local communities of Manakau and Ohau?

132. Could the Applicant please explain how the O2NL interchange at Taylors Rd, north of Ōtaki optimise the economic and social capacity of Ōtaki and Manakau?

133. The economic effects of O2NL on Tara-Ika and the economic role of Tara-Ika in relation to Levin/Horowhenua are not covered within the Final Technical Assessment O - Economics and Town Centre Impacts, which only considers global issues concerning Levin/Horowhenua and those relating to the existing town.

Could the Applicant please provide an assessment of the economic effects of O2NL on the Tara-Ika growth area?

134. Could the Applicant please explain what the community connectivity impacts and associated economic effects of providing connections only at Queen Street East and Tararua Road on Tara-Ika and the eastern part of Levin are, including between Tara-Ika and Waiopehu College?

135. Could the Applicant please explain why/how it considers that not providing the local connections over the 2km wide extent of the interface between Tara-Ika aligns is consistent with the Project Objectives (as set out in Volume II, Part A s.4.6) and the various documents listed in s.1.4 of the CEDF (pgs 16 & 17), in relation to addressing community connectivity, severance, economic, social and environmental sustainability?

136. Could the Applicant please provide the empirical information to demonstrate the social, economic and environmental sustainability impacts of the proposed approach to connections at Tara-Ika and how that relates to the cross connections and urban form proposed in the Tara-Ika Structure Plan?

HDC and KCDC - Urban Design

137. Could the Applicant please explain why/how, in omitting to provide the connections illustrated by the Tara-Ika Plan Change 4 Structure Plan, the proposal is or can be consistent with the Waka Kotahi Design Principles described at page 10 of the CEDF, specifically, and in relation to the omission of east-west connections located between Queen Street East and Tararua Road, how the proposal fully and optimally follows the first six of these design principles, in particular Principles 2,3,5 and 6?

138. Could the Applicant please explain how O2NL, by treating the planned rezoning and urban growth provided for by Plan Change 4 at Tara-Ika as not part of the existing environment, addresses and meets the following project objective:
'….to provide appropriate connections that integrate the state highway and local road network to serve urban areas" (refer AEE Volume II, Part A, p23)?

139. Could the Applicant please explain what the social and urban design effects would be from the East-West Arterial not being established once O2NL is constructed, including on delivery of the outcomes anticipated and provided for by Plan Change 4 Tara-Ika?

140. Could the Applicant please explain how the *'Project Shared Use Path and Possible Future Connections – Indicative, not part of Ō2NL Project'* diagram (CEDF page

128) provide for the potential for connections to the strategic cycleways that are included in the Tara-Ika Plan Change 4 Structure Plan?

141. The AEE Vol II, Part A, page 19 states: *"Waka Kotahi will continue both through statutory planning processes but also through future integrated master planning processes and the improvement programme to work with stakeholders to achieve the sustainable urban access critical to reducing enabled emissions."*

Could the Applicant please explain how matters of connection, severance and emissions will be achieved and how the proposal is consistent with this statement?

142. Could the Applicant also please explain the impact on enabled CO_2 emissions for the foreseeable future in allowing for movement between the 3500+ houses at Tara-Ika and Levin relative to the impact if the connections were to be provided?

143. The Final Technical Assessment A-Transport notes at paras 102-105 that the Ō2NL Project is consistent with the HDC District Plan and *"has strong alignment with transport policy at regional and national level."*

Could the Applicant please explain how this comment considers the Tara-Ika Plan Change and the effects of Ō2NL on that area, in particular the east-west connections to and from Tara-Ika, including provision for convenient walking and cycling using planned strategic cycleways.

144. The Final Technical Assessment A-Transport notes at para 206: *"Severance can be created when a road acts as, or feels like, a barrier to movement. This tends to be because people feel unsafe crossing the road. … If people do not make journeys they would like to, this has negative consequences at both social and economic levels."*

While this comment specifically refers to at-grade crossing, could the Applicant please how this principle applies to the Tara-Ika growth area and its relation to Levin, and what the precise magnitude of the negative consequences of absence of crossing are?

