Attachment 1:

Further information requested under Section 92 of the Resource Management Act 1991

Contents

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Planning / General				
P/G 1	Clarification	• Developer Interests are addressed within Section 8.8.15 of the AEE – where they are summarised and limited to the Drury Centre project and the Drury South project. Commentary is then made that the project team cannot explicitly state that there are no other relevant developments within proximity to the Project. Appendix K does provide more detail - e.g: with regard to St Stephens. Has there been further work completed, since the time of writing, to identify whether there are any other relevant projects which may be affected, within proximity to the project and if so, could an update in this regard be provided? • Please describe how NZTA intends to provide for /	To better understand the potential impact on consented projects, as part of the existing environment. Whilst the process continues for the Pukekohe NoRs (hearing held recently and at the time of writing it remains open), it is noted that a Land use Integration Process condition for the AT NoRs in Pukekohe was proposed - per the extract below. Land use Integration Process. The Requiring Authority shall set up a Land use Integration Process for the period between confirmation of the designation and the Start of Construction. The purpose of this process is to encourage and facilitate the integration of master planning and land use development activity on land directly affected or adjacent to the designation... Whilst it is acknowledged that a separate process is involved for subdivision and land use consents as opposed to that for the NoRs, by way of one example, it is noted that a section	• Since lodgement of the Project NoRs in February 2024, no subsequent updates on developer interests of note have been received by NZTA, although as discussed below NZTA has on-going relationships with developers in the area. There are also relationships with existing homeowners and small-scale businesses which are impacted by the Project and some of them may discuss future development aspirations for their sites but as these are small-scale and often confidential, they are not included in the Assessment of Alternatives Report (Appendix K). • NZTA is committed to ongoing engagement with landowners and developers affected by the proposed designation. It has an established team and processes to assess development proposals and provide responses and approvals. This includes approvals under Sections 178 and 176 of the RMA to undertake works within the designation. • NZTA does not intend to offer a land use integration management plan for the NoR applications and one was not offered by NZTA in the Pukekohe NoRs (reference Supporting Growth Alliance). NZTA's existing processes are sufficient to achieve the necessary integration. In this case as the majority of the land adjoining the project is zoned rural (i.e. it has very limited development potential) and the bulk of the Project relates to a motorway (i.e. no public interface or access), the level of land use integration will be limited compared to other NoRs. • As an example of the existing process, NZTA are in regular communications with Drury South Limited and have already provided approval under sec 178 of the RMA for the vesting of the stormwater reserve (lot 154 in the example in the request for information). Further approvals from NZTA for this developer (and others) are likely to occur during the processing of this NoR. • In addition to existing RMA processes, as noted in the request, the Public Works Act (PWA) is the primary process with which NZTA will undertake engagement with landowners regarding acquisition of land, and interfacing with existing land use and subdivision consents. These processes are separate

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		integrate with consented development within the boundary or within proximity to the areas subject to the NoRs. • Also, how will NZTA deal with existing consented development where NZTA's projects may render the consented development non-complying or require the developer to make changes to its consented development. There may be costs to the consent holder resultant from changes. • Is the Public Works Act to be the primary avenue for assessment and relief with regard to the above matters? The proposed SCMP condition is noted.	224(c) application (CCT90113492-2) has been submitted for releasing titles of the sites created under the subdivision consent (SUB60383451-A) for 539 Fitzgerald Road, Drury 2578. One of the sites, Lot 154, located within the proposed boundary of NoR 5, has been constructed and planted as Super Green Outfall, which is required for managing public stormwater. Lot 154 is to be vested in Auckland Council as a drainage reserve on the survey title plan. Will Lot 154 be able to be used for public stormwater management? The AEE (or Appendix K) does not appear to discuss the subject site or its subdivision. It is unclear whether consultation has been undertaken with the subject landowner nor the outcome of any discussions. There may be other examples of development which has been progressed or consented which may be affected by the NoRs. The discussion within Section 10.11 of the AEE (and Appendix K) is noted. However, it would be useful for NZTA to provide an update with regard to consideration of other such situations – whereby consent holders are potentially affected by the project.	from the NoR application and should not preclude the Council's assessment of the NoRs under the RMA. If any existing resource consents are affected to such an extent that they are non-compliant or need to be changed, then NZTA will ensure this occurs or compensate the affected person via the PWA. Affected landowners can recover the costs of making amendments themselves so that they are overall in no worse place than before the Project.
P/G 2	Planning	• Please confirm if any person or landowner or utility has at this stage, provided written approval or documented support, regarding the NoRs?	A record of written approval or support does not seem to have been mentioned in the AEE. There may be no written approvals. The reason for this request is to seek clarity in this regard. With regard to utilities, the discussion at Section 9.3.4 of the AEE regarding s176 approval being required from Transpower, the discussion at Section 10.10 of the AEE and the NUMP condition (etc) are noted.	NZTA has not obtained written approval or documented support for the Project NoRs. Following the submission of the Project NoRs, no further communication has taken place with NUO. Nevertheless, active engagement with multiple stakeholders has been maintained throughout all phases of the P2B project, and NZTA expects to continue communications with NUO should any matters arise, which pertain to NUO interests.

