22 March 2021

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Issued via email: helen.hicks@supportinggrowth.nz

Dear Helen,

Request for further information in accordance with section 92 of the Resource Management Act 1991

Notices of requirement: Drury Arterial Network:

- Project D1: Alteration to Designation 6707 – State Highway 22 Upgrade (NZTA)
- Project D2: Jesmond to Waihoehoe West FTN Upgrade (Auckland Transport)
- Project D3: Waihoehoe Road East Upgrade (Auckland Transport)
- Project D4: Ōpāheke North-South FTN Arterial (Auckland Transport)
- Project D5: Ponga Road and Ōpāheke Road Upgrade (Auckland Transport)

We are writing with respect to the notices of requirement lodged for the projects described above.

After completing a preliminary assessment of documents lodged for the notices of requirement, we consider that further information is required to enable an adequate analysis of the proposals, their effects on the environment and the way in which any adverse effects on the environment may be mitigated. Provision of this further information is also sought to ensure potential submitters are able to adequately assess the extent to which the notices of requirement and associated environmental effects will affect their interests.

The information requested below will also enable the council to undertake a full and proper assessment of the notices of requirement and provide recommendations on each proposal.

Under section 92 of the Resource Management Act 1991 (RMA), we request the following further information:

(1) **Planning and general matters**

1. What will be the council's regulatory role in ensuring that the following management plans achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works if they are only being provided to the council for information instead of certification through submittal with an Outline Plan pursuant to s176A of the RMA (as per Project's proposed management plan conditions, noting that other management plan conditions put forward to address construction effects provide for certification by the council, such as the Project's Construction Noise and Vibration Management Plan conditions) (**Project-wide**):

    - Construction Environmental Management Plan (CEMP)
    - Construction Traffic Management Plan (CTMP)

    Explanation: Certification of management plans which address project construction effects (including the certification of CEMPs and CTMPs) is consistent with conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations. When responding to this further information request, and if these requiring authorities are still of the view that CEMPs and CTMPs for the Project should be provided for information only to the council, it would be useful to understand the reasons for adopting this approach which is inconsistent with conditions approved for recent AT and WKNZTA designations.

    Section 176A(3)(f) of the RMA requires an Outline Plan to show (amongst other specific matters) "any other matters to avoid, remedy, or mitigate any adverse effects on the environment". As the stated objectives of the Project's proposed CEMP and CTMP conditions are to avoid, remedy or mitigate adverse environmental effects associated with proposed Project construction works, submittal of these management plans with the corresponding outline plans would be required under section 176A(3)(f) of the RMA, noting that the Project's proposed conditions exclude provision of these plans with future Project Outline Plans.

    Sections 176A(1) and 176A(4) of the RMA enables the council in it's regulatory role to request that the requiring authority make changes to the Outline Plan, and this would not be possible for certification purposes in relation to the Project CEMPs and CTMPs if they are not provided with the Project Outlines Plan and are instead submitted to the council for information only.

    Certification of the Project CEMPs and CTMPs to confirm they achieve their stated objectives of avoiding, remedying or mitigating adverse environmental effects associated with proposed Project construction works would also be supported by the need to ensure such effects are appropriately managed both within the existing environment, which is predominantly rural in nature, and likely future environment which is anticipated to reflect a mix of urban residential and business land uses, in accordance with the current future urban zoning and indicative future land uses identified in the Drury-Opaheke Structure Plan (the need to manage construction effects within the likely future receiving environment is particularly relevant to the proposed Project works as anticipated construction commencement dates are identified as being later this decade, and this accords with the15-20 year lapse periods sought for the Auckland Transport notices of requirement).

2. The AEEs submitted for each notice of requirement (NoR) state that adverse construction effects on affected communities will be mitigated by ensuring the public and stakeholders (including directly affected and adjacent owners and occupiers of land) are communicated with throughout construction works by implementing Stakeholder and Communication Management Plans, and these communications will need to address, amongst other matters:

    - determining adequate notice periods for the commencement of construction activities and works that affect access to properties; and

- informing parties of the expected timing, duration and staging of works and regular updating of progress.

It is also noted that the measures listed at the end of each NoR AEE for managing adverse Project effects on property, land use and business include:

- Methods to regularly communicate with the community, stakeholders and land owners/occupiers during construction, including timeframes.
- Links to other communication methods in other management plans

Please confirm how the Stakeholder and Communication Management Plan conditions proposed for each NoR will achieve the aforementioned communication outcomes and outlined in the submitted NoR AEEs, noting that condition 14(b)(v), which is the same for each NoR, only provides for *"methods to communicate the proposed hours of construction activities outside of normal working hours and on weekends and public holidays, to surrounding businesses and residential communities"* (also noted that the aforementioned measures for managing adverse Project effects on property, land use and business appear to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR, with the intention being to include these measures in these conditions (as per statement preceding table summarising measures at the end of each NoR AEE)) (**Project-wide**).