145. Final Technical Assessment A-Transport at Figure A.27 shows a diagram describing *"2039 Induced and Suppressed Trips in Levin"* which shows a connection over the Ō2NL from Tara-Ika on and connecting to Arapaepae Road on the alignment of Liverpool Street, which is inconsistent with the General Arrangement Plans in Volume II-02.

Could the Applicant please explain how the induced traffic analysis would change if that connection across the Ō2NL were to be excluded?

146. In relation to implementing the CEDF could the Applicant please explain:

(a) what is the full process of the Design Review Audit including appointment of suitably qualified person(s) to cover all elements covered by Chapter 4 of the CEDF?

(b) what is the scope for questioning and/or comment and/or possibly certification by the District Council of any Design Review Audit?

147. Could the Applicant please describe how the project relates to HDC's Tara-Ika urban growth area as per HDC's Plan Change 4, including the road and pedestrian and cycle connections that are part of that plan change?

148. Could the Applicant please explain how Ō2NL in relation to Tara-Ika responds to the existing traffic network and its problems as discussed by Technical Assessment A-Transport (para 206) to meet the identified Project objectives, which include *"To provide appropriate connections that integrate the state highway and local road network to serve urban areas."*

149. Could the Applicant please comment on the following photo simulations contained in Volume III Section 10-Photo Simulations:
    (a) the state of completion of rendition of the proposed planting at Viewpoint 4 in the Queen Street East over-bridge as this currently does not include the proposed tree stands nor the 'tree avenue' described in the 09-Planting drawing for this area.
    (b) Viewpoint 14 appears to not show the planned tree clusters. (The purpose of the yellow lines to describe intervening planting is understood. However, the cluster planting described on the landscape drawings ideally would be included to ensure consistency.)

HDC and KCDC - Terrestrial and Freshwater Ecology

150. Throughout Technical Assessments J and K, property identifiers are used, however there appears to be no table/reference map which shows the property identifications.

    Could the Applicant please provide a property identification reference map as part of the drawing set or as part of these Technical Assessments?

151. Proposed condition REM12 outlines performance targets relating to planting implementation and management.

    Could the Applicant please clarify the difference between enrichment and replacement planting, which appear to be used interchangeably in this condition?

152. The accepted methodology for long-tailed bat surveys includes surveys in spring/early summer (for breeding females and depend young) and later summer/autumn (for juvenile range establishment and adult mating).

    Could the Applicant please explain the rationale for undertaking a single ABM deployment for bat monitoring during bat active period?

153. Proposed condition RTE7 outlines the requirements relating to the provision of indigenous buffer planting. The proposed timing of the planting under b)ii) specifies that buffer planting be undertaken before the end of the first planting season following the Project being open to the public.

Could the Applicant please clarify and confirm the timing of the buffer planting because this appears to be inconsistent with the recommendations of Technical Assessment J (paragraph 207 (d) and (e), pg 63) where buffer planting is identified as a mitigation measure for potential dust deposition, which can occur during construction?

154. Proposed conditions RTE2 e) and RTE3 e) could be interpreted in its current form that if an active nest is found subsequently to work starting that activity can continue inside of 50m exclusion zone if activity doesn't cause nest failure.

Could the Applicant please clarify whether a 50m exclusion zone will be established in the event of nest identified by Condition RTE2/3 d) consistent with the methodology in RTE2/3 b) and e)?

HDC and KCDC - Noise and Vibration

155. The Final Technical Assessment B – Noise and Vibration presents several differing ranges of noise criteria. For operational traffic noise, these include criteria based on NZS 6806:2010, WHO guidelines, and subjective response criteria based on UK planning guidance.

Could the Applicant please explain what noise criteria have been selected as guidance to what is "reasonable"?

156. At Paragraph 20 of the Final Technical Assessment B – Noise and Vibration the first sentence notes that the operational noise levels will be reasonable. However, the following sentence notes that for some receivers, the operational noise *"…may be disruptive, or very disruptive…."*. These two sentences appear to be contradictory.