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P/G 3	Planning – Mana whenua engagement and CIAs and CVAs	The discussion at Section 10.12.2.1 provides discussion on Ngaati Whanaunga's CIA. • The analysis at 10.12.1 of the AEE is noted but is there commentary or analysis that can be provided by NZTA regarding the CVA/CIAs from Ngātti Tamaoho, Ngāi Tai ki Tamaki and Ngāti Te Ata Waiohua, which were done for the wider corridor and SCI projects, which are specific to this project? • Are these CIA/CVAs able to be provided and if so, could NZTA confirm if Mana Whenua who provided these CIA/CVAs are agreeable to these being made public, as part of notification? • Also, since the time of writing (AEE) has supplementary or subsequent CIA/CVA documentation been provided, that is able to be forwarded to AC and if so would the Mana Whenua be agreeable to these being made public, as part of notification ?	To gain a broader appreciation of the views of the mana whenua specific to this project.	• CVA/CIAs from Ngāti Tamaoho, Ngāi Tai ki Tamaki and Ngāti Te Ata Waiohua, as they relate to the P2B Project corridor overall, were outlined in the addendum to the application AEE included in the response at **Attachment 2**. • As stated in the AEE, due to confidentiality reasons, only a summary of the Ngaati Whanaunga CIA has been provided for lodgement as the lodged documents will be made publicised on the Council's website. Ngaati Whanaunga are not agreeable to making the document public as part of the notification. The CIA states, *"While this report can be provided to relevant consent authorities, only the Front Cover page and Section 1 may be published publicly"*. If Auckland Council can guarantee the confidentiality of the report, it can be provided to the hearing panel. • There has been no supplementary or subsequent CIA/CVAs documentation provided to NZTA since the lodgement of the Project NoRs.
P/G 4	Planning – Section 171(1)(d)	• Other Matters – What update can be provided by NZTA with regard to the policy documents addressed in Section 11.1.1 in light of advances or changes since the time of writing?	To assist with understanding the project in light of advances or changes to the documents described within 11.1.1, such as the Draft 2024 GPS and the FDS.	**Auckland Future Development Strategy (FDS)** Regarding the FDS we note; • Table 11-4 in the application AEE evaluates the Project against the FDS • The FDS has not undergone any significant changes since the submission of the Stage 2 Project NoRs in February 2024; and • The Project has been designed in consideration of the planned 'live zoning' outlined in the FDS, which aligns with the Project's anticipated delivery timeline:

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				○ The Drury-Ōpaheke cluster's FUZ land is expected to be urbanised around 2035, coinciding with the planned delivery of the SGA Drury Arterial Network and the Stage 2 DBC, which recommends construction to take place within 15-20 years; and ○ Some FUZ areas in the Ōpaheke region have been excluded from the FDS due to potential flood risk, but this will not impact the triggers for the Project. **Draft Government Policy Statement on Land Transport (GPS 2024)** The Draft GPS 2024, while providing a strategic framework for investment decisions, has very limited direct relevance to the Project NoRs. The Draft GPS remains a proposal under consideration and has not been formalised. The Project, however, aligns with the strategic direction set forth in the GPS 2021, which was the prevailing policy at the time the Project was lodged. If needed, the project can be assessed against the new version of the GPS when it is finalised.
Healthy Waters				
HW1	Section 3.1 Flood Impact Assessment Revision: C, 16/02/2024	It is understood from Section 3.1 that the Drury South model has been used. The Drury South development used an existing development imperviousness of approximately 3%. The upstream rural catchment can develop to approximately 15% imperviousness as a permitted activity. • Please provide information on what imperviousness has been used in the model for the catchment upstream of Drury South and the reasoning? • Please note we have not reviewed the Drury South Flood Management Assessment (Tonkin & Taylor, June 2023) for this request. Please provide further information where appropriate.	To better understand the flood assessment approach and methodology	The Drury South model uses an Existing Development (ED) imperviousness of approximately 3% for the upstream rural catchment. This was used in the Auckland Council Hingaia Flood model used to assess and develop the Drury South precinct Stormwater Management Plan (SMP) and precinct scheme design. It was subsequently approved via the Network Discharge Consent (NDC) and precinct resource consent. The same model was used to calibrate the Tuflow model that has been used for all subsequent detailed design within the precinct and has continued to be approved on an annual basis via the Annual Management Plan (AMP). The original precinct scheme plan and SMP flood assessments included representation of the Mill Road corridor (predecessor to the current P2B interchange) as this was anticipated to form part of the final buildout for the precinct. For this reason, the same approved model has been used for the current assessment. Drury South Ltd expects to receive an update on Healthy Waters approval of the Overall Finalised Scenario Flood Model for the Drury South Precinct in the coming weeks. Furthermore, we are also of the understanding that Healthy Waters is planning on sharing this model with other developers in the precinct to ensure compliance with this model.