Explanation: Stakeholder and Communication Management Plan conditions which have been approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations specifically provide for methods to communicate and consult with affected communities throughout construction works, but this appears to be absent from the Stakeholder and Communication Management Plan conditions proposed for each NoR. As the AEEs submitted for each NoR states that adverse construction effects on affected communities will be mitigated by ensuring they are communicated with throughout construction works, this should be stated in the Stakeholder and Communication Management Plan conditions proposed for each NoR, as has been the case in relation to Stakeholder and Communication Management Plan conditions approved over recent years for Auckland Transport (AT) and Waka Kotahi New Zealand Transport Agency (WKNZTA) designations (as stated above, noted that the NoR AEEs also specify communication methods, but these appear to be absent from the proposed NoR Stakeholder and Communication Management Plan conditions).

3. In relation to site compounds, construction yards (laydown areas) and bridge construction areas shown on the Project's indicative design drawings (**Project-wide**):
    a. Please clarify the anticipated effects on existing buildings located within the footprint of these construction works areas.
    b. Please explain what amenity-related effects are anticipated on occupied buildings proximate to these construction works areas, particularly in relation to visual, noise and vibration effects. Please also explain what mitigation measures are proposed, and how these are reflected in the proposed conditions for each designation which seek to address construction effects.

Explanation: The AEE and indicative design drawings identify site compounds, construction yards (laydown areas) and bridge construction areas in various locations throughout the Project's spatial footprint. Further commentary is sought on the noise, vibration and visual effects of construction on owners and occupiers in the vicinity of these construction works areas.

4. Please provide further information to supplement the Project feedback summaries provided for the following groups, stakeholders and affected landowners who were consulted and engaged on the Project which is sought to better understand how this feedback informed the design and proposed designation boundaries for individual NoRs to avoid, remedy or mitigate adverse effects of the Project on their interests (**Project-wide**):

a. Mana Whenua groups Ngāti Tamaoho, Ngāi Tai Ki Tamaki, Te Ākitai Waiohua and Ngāti Te Ata Waiohua
b. KiwiRail
c. Heritage New Zealand Pouhere Taonga
d. Ministry of Education
e. Department of Conservation
f. Fire and Emergency New Zealand
g. Network Utilities providers
h. Developers
i. Landowners and community

Explanation: Summaries of feedback received from the above groups, stakeholders and affected landowners during consultation and engagement on the projects have been referenced in Part C and Appendix A of the Project AEE in relation to the design of the Project, assessment of alternatives and avoiding, remedying or mitigating adverse Project effects. To assist the council and potential submitters better understand how the feedback provided by groups, stakeholders and affected landowners was used to address adverse Project effects on their interests, further information is sought which confirms how this feedback informed the design and proposed designation boundaries for individual NoRs. For example, page 49 of the Project's assessment of alternatives makes reference to this in relation to discussions had with stakeholders and affected landowners, although it is not clear from the assessment how the resulting Project design refinements informed selection of the Project's preferred options. Also, Part C of the Project AEE (page 58) states that in relation to those parts of the Project covered by NoR D1-NoR D4, "…there were adjustments to the proposed designation boundary and opportunities, including identification of valued trees and private property adjustments were identified, to address landscape and visual amenity at detailed design stage." Again, it is not clear from the Project's assessment of alternatives how the resulting Project design refinements informed selection of the Project's preferred options.

Furthermore, in order to adequately assess specific concerns raised by groups, stakeholders and affected landowners regarding the Project's environmental effects, it is requested that further information be provided which expands upon these concerns where stated in the corresponding feedback summaries, noting that this information will also assist in ensuring the Project's cultural effects can be adequately assessed in the absence of cultural value assessments from the Mana Whenua groups with an interest in the Project area.

(2) **Transport**

5. Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Drury Hills Road and Waihoehoe Road (**NoR D3**).

Explanation: Drawing SGA-DRG-STH-004-CI-4103 does not include an appropriate tie in to Drury Hills Road, as shown in Figure 10. We consider that NoR: D3 should demonstrate an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary.