Could the Applicant please explain this contradiction and what noise criteria has been used to make this assessment?

157. At Paragraph 45 of the Final Technical Assessment B – Noise and Vibration, no reference has been provided for the research referred to, regarding New Zealanders exposed to road traffic noise.

Could the Applicant please provide the relevant reference to the document for this research?

158. There appear to be some anomalies between the information provided in Table B.12 and the same information set out in Appendix B4 of the Final Technical Assessment B – Noise and Vibration. For instance, Table B.12 shows that the current noise level at 47 Sorenson Road is estimated to range between 45 and

50 dB LAeq(24h) whereas Appendix B4 states that the range is 50 to 55 dB LAeq(24h). This type of anomaly between the two sections of the report occurs for a number of assessment locations.

Could the Applicant please explain why is there a difference in current noise level estimates in Table B.12 and Appendix B4?

159. At Paragraph 167 of the Final Technical Assessment B – Noise and Vibration, the current ambient noise levels in the area of Sorensons Road are reported as 45 to 55 dB LAeq(15 min) (15 min) during the day, and 35 to 45 dB LAeq(15 min) (15 min) at night. The next sentence concludes that the 24 hour sound level in this vicinity has been estimated as 50 to 55 dB LAeq(15 min) (24h).

Could the Applicant please explain how this conclusion was reached?

160. At Paragraph 223 the Final Technical Assessment B – Noise and Vibration notes that the noise from the road milling has not been considered in the construction noise assessment, due to it being a short-term activity.

Road milling machines typically have a sound power level of around LWA 110 dB and the activity is scheduled to occur at night times, therefore could the Applicant please address the noise effects of nighttime road milling in the construction noise assessment?

161. There are two Figures provided which illustrate the location and type of proposed operational noise mitigation, being Figure B.29 of Final Technical Assessment B – Noise and Vibration and Figure 42-4 of "Volume II Supporting Information and Assessment of Effects on the Environment.

Could the Applicant please confirm which Figure should be relied on as they are different in terms of level of detail provided?

HDC and KCDC – Water Quality

162. Could the Applicant please explain how the National Policy Statements – Fresh Water (NPSFW), Regional Policy Statements and district plan requirements related to water quality are addressed in the proposed designation conditions such that they fulfil the territorial authority obligations under these instruments?

163. The KCDC District plan, Policy INF Gen P4 calls for the use of adaptive management measures.

Could the Applicant please clarify how this adaptive approach has been incorporated into the mitigation measures proposed to manage water quality effects?

164. The CEMP requirements as required by the designation conditions do not appear to be connected to the CEMP required by the resource consent conditions. The designation conditions are silent on the matter of minimizing and managing erosion. Could the Applicant please clarify how the requirements of the

territorial authorities under the relevant national, regional and district policies and objectives and in relation to erosion are captured in the conditions for this application and how the CEMP will be prepared and approved to address both district and regional requirements?

165. Technical Assessment H - Water Quality recommends instream water quality monitoring upstream and downstream of the construction zone to determine the water quality effects of the project.

Could the Applicant please clarify how this is captured in the conditions?

166. Technical Assessment H - Water Quality outlines the methodology used to estimate concentrations contaminants in the receiving environment during construction. These are based on current TSS values in the stream which are increased on a pro-rata fashion based on a % increase in sediment generation for the contributing catchment.

Given this is the case, could the Applicant please explain how we can be confident that the concentrations estimated are accurate enough to enable acute effects during rain fall events to be adequately assessed and how will the predicted 40% change in catchment D which exceeds the One Plan target will be minimised?

167. The Design and Construction Report recognizes that higher intensity rainfall events have the potential to increase the volume and sediment load discharged from sediment control devices and has set trigger events above which more significant outflows from sediment control devices are likely to occur.