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HW2	Section 3.2 Flood Impact Assessment Revision: C, 16/02/2024	In section 3.2 it states the Projects will be designed to achieve "*No increase of more than 100mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling".* • Why has 100mm been selected? It is understood from the report that flood increases will be contained within existing stream channels, please provide further clarification.	To better understand the flood assessment approach and methodology	The design parameters for the Project will be determined at the detailed design stage, the concept design submitted with the Project NoRs is used determine the potential and likely adverse effects of the Project and required land to mitigate these effects. . The primary assumption of the Flood Impact methodology is reflected in the 'Flood Hazard' condition specified in the Specific Outline Plan Requirements for each of the Project NoRs. This condition states that the Project must be designed to ensure that post-Project flood risks remain at pre-Project levels beyond the designated extent. In simpler terms, this condition is significantly more stringent than the design parameters described in Section 3.2 of the Flood Impact Assessment. Therefore, the condition should form the basis for the effects assessment. Overall, we can confirm with certainty that, adequate space has been provided to accommodate the flood impacts within the extent of the Project NoRs. It should be noted that there is a discrepancy between the report and NoR conditions (refer to HW16), however the condition is intended as a 'back-stop' to account for the uncertainty in lieu of detail design, and define the envelope of effects. The project will be designed to ensure that there will be no more than 100mm increase in flood level for urban or future urban development. This condition is in line with the assessment as the flood level increases were determined to be contained within the existing channels, such that no other properties will be adversely affected.
HW3	Section 3.2 Flood Impact Assessment Revision: C, 16/02/2024	In section 3.2 it states the Projects will be designed to achieve *"No more than a 10% average increase of flood hazard (defined as flow depth times velocity) for main access to authorised habitable dwellings existing at time the Outline Plan is submitted"*. • Please identify on a plan where flood hazard is proposed to increase. • A 10% increase will have different effects depending on the site and existing flood hazard condition. Please clarify what "No more than a 10% average increase of flood hazard" means, and whether this would allow for an increase in flood hazard that is unsafe for main access.	To better understand flood effects.	The design parameters for the Project will be determined at the detailed design stage, the concept design submitted with the Project NoRs is used determine the potential and likely adverse effects of the Project and required land to mitigate these effects. . The primary assumption of the Flood Impact methodology is reflected in the 'Flood Hazard' condition specified in the Specific Outline Plan Requirements for each of the Project NoRs. This condition states that the Project must be designed to ensure that post-Project flood risks remain at pre-Project levels beyond the designated extent. In simpler terms, this condition is significantly more stringent than the design parameters described in Section 3.2 of the Flood Impact Assessment. Therefore, the condition should form the basis for the effects assessment. Overall, we can confirm with certainty that, adequate space has been provided to accommodate the flood impacts within the extent of the Project NoRs. Flood hazards (defined as flow depth times velocity) are contained in existing streams and do not affect any habitable dwellings and their main access. The streams have sufficient capacity above the current flood levels, therefore, any increase in flood hazard as a result of the proposed development are expected to be contained within the stream cross sections. Figure 10-4 (below) taken from the application Flood Impact Assessment at **Appendix J** shows where flood displacement is occurring within the Project area.