Figure 2: Intersection of Drury Hills Road and Waihoehoe Road, from drawing SGA-DRG-STH-004-CI-4103

6. Please provide further detail on the proposed closure of the Waihoehoe/Flanagan intersection, including timing, co-ordination with any other works needed to maintain access to Flanagan Road, and consultation with affected parties. Alternatively, if the closure of the intersection is not proposed as part of the designation, drawing SGA-DRG-STH-04-CI-3101 should be updated (**NoR D3**).

   Explanation: Drawing SGA-DRG-STH-04-CI-3101 identifies that the intersection between Waihoehoe Road and Flanagan Road will be closed and that "CONNECTION WITH FLANAGAN ROAD AND PROPERTY ACCESS TO BE DEVELOPED WITH FUTURE NZUP PROJECT"

   Further, Table 7-15 of the Assessment of Transport Effects states that

   > *"The Flannagan Road intersection with Waihoehoe Road West is expected to be closed through NZUP as a result of the new Drury Central Rail station and park and ride facilities."*

   In our view NoR D2 should not include the closure of the Flanagan Road intersection, as currently shown in Drawing SGA-DRG-STH-04-CI-3101. If the closure of the intersection proceeds works under NZUP, this affect access to the future rail station and existing properties on Flanagan Road, noting there is currently no alternative access for Flanagan Road.

7. Please provide further detail on construction traffic effects upon the transport network should the Jesmond Road and Bremner Road sections of NoR D2 be constructed in parallel including how this will be addressed in the recommended construction traffic management plan condition (**NoR D2**).

   Explanation: Section 5.2 of the Assessment of Transport Effects identifies the methodology used to assess the potential construction traffic effects, including consideration of any works that should not occur at the same time. The subsequent sections of the report do not identify any works that should not occur at the same time. It is unclear whether the author considers that all sections of all corridors could be constructed in parallel. While NoR D2 is assessed in sections, there is no detail on whether NoR D2 is likely constructed in sections, or as a single corridor of works. Should the Jesmond Road and Bremner Road sections be constructed in parallel, there

may be significant effects on access as there are no alternative corridors to access existing and future development within the Auranga Precinct.

8. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects. Please comment on what, if any, alternatives have been considered to maintain access to properties on Tui Street (**NoR D2**).

   Explanation: Drawing SGA-DRG-STH-04-CI-3101 shows the realignment of Tui Street, to form a new intersection with Great South Road, as shown in Figure 11 above. We consider that the proximity of the proposed intersection with the upgraded Great South Road/Waihoehoe Road intersection is likely to create safety issues for drivers turning right into and out of Tui Street. Please provide further assessment of the proposed realignment of Tui Street, including safety and access effects, and comment on what means to mitigate potential safety effects were considered (such as an alternative access to the north of the Drury Rugby Clubrooms).

9. Please demonstrate that an intersection that complies with relevant standards and guidelines can be formed within the proposed designation and/or existing legal road boundaries, between Ponga Road and Jack Paterson Road. This should include an assessment of sight distances, management of the interface between a rural and urban road environment, and accommodation of vehicle tracking (**NoR D5**).

   Explanation: Drawing SGA-DRG-STH-04-CI-8102 does not include an appropriate tie in between NoR D5 and the Ponga Road/Jack Paterson Road intersection, as shown in Figure 13. We consider that NoR D5 should demonstrate than an appropriate design for the intersection can be accommodated within the proposed designation boundary and/or the existing legal road boundary. The design should demonstrate that safe intersection sight distances can be met, that the interface between a rural and urban road environment is appropriately managed, and appropriate vehicle tracking movements can be accommodated.

10. Please confirm whether the arrangement of the Hunua Road/Croskery Road intersection, as assumed in the traffic model, can be accommodated within the existing legal road boundaries and/or NoR D4 boundary. Further, please confirm the timing of the alteration in intersection form (conversion to a roundabout) (**NoR D4**).

    Explanation: In the traffic model, the Hunua Road/Croskery Road intersection is assumed to be a roundabout, in both the future Do Minimum and NoR SATURN models. Clarification is required on

    - *is the change in layout in response to NOR D4 or considered to be a separate business as usual project*
    - *what are the implications if the intersection is not altered prior to implementing NOR D4*

    whether any localised widening is required and whether it should be included in the NOR D4 designation.

11. Please explain what effects on the transport network may be under or over-stated in the NoR due to the difference between the traffic model and the NoR design for the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road (**NoR D4**).