Could the Applicant please clarify how these events affect downstream water quality in the receiving environment and how do the mitigation measures proposed respond to this increased risk of adverse water quality effects in high intensity rain fall events and appropriately minimise them?

168. The operational estimates of contaminant concentrations in the receiving environment are based on an average annual rainfall depth. Runoff and entrainment of contaminants tends to be worse during high intensity rain fall events.

Could the Applicant please clarify how the shorter term, potentially acute effects resulting from such events have been addressed and shown to be appropriately minimised?

169. The extent of earthworks will not be uniform across the construction period. Could the Applicant please explain when peak earthworks will occur and how does the USLE and recommended erosion and sediment control approach accommodate this peak, manage the extent of unstablised construction footprint and thus address the relatively increased potential risk to water quality?

170. Could the Applicant please explain what erosion and sediment controls are proposed for yard areas, temporary works areas and other activities undertaken during the enabling/establishment works period, how this will be documented and how will the appropriateness of the controls be confirmed?

171. Parts of the proposed project will be constructed in a flood plain.

Could the Applicant please explain how the additional risks to erosion and sediment controls and consequently, water quality, have been addressed in these areas?

172. Technical Assessment H - Water Quality states that hydrological effects could be mitigated through increased infiltration in catchments predicted to have > 10% impervious area.

Could the Applicant please explain how and where this will be achieved?

173. Technical Assessment H - Water Quality does not appear to address the extent of potential effects of stream works/diversions on water quality or propose mitigation measures for these works.

Could the Applicant please provide this information?

174. Technical Assessment H - Water Quality does not address the potential effects and mitigation in relation to water quality and flood plain function for the material supply areas adjacent to the Ohau River and Waikakwa stream.

Could the Applicant please provide this information?

175. The application does not indicate any additional controls and mitigation for streams identified with high or moderate levels of adverse water quality effect in relation to sediment release. It is common to see additional measures being used to supplement business as usual controls in more sensitive areas.

Could the Applicant please clarify what specific attention such locations will receive?

176. The application states that in the absence of management actions, the effects of water abstraction are high and this includes potential exacerbation of water quality effects. Technical Assessment H - Water Quality does not appear to address this point.

Could the Applicant please clarify the type, scale and potential risk to water quality from this activity?

177. Could the Applicant please describe how the permanent stormwater devices will be operated and maintained in a manner that enables them to provide efficient and effective treatment of stormwater prior to discharge and how will performance of these devices be assessed and reported during operation?

HDC and KCDC - Hydrology and Flooding

178. Para 115 in the Final Technical Assessment F – Hydrology and Flooding report indicates inundation duration will be short, based on the short catchment response times. The Report provides two figures (F.15 and F.25) showing pre and post water level comparisons over time at two locations with neither of these figures appearing to extend over a long enough period to account for when inundation depths approach zero metres.

Could the Applicant please quantify the changes to the duration of flood inundation on active pasture and/or crop land beyond the designation boundary within the 2D extents of the three models? (This could be mapped as a time difference between pre and post O2NL construction from when inundation commences to when inundation ceases for a range of time bands (minimum of 0 to 1 hour) and for both the 10 year and 100 year scenarios).

179. Figures showing peak water level differences and velocity changes in the Final Technical Assessment F – Hydrology and Flooding Report do not include a legend clarifying the various colour bands.

Could the Applicant please provide legends for these Figures?

HDC and KCDC – Contaminated Land

180. Could the Applicant please explain how, at this stage in the project, excluding site contamination from the application does not pose a material issue/risk to other disciplines regarding their respective design/approach, and therefore the overall project concept?

181. The submitted PSI has identified 35 'potential HAIL sites', 30 within the proposed designation and 5 adjacent and has further ranked these sites as either 'low', 'medium' or 'high' risk, based on 'the likelihood and the nature of contamination existing at the site from a particular activity'. Eight sites ranked 'medium' risk and one site ranked 'high' risk are identified as requiring further investigation and these sites are listed in proposed condition REW4.