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				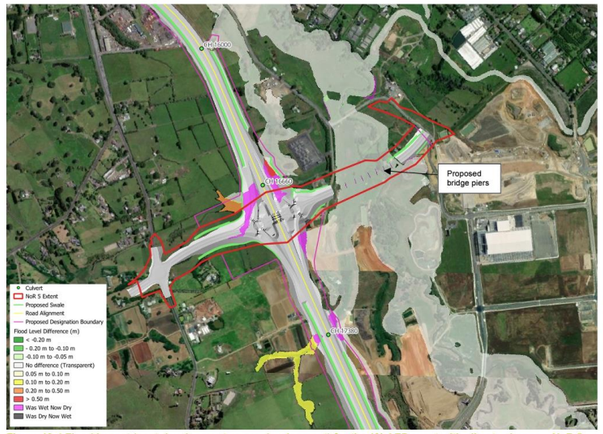 Figure 10-4 Flood impact (post-development vs pre-development) for the 1% AEP event with climate change – NoR 5
HW4	Table 3-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 3-2 identifies a criterion for flooding effects risk assessment which utilises flood volume displacement. Flood volume displacement is not meaningful unless it can be related to other factors such as increases in flood levels or extents. • Please provide further information on why flood volume displacement was used in the matrix and whether other flood effects assessment that considers changes in water levels, flood extents, flood duration, frequency of flooding, etc was considered and reasons why. • How was the categorisation of Negligible to High determined and what were the reasoning for the categorisation brackets. And why was this cross refence with Land Use? • Are there any factors that could change the categorisation other than Land Use?	To better understand the flood assessment.	Since no flood modelling was undertaken for NoR 1, 2, 3, and 4, flood volume displacement analysis was used based on the available information from AC GeoMaps in lieu of a detailed flood modelling. This was then related to changes in flood level and flood extent, which was discussed in the report. For areas where flood volume displacements were identified, there will be a minor increase in flood levels but will be contained within the existing streams. This is because the stream channels have sufficient capacity to contain the increased water volume without overflowing their banks. The categorisation was made based on the available information. Flood volume displacement was cross referenced with land use to identify the areas where flood risk is present in the existing and future environment. This will inform the design where to focus on the flood mitigation based on the vulnerability of the location if it is identified at risk (i.e., residential properties are identified as highly vulnerable). In the assessment, using land use is considered the most appropriate as this will be directly affected by the Project. Table 3-2 was used to determine the level of flood risk of each location based on the flood volume displacement and land use. For areas where increased flood risk was identified, recommendations were provided to mitigate the potential flooding (refer to response in Item HW 3 above) and adequate space has been provided to accommodate the flood impacts within the extent of the Project NoRs.

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		• How was the Table 3-2 used to inform the design and assessment of the projects?		
HW5	Section 3.2.1 Flood Impact Assessment Revision: C, 16/02/2024	It is understood that the loss of flood storage volume due to the project was estimated using flood plain layers downloaded from AC GeoMaps and the design drawings. It is noted that that flood plain layers shown on AC GeoMaps incorporate 3.8-degree climate change allowance. If climate change is ignored the flood volume (shown on AC GeoMaps) will be less and so the effects (of the proposed works) could be more than currently represented. Climate change can mask the effects of development. If climate change is ignored the actual effects of development can be better understood. • Please clarify if this was assessed and provide reasoning? • Will there be an increase in flood extents, frequency, duration, velocity outside the designation post project for various storm events (ignoring climate change)? Please discuss.	To better understand the flood assessment and flood effects.	While it is possible that the relative effects could be more prominent if climate change is not considered, the assessment based on the 1% AEP with climate change is conservative in these particular areas because it provides the greater extent of flooding. The assessment of existing conditions indicated that flooding is contained within the existing streams, therefore the critical impact would be if the streams are overtopped and inundate a larger area. Since the flooding extents and impacts considering climate change are contained within the existing streams, a similar outcome can be expected when climate change is ignored.
HW6	Tables 6-1, 7-1, 8-1, 9-1 and 10-1 Flood Impact Assessment Revision: C, 16/02/2024	Tables 6-1, 7-1, 8-1, 9-1, and 10-1 mention water quantity treatment for the increase in impervious surfaces. • What water quantity treatment is proposed, please clarify? • Is hydrology mitigation provided?	To better understand the flood management.	Swales have been proposed alongside the motorway to attenuate the additional runoff caused by the Project and to match the pre-Project flows to post-Project peak flows. This ensures that any potential flooding impacts contributed by the increased imperviousness are sufficiently mitigated.