    Explanation: In the traffic model, the Ōpāheke N-S arterial intersections with Walker Road and Ponga Road are assumed to be signalised intersections. However, the designation layout includes roundabouts at both intersections. While we appreciate that the detail around intersection design and control will be dealt with through the design phase, the traffic modelling includes a sizeable delay at the Ponga Road intersection (more than 3 minutes).

    Our concern here isn't related to the potential footprint at these particular intersections, as a roundabout presents a conservative approach, but the footprint about the upstream and downstream signalised intersections may alter, as the level of delay included in the traffic model may be pushing demand away from the corridor and onto alternative routes.

Some feedback on possible impacts to the NOR D4 designation is worth teasing out should modelled constraints (high delays along the route) be reduced.

12. Please detail the extent to which documents lodged for NoR D4 will be updated to confirm the proposed closure of the Sutton Road at-grade rail crossing, with the traffic model used to inform the supporting transport assessment placing particular importance on the Ōpāheke N-S arterial being protected to allow for this network change (**NoR D4**).

    Explanation: The SATURN traffic model assumes that Sutton Road is closed when the Ōpāheke N-S arterial is operational. We support the closing of this level rail crossing, noting that it presents a safer outcome and aligns with the Vision Zero safety strategy, but highlight the need for this assumption to be addressed in the AEE for NoR D4 and proposed designation conditions, noting that the closure of this connection places additional importance on adjacent sections of the NOR D4 corridor being protected to allow for this network change.

13. Please provide clarification on whether turning lanes and/or intersection improvements along the urban section of Ōpāheke Road may be required due to the increase in vehicle movements resulting from (**NoR D5)**.

    Explanation: The traffic modelling suggests predicts a significant increase in traffic on Ōpāheke Road into the future. For example, the base traffic model assumes some 150 vehicles northbound about Boundary Road, with this predicted to increase to some 750 vehicles per hour. While the proposed designation includes several vehicle crossings, where localised works are required, we ask for clarification on the extent to which turning lanes and localised intersection improvements have been captured within the analysis. For example, right turning storage space will likely be required to ensure right turning vehicles can stack safely based on the increased demand predicted along this route.

(3) **Noise and vibration**

Construction noise and vibration (**Project-wide unless otherwise stated**)

14. The preamble to Table 4-1 of the CA notes that the long term construction noise limits of the AUP have been adopted but the night time levels reported in Table 4-1 do not include the described -5dB correction. Please clarify why this is the case.

15. Please explain whether the exceptions to construction noise outlined in E25.6.29(3) (page 10 of the CA) apply to the Project?

    Explanation: Page 10 of the CA discusses Rule E25.6.29(3) of the Auckland unitary Plan – Operative in Part (AUP) and identifies situations where the AUP construction noise levels between 7am and 10pm do not apply. These include:

    > *(a) …*
    >
    > *(b) Because the nature of the works and the proximity of the receivers the noise generated cannot practicably be made to comply … or*
    >
    > *(c) for planned works, a copy of the works access permit issued by Auckland Transport or approval from the NZTA is provide to the Council five days prior to work commencing; or*
    >
    > *(d) for planned works where the works will take more than 8 hours to completed a construction noise and vibration management plan is provided to the Council no less than five days prior to work commencing …*

    Could the author of the CA please comment on how the above three points apply to the Project? Is the Project required to comply with the AUP limits?

16. Please explain what thought has been given to protect construction of the road corridors against reverse sensitivity effects arising from future development.

Explanation: In the last paragraph of the summary to the Assessment Methodology (Section 5) the CA notes that "Construction will occur several years in the future. Therefore, receivers may have changed by then, with new receivers in the vicinity due to increased development. Construction noise and vibration effects will need to be reassessed at the time of construction".

While we understand this to be a practical solution to address the unknown, this does not appear to fulfil the purpose of the designation, being route protection for the local arterial roads. If the future reassessments result in significant adverse effects, could this compromise the project through reverse sensitivity?

17. Please elaborate on the potential effects of construction works at night, particularly in relation to bridge demolition and construction, and noise from machinery (millers, trucks and pavers) operating on existing roads.

    Explanation: Section 5.1 provides commentary on activities and duration. It raises night works, which may include the noisiest activity of pavement construction. Any night work has the potential to result in the largest effects on neighbours and is touched on in Section 5.6.6. For previous projects, bridge demolition and construction were often undertaken at night, both of which require major items of plant and occur for significant durations. Likewise, working on existing roads, of which most of the designations relate to, often requires night works with the use of noisy machinery including millers, trucks and pavers. Given the large machinery often required at night, the potential for adverse effects and size and resources available to the design team, could the potential effects of night works be significantly elaborated upon?