Following the process set out in the NES-CS, and as full site walkover has not yet been undertaken, could the Applicant please comment if it would be more appropriate to first require the PSI to be revised and updated following a complete site inspection, and then require DSIs for all identified pieces of land where the PSI cannot conclude that it is 'highly unlikely that there will be a risk to human health if the change of use is made' (Regulation 8(4) and/or that the soil disturbance component cannot meet permitted activity thresholds (Regulation 8(3))?

182. The PSI states that the risk screening system is based on the Ministry for the Environment (MfE) Contaminated Management Guideline No 3: 'Risk Screening System'.

Could the Applicant please provide the template and workings of the risk screening, including the parameters adopted and the inputs?

HDC and KCDC – Planning

183. Section 19 of Volume II Part D states:
'The activities that require resource consents pursuant to sections 9(2), 13, 14 and 15 of the RMA, the NES-F, the NES-CS, One Plan and the PNRP are described in detail within the Rule Assessment at Appendix One and summarised below. Appendix One also sets out the permitted activity rules applicable to the Ō2NL Project.
All regional resource consents required for the Ō2NL Project are being sought as part of this application, whether they are explicitly specified or not. If, after detailed design is complete, further or different consents are required these will be sought at the time'.

Section 19.7 of Volume II Part D states:
'Waka Kotahi will undertake detailed site investigations (DSIs) including soil testing of sites traversed by the Ō2NL Project in subsequent design phases and once land access becomes available. Informed by the DSI results, if necessary Waka Kotahi will then apply for any resource consents required by the NES-CS regulations and/or the relevant Regional Plans. Waka Kotahi will share the results of the DSI with the relevant district and regional council when they are completed.'

These paragraphs appear to contradict each other and there is potential that the consents required by the NES-CS could affect the alignment of the designation. Could the Applicant please explain why potential consenting requirements under the NES -CS do not need to be addressed at this stage?

184. The O2NL Project does not include a connection between East Levin and Tara-Ika between Tararua Road and Queen Street East, and yet this is shown as a key component of the Tara-Ika Structure plan.

Could the Applicant please provide a place based comparison of the before (no link) and after (with the pedestrian link and then a multi-mode link) assessment of connection options.

185. Appendix 5, reference D.1 and D.2 describes the designation as:
'The construction, operation, maintenance and improvement of a state highway and shared user path and associated infrastructure, between Taylors Road (to the north of Ōtaki) and State Highway 1 north of Levin known as the Ōtaki to North of Levin Highway Project'.

Could the Applicant please explain what is meant by 'improvement' and describe the nature of the activities undertaken that would constitute improvement?

186. Appendix 1 of the AEE provides a Rules Assessment against the Horizons One Plan and the Proposed Natural Resources Plan for the Wellington Region,

however, there is no assessment of the Project against the Kapiti Coast District Council and Horowhenua District Council District Plan rules.

Could the Applicant please provide an assessment of the Project against the HDC and KCDC District Plan rules, to demonstrate that a Notice of Requirement to designate is the most appropriate mechanism to achieve the objectives of the Requiring Authority (s.171(1)(c) RMA)?

187. Section 12.8 of the AEE notes that the design and timing of reconnecting network utilities effected by the O2NL will be discussed and developed in consultation with network utility owners.

Could the Applicant please comment on whether the intention is to rely on the Network Utility provisions of the HDP and KCDP to undertake these works, and whether these works are likely to be permitted by the District Plans?

188. Section 18.6 notes that within the Kāpiti Coast District, for several hundred metres, the SUP is located outside of the Ō2NL designation, but within the existing SH1 designation.

Section 19.12.3 of the AEE notes that in some locations the SUP is located outside of the area subject to the proposed designation.

(a) Could the Applicant please clarify if those parts of the SUP that are outside the proposed O2NL designation are within the existing SH1 designation, or are there parts of the SUP that fall outside either designation?

(b) If the SUP is located outside either the existing SH1 designation or the proposed O2NL designation, could the Applicant please comment on the potential resource consents that may be required under the KCDP, or if the works are permitted by the rules in the KCDP?