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HW7	Table 7-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 7-2 indicates a flood displacement volume of 860m^3 and 0.24 ha increase in flood extents upstream of the proposed culvert crossing at CH16000 for the 1% AEP event with climate change. • Please show the flood extents on a plan if it extends outside the proposed designation boundary. • What is the increase in flood extents in a 1% AEP event (without climate change)? • What about other storm events such as the 50% and 10% events, please clarify.	To better understand the flood effects.	A plan illustrating the flood extents outside of the NoR boundary are shown in Figure 10-4 of Flood Impact Assessment. The flood extent will be contained within the existing streams. This is because the stream channels have sufficient capacity to contain the increased water volume without overflowing their banks. Since flood extents for the 1% AEP with climate change are contained within the existing streams, flood extents for minor events such as the 50% and 10% AEP events will also be within the existing stream. Therefore, these are also accounted for within the designation boundary. There will be no adverse impact outside the proposed designation boundary. Proposed Condition OPW.1 requires the design of Project works ensures post-Project flood risk (1% AEP) is maintained at pre-Project levels outside the designation extent.
HW8	Table 7-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 7-2 indicates a flood displacement volume of 20748m^3 (upstream), 265m^3 (downstream) and 0.45 ha increase in flood extents upstream of the proposed culvert crossing at CH18240 for the 1% AEP event with CC. • Please show the flood extents on a plan if it extends outside the proposed designation boundary. • What is the increase in flood extents in a 1% AEP event (without climate change)? • What about other storm events such as the 50% and 10% events, please clarify.	To better understand the flood effects.	A plan illustrating the flood extents outside of the NoR boundary are shown in Figure 10-4 of Flood Impact Assessment. The flood extent will be contained within the existing streams. This is because the stream channels have sufficient capacity to contain the increased water volume without overflowing their banks. Since flood extents for the 1% AEP with climate change are contained within the existing streams, flood extents for minor events such as the 50% and 10% AEP events will also be within the existing stream. Therefore, these are also accounted for within the designation boundary. There will be no adverse impact outside the proposed designation boundary. Proposed Condition OPW.1 requires the design of Project works ensures post-Project flood risk (1% AEP) is maintained at pre-Project levels outside the designation extent.
HW9	Table 7-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 7-2 indicates a flood displacement volume of 4010m^3 and 0.16 ha increase in flood extents upstream of the proposed culvert crossing at CH20820 for the 1% AEP event with CC.	To better understand the flood effects.	A plan illustrating the flood extents outside of the NoR boundary are shown in Figure 10-4 of Flood Impact Assessment. The flood extent will be contained within the existing streams. This is because the stream channels have sufficient capacity to contain the increased water volume without overflowing their banks. Since flood extents for the 1% AEP with climate change are contained within the existing streams, flood extents for minor events

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		• Please show the flood extents on a plan if it extends outside the proposed designation boundary. • What is increase in flood extents in a 1% AEP event (without climate change)? • What about other storm events such as the 50% and 10% events, please clarify.		such as the 50% and 10% AEP events will also be within the existing stream. Therefore, these are also accounted for within the designation boundary. There will be no adverse impact outside the proposed designation boundary. Proposed Condition OPW.1 requires the design of Project works ensures post-Project flood risk (1% AEP) is maintained at pre-Project levels outside the designation extent.
HW10	Table 7-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 7-2 indicates a flood displacement volume of 1242m^3 (upstream), 87m^3 (downstream) and 0.16 ha increase in flood extents upstream of the proposed culvert crossing at CH22060 for the 1% AEP event with CC. • Please show the increased flood extents on a plan if it extends outside the proposed designation boundary. • What is the flood displacement volume and increase in flood extents in a 1% AEP event (without climate change)? • What about other storm events such as the 50% and 10% events, please clarify.	To better understand the flood effects.	A plan illustrating the flood extents outside of the NoR boundary are shown in Figure 10-4 of Flood Impact Assessment. The flood extent will be contained within the existing streams. This is because the stream channels have sufficient capacity to contain the increased water volume without overflowing their banks. Since flood extents for the 1% AEP with climate change are contained within the existing streams, flood extents for minor events such as the 50% and 10% AEP events will also be within the existing stream. Therefore, these are also accounted for within the designation boundary. There will be no adverse impact outside the proposed designation boundary. Proposed Condition OPW.1 requires the design of Project works ensures post-Project flood risk (1% AEP) is maintained at pre-Project levels outside the designation extent.
HW11	Section 7.5 Flood Impact Assessment Revision: C, 16/02/2024	In section 7.5 it states that “any adverse flooding impacts can be mitigated by upgrading the existing culverts across the motorway”. • Please provide further explanation on why an upgrade is proposed compared to a new culvert. What would be the effects (if any) of proposed new culverts not being considered?	To better understand the flood management.	Refer to the response HW14.

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HW12	Table 8-2 Flood Impact Assessment Revision: C, 16/02/2024	Table 8-2 indicates increases of flood extents of 0.02ha and 0.03 ha respectively downstream of culverts CH 23560 and CH 24000. • Can this increase in extent be shown on a plan if it extends outside the designation?	To better understand the flood effects.	A plan illustrating the flood extents outside of the NoR boundary are shown in Figure 10-4 of Flood Impact Assessment.
HW13	Flood Impact