18. Please assess the construction noise effects arising from night time works.

    Explanation: Table 5-4 of the CA provides an assessment of day time effects from various levels of construction noise and is used throughout the CA as a basis for determining effects. Given the expectation of night time works, could some form of assessing the resulting effects be provided?

19. Please provide noise data for the large items of plant identified in Table 6.1 of the CA, including mobile concrete pumps and trucks, mobile cranes used for bridge construction, graders and kerb machines.

    Explanation Table 5.1 of the CA provides noise data from some of the plant considered in the analysis. Table 6.1 goes on to identify other large items of plant not considered, including mobile concrete pumps and truck, mobile cranes used for bridge construction, graders and kerb machines. Could noise data please be provided for this additional plant?

20. Please clarify whether the plant identified in Table 5.1 of the CA is a complete list, or if additional plant will be required.

    Explanation: Other, noisy plant often required for road building includes motor scrapers, millers, concrete saws and breakers.

21. Please explain what type of piling is expected in construction of the bridges. Given that proposed bridges are often over streams, please clarify whether piling require driving or casings to be vibrated in or out. If so, does the assessment allow for this?

22. Please check and confirm the construction noise anticipated from the plate compactor

    Explanation: Throughout the CA, it is the plate compactor that results in the largest effects. Table 5.1 reports this as one of the noisiest pieces of plant anticipated for construction with a sound power level of 110dBA. Based on field measurements of handheld plate compactors undertaken by Hegley Acoustics, this level appears high.

23. Please clarify whether setback distances from plant are required for night time construction.

    Explanation: Tables 5-1 and 5-2 give the respective setback distances from individual and groups of plant to comply with the day time limit of 70dB LAeq. Given night time works are anticipated, is a similar setback distance required for night time?

24. Please comment on whether the requirements of Waka Kotahi (*Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019)* referenced in Condition 20 to NoR D1 should be included in the appendices to the conditions? (**NoR D1**)

    Explanation: Condition 20 to NoR D1 requires the CNVMP to be undertaken in accordance with Waka Kotahi State highway construction and maintenance noise and vibration guide (version 1.1, 2019), but does not make this document available to view within the conditions.

25. Please explain why the requirements of the Schedules in the CA (Section 5.6.2) are different to those of the CNVMP (Section 5.6.1).

26. Please explain whether SGA has considered developing a set of guidelines for the relocation of neighbours during times of high noise at this stage of the project to provide an understanding of how this is anticipated to work.

    Explanation: In 5.6.3, the CA describes the hierarchy of noise mitigation measures before going on to note the limitations of relocating neighbours. Section 5.6.4 is the comparable vibration section.

27. Please expand on the noise and vibration effects associated with demolition in any of the sections of the Project. This is not discussed in the construction methodology within the CA or the AEE.

28. Please expand the assessment of construction noise effects within the CA to consider the following:

    a. The noise levels that each property predicted to more than 70dB LAeq was to receive. For instance, Section 6.2.1.2 says that with mitigation the highest levels of noise would be 75 – 80dB LAeq. It is not clear however, whether this level applies to all 22 properties or whether some are exposed to lower levels.

    b. The addresses of the properties that are predicted to receive over the 70dB LAeq adopted limit. This is requested as it will aid with determining which properties should be considered for notification, and which is discussed further below:

    c. When assessing effects of the various levels, it would be useful to understand the duration of such levels. The CA explains that construction noise will vary with worst case levels expected for around three days. However, given that the construction periods of the various NoRs are up to four years, a more detailed investigation on the durations is requested.

    d. A discussion on expected night-time levels and durations is requested (cross-reference with item 13 which also seeks similar information)

    e. The assessment provided is in terms of LAeq. Why has L_{AFmax} been omitted? If it has been omitted from the assessment, should the L_{AFmax} form part of the conditions?

    Explanation: The sections relevant to each NoR on Construction Noise Effects are confined to reporting the highest day time level to the most affected property/ properties and the number of properties that can expect to receive day time levels above 70dB LAeq. For assessment, it would be useful to understand the above.

29. Please explain how significant vibration effects that exceed the damage protection threshold of DIN 4150 would be avoided, remedied or mitigated by the project, and who would undertake this.

    Explanation: Throughout the NoRs, there are 83 of sites where vibration is reported to exceed the damage protection threshold of DIN 4150. The CA advises pre and ongoing monitoring of such sites but offers no view on whether such damage is an acceptable outcome for the project and comment on this adverse effect is requested. Comment is also requested on who would remediate any damage. While it is expected that much of this

would be addressed through the CNVMP, it would be useful if the CA at least offered guidance on how any serious effects would be avoided, remedied or mitigated.

30. Please clarify the approximate durations where vibration is anticipated to exceed the amenity criteria levels of DIN 4150.

31. Please identify all buildings predicted to be exposed to vibration levels exceeding the amenity criteria of DIN 4150, and the duration that these receivers would be exposed to vibration exceeding these criteria.

    Explanation to 25 & 26: In addition to the buildings predicted to receive vibration levels in exceedance of DIN 4150, there are a number of additional buildings that are predicted to be exposed to vibration levels that exceed the amenity criteria.

32. Please explain whether the use of construction yards across the project requires consideration from a noise and vibration perspective.

    Operational noise and vibration (**Project-wide**)

33. Please expand upon the statement in Section 4.1.1 of the CA that commercial and industrial building do not fall within the definition of a Protected Premises and Facility (PPF) as described by NZS 6806. It is our understanding that section 1.4 of NZS 6806[1] neither includes such uses nor excludes such uses.

34. Please clarify whether consideration needs to be given to controlling road traffic noise on future residential areas to levels considered appropriate for residential amenity. Please explain why the Operational Noise Assessment *('**ONA**')* assessment is limited to existing and consented PPF's under NZD 6806, given the limitation of these standards in addressing a changing environment.

    Explanation: The ONA has included existing PPFs and those with building consent but which are yet to be built but excludes are all future properties. It is recognised that this is the approach described by NZS 6806. However, most roading projects that NZS 6806 relates to are in either a rural environment or a built up area where the potential for future dwellings is limited. The proposal differs in that the purpose of the intended roads is to facilitate large numbers of new residential dwellings. This being the case, does consideration need to be given to controlling road traffic noise to future residential areas to levels that are considered appropriate for residential amenity? Essentially, is the Project creating a problem for someone else to fix as suggested by section 5.4?

    In relation to the above point, Auckland Council Practice Note RC 3.2.23 describes assessing noise to sites based in their development potential as described by the AUP. While the practice note confines itself to NZS 6802 and resource consent applications, please explain whether you consider this approach is appropriate for the Project?

35. Please explain whether consideration has been given to achieving the BPO described in s16. Are there areas of the Project where mitigation could easily and effectively be installed to the benefit to PPFs regardless of the level before such mitigation?

36. Please explain the rationale underpinning the timeframe of 2048 is used as a design year in Section 4.1.3.

    Explanation: In relation to the design year, Section 4.1.3 makes the point that the opening year for the project is yet to be confirmed before going on to describe why 2048 was selected. Is the SGA able to confirm that 2048 is generally in accordance with the requirement of NZS 6806 for it to be 10 – 20 years afterthe completion of a road

37. Please provide further commentary on the risk that traffic flows exceed those anticipated due to some road alignments not being constructed, and whether the effects associated with these risks could lead to a different conclusion being reached in respect of designation the project.

[1] NZS 6806: 2010 Acoustics – Road-traffic noise – New and altered roads

Explanation: The ONA notes that the design year does not represent the highest possible traffic flows which, it explains, might eventuate should some of the roads not be constructed. Is the author able to provide some commentary on the risk that any realistic alternatives pose to the Project? Are there scenarios where traffic flows/ noise levels would increase significantly to the point that a different conclusion would be reached with respect to designating the Project

38. In relation to comparing the noise effects against the Do-nothing and Do-minimum scenarios/baselines used for the ONA:

    a. Please justify the use of Do-nothing flows as a baseline for the operational noise effects assessment, given that the Do-nothing noise levels are based on full residential development of the Future Urban area, which the ONA identifies as not being possible without the Project.

    b. Please clarify the difference in traffic flows between the Do-nothing and Do-minimum scenarios.

    c. Please explain whether the calculation method used for the Do-nothing noise levels lead to any issues with comparing the Do-minimum levels, which the assessment relies upon.

    d. Please explain why the analysis methodology explained in Section 5.1.1 of the ONA does not apply to interrupted vehicle flows, and how this methodology addresses intersections, which introduce interrupted flows.

    e. Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?

    Explanation: NZS 6806 describes the Do-nothing scenario as the predicted noise levels at design year assuming the Project did not go ahead. As Section 4.1.4 explains, this assumes full growth of the surrounding area (for which the Project is intended to facilitate). Does this mean that the Do-nothing flows are the same as the Do-minimum flows?

    Based on the answer to the above being yes, the ONA goes on to point out that the Do-nothing flows could not occur as the existing roads could not accommodate that volume of traffic before confirming that the reported do- nothing noise levels are therefore not a feasible option. However, the predicted Do-nothing levels are then used as the basis of the analysis. In simple terms, the use of the Do-nothing noise levels by NZS 6806 is to allow a noise level comparison at a set point in time with and without the Project to highlight its effects. In this instance, this does not appear to be possible as the Do-nothing noise levels are based on the full residential development, which cannot occur without the Project. As such, it would appear that the differences between the Do-nothing and the Do-minimum are limited to road width, traffic speed and road surface. The anticipated change in traffic flow resulting from the upgraded road network (which is the aim of the Project) is not addressed by the analysis. Is this a correct interpretation of the assessment and if so, can it be justified?

39. Table 5-2 demonstrates the accuracy of the modelling through a comparison of a measured level of the existing noise at 116 Waihoehoe Road with a predicted level of road traffic noise at the same point. The conclusion is that the difference of 0.6dB confirms the accuracy of the model. Section 6.1.3 discusses the same measurement but describes the dominant sounds as being birdsong and farm animals with road traffic noise being audible at a distance. Did road traffic noise control the measurement making it a good basis for calibrating the noise model?

40. Has the applicant considered providing a conclusion on the existing noise environment for each of the NoRs?

(4) **Urban design and Landscape and visual effects**

AV1. The proposed Urban Landscape Design Management Plan conditions appear to be quite generic, and do not take into account the place-based recommendations made in the Urban Design and Form Effects and Assessment of Landscape and Visual Effects. Further consideration will need to be given to these matters later in the NoR process (**Project-wide**).

(5) **Arboriculture**

41. Please confirm whether the proposed replanting will include a calculation for replacing the ecosystem services including sequestered carbon loss that will result from the proposed tree removals (**Project-wide**).

    Explanation: While the Applicant has offered to provide 'mitigation' for the proposed tree removals, by definition, mitigation acknowledges that there is a lasting negative effect, and it is preferred that an approach which remedies the impact of tree removals is adopted, where the remedial planting accounts for lost future environmental benefits, including the eco-system services of soil / erosion protection, storm-water reduction, wildlife habitat, and sequestered carbon as outlined in the Applicant's tree values checklist.

    In consideration of the ecosystem services provided by the trees proposed to be removed for these designations, and specifically carbon sequestration, the loss will also require appropriate remedial planting to achieve the stated objective of central government to be 'carbon neutral' by 2050 and also to align with the sustainability goals of the Auckland Council's 'Low Carbon Strategic Action Plan'.

    In regards to carbon sequestration, the remedial planting needs to match or exceed the value of total stored carbon which would have been achieved by the existing tree asset at the end of the forecast period. In this instance the forecasted carbon sequestration value is for 30 years, which was chosen as this is a realistic average life span for the trees proposed for removal, and 2050 is the goal that has been set by the government for carbon neutrality under the Climate Change Response (Zero Carbon) Amendment Act.

    The carbon calculation can be achieved by using the i-Tree Development Team, 2020 forecasting tool to estimate the lost future benefits arising from the proposed tree removals.

    The remedial planting will need to achieve this same value of stored carbon by 2050 if carbon neutrality is to be achieved, and the actual effects of tree removal are to be addressed in a sustainable fashion. Please refer to this link provided for your assistance https://www.itreetools.org/

(6) **Heritage**

42. Please explain how the discovery and subsequent management of non-Māori artefacts found during the development of the arterial network will be undertaken, particularly in relation to the redevelopment of bridges over the Ngākoroa and Hingaia streams (**Project-wide**).

    Explanation: The potential for finding, and subsequent management of, non-Māori artefacts found during the development of the arterial network, should be addressed in the AEE. Matters that should be considered include conservation treatment (where needed) and eventual ownership or intended repository or display of items recovered.

    In relation to NoR D2, the proposed transport corridor crosses the Ngākoroa and Hingaia streams and will involve demolition and replacement of the existing bridges.

    The existing Ngākoroa bridge occupies the site of a series of earlier bridges dating back to (at least) Runcimans bridge of the 1850s. The bridge site is recorded as R12_1171. The effects on this site are not specifically addressed in the historic heritage AEE. They

will potentially include modification or destruction of structural elements of earlier bridges or abutments and of earlier road/track approaches, both of which exist beneath the existing bridge.

There is also potential for assemblages of artefacts (including waterlogged organic materials) lost or dropped from the bridge to be present in stream bed deposits at this site and that of the Hingaia Stream bridge (R12_1152). Both bridges were extensively used during the New Zealand Wars. The Ngākoroa Stream bridge is close to the site of the Commissariat Redoubt and wharves, Runciman's homestead and wharf (which was also used to ship coal from Drury) and a Tauranga waka (Māori canoe landing site).

We consider that the effects on the Ngākoroa and Hingaia bridge sites including potential artefact finds and how they will be managed are not fully addressed in the application.

The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations.

43. Please explain how the discovery of graves will be managed (**NoR D2 and D5**).

    <u>Explanation:</u> The D2 and D5 NoRs are adjacent to or within the extent of cemeteries (St Johns Church graveyard – D2; Papakura Cemetery – D5). While it would appear unlikely that unmarked or unrecorded graves will be impacted, this possibility should be addressed since it is not uncommon in historic cemeteries to find unrecorded burials such as pauper graves in unexpected locations

    The discovery and disinterment of burials would potentially have an impact on affected persons, particularly descendants of the individuals interred. This community of interest may include New Zealanders of pākehā or Māori descent, and/or persons resident overseas.

    In my opinion, the potential effects of the discovery of graves and how they will be managed are not fully addressed in the application and would be of interest to persons who may be affected. For example, it may be appropriate to address identification and reinterment of disinterred individuals, should graves be found.

44. Please identify the extent of vibration effects on scheduled historic heritage places, and in particular the St Johns Church graveyard and also Papakura Cemetery (**NoR D2 and D5**).

    <u>Explanation:</u> Vibration effects on the church are briefly addressed and indicate that the thresholds for damage may be exceeded (p.46) and that there is the potential for 'cosmetic damage' to buildings such as cracking. This is a matter of concern. St Johns Church is a timber framed and clad building. The structure itself is not in the same risk category as an unreinforced masonry building. However the building has historic stained glass windows (see photo of one example). These are potentially made of very thin and brittle glass, in colours or patterns that are difficult or impossible to replace. The associated graveyard contains multiple unreinforced stone or masonry grave markers including tablets and obelisks (see photos) including some from the New Zealand Wars of the 1860s. Some of these are very close to the existing road and are potentially at significant risk of damage from excessive construction vibration.

    I consider cracking of windows, or cracking, collapse or subsidence of grave markers, to be modification of features/fabric of a scheduled heritage place rather than cosmetic damage. I consider that these effects have not been adequately addressed in the vibration report and application, and that these potential effects should be avoided to the extent possible rather than just monitored to determine if damage was pre-existing.

    Further information is required to better understand the effects on these identified historic heritage places.

(7) **Parks Planning**

45. In relation to NoR D1, please provide an assessment detailing it's effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Ngakaroa Esplanade (**NoR D1**).
46. In relation to NoR D2, please provide an assessment detailing it's effects on the blue-green network in the Drury-Opaheke Structure Plan and the proposed future delivery of a greenway connection along the Hingaia stream esplanade reserve (**NoR D2**).
47. In relation to NoR D5, please provide an assessment detailing it's effects on access to the proposed Opaheke Park shown in the Bellfield Masterplan and Opaheke park concept plan (included as **Appendix 1** to this letter) and how this will be provided for during and after project construction works are completed, particularly in relation to the finished ground levels for the widened Opaheke Road corridor and proposed new bridge over Slippery Creek. For example, how will these finished ground levels affect the feasibility of proposed carpark and pedestrian access links into Opaheke Park from Opaheke Road, as shown on the concept plan? (**NoR D5**).

You must provide this information within 15 working days (before 14 April 2021). If you are unable to provide the information within 15 working days, then please contact me so that an alternative timeframe can be mutually agreed.

If you do not respond within 15 working days, refuse to provide the information or do not meet an agreed alternative timeframe between the council and yourself, this application must be publicly notified as required by section 95C of the Resource Management Act 1991.

In accordance with the Resource Management Act, processing of your notice of requirement will remain on hold until the indicated date, pending your response to this request. Please note that the processing clock will stop as this is the first request for additional information.

If you have any queries regarding the above, please contact Nicholas Lau on 021 897 429 | nicholas.lau@aucklandcouncil.govt.nz, or Sanjay Bangs at 021 619 327 | Sanjay.bangs@aucklandcouncil.govt.nz.

Yours sincerely,

Insert signature

Nicholas Lau,
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Sanjay Bangs,
Policy Planner, Central and South Planning