189. Section 19.12.3 of the AEE notes that the works to relocate and improve the Tararua Road and existing SH1 intersection are located outside of the proposed designation and partially within the existing SH1 designation and *'where the SUP and intersection are not within the existing or proposed designations, the rules in the HDP apply'*.

Could the Applicant please provide an assessment of the SUP and intersection works that are not located within the existing or proposed designation against the HDP rules and identify whether the works are permitted or will require consent under the HDP?

190. Section 10.1 of the AEE, final paragraph discusses the Design Audit process and makes reference to a Figure, however the Figure appears to be missing.

Could the Applicant please provide the referenced Figure?

191. Section 3.3.3 of the AEE notes the following:

'The Tara-Ika Structure Plan shows an east/west arterial road (referred to as East West Arterial) crossing over Ō2NL and connecting the Tara-Ika Growth Area with Arapaepae Road. The East West Arterial provides access to the proposed commercial centre of Tara-Ika and provides additional capacity in the transport network. As the East West Arterial will cross over O2NL it will required bridging, which will require RMA approvals. It is expected that the RMA approvals will be sought in the near future.'

(a) Could the Applicant please explain what structures (i.e. bridging and supports) would be required to accommodate the EWA and O2NL as depicted in the District Plan and NOR (noting that construction of the EWA road itself is currently a permitted activity albeit subject to s178(2))?

(b) Do any effects on the environment arise from these structures (including e.g. traffic and transportation effects, social and urban design effects, landscape / visual effects, cultural effects, and effects on the delivery of the outcomes anticipated and provided for by Plan Change 4 Tara-Ika)?

192. Section 18.2 of the AEE notes that *'establishment works are limited in scale and have minor adverse effects. Further, establishment works are generally permitted by the rules in the relevant District Plan. It is on this basis that Waka Kotahi seeks to waive the requirement for an outline plan for establishment works'.*

Could the Applicant please undertake an assessment of the establishment works as defined in Appendix 5 Draft Conditions, to confirm that establishment works are permitted by the HDP and KCDP and that the subsequent request to waive the for an outline plan is appropriate?

193. Could the Applicant please comment on the intent of proposed condition DGA8 - Establishment Works when there is a process specified under the RMA (s.176A(2)) for a Requiring Authority to seek a waiver to an Outline plan requirement?

194. Final Technical Assessment N – Productive Land, at paragraph 7 notes that the *'extent of the restored land (and to what state it will be restored) is unknown'*.

Could the Applicant please explain what are the options available for restoration and are there minimum standards required that could be set as conditions to enable as much highly productive and highly versatile land to be restored?

Under the Act, you must, within 15 working days of the date of this letter, take one of the following options:

a. provide the information; -OR-
b. advise in writing that you agree to provide the information (at which point we would negotiate a reasonable time within which the information will be provided); -OR-
c. advise in writing that you refuse to provide the information.

If you have any questions in relation to the determination or wish to discuss any aspects of this letter, please feel free to contact the relevant person(s) listed below.

Yours faithfully on behalf of the Regional Councils,

Mark St.Clair
CONSULTANT CONSENTS PLANNER
Horizons Regional Council and Greater Wellington Regional Council

Approved by:

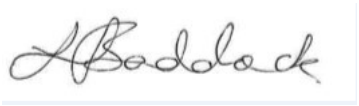
Jasmine Mitchell
CONSENTS TEAM LEADER
Horizons Regional Council

Anna McLellan
TEAM LEADER COMPLIANCE AND CONSENTS
Greater Wellington Regional Council

Yours faithfully on behalf of the District Councils,

Helen Anderson
CONSULTANT PLANNER
Horowhenua District Council and Kapiti Coast District Council

Approved by:



Lauren Baddock
DISTRICT PLAN LEAD
Horowheuna District Council

Eloise Carstens
RESOURCE CONSENTS AND COMPLIANCE MANAGER
Kapiti Coast District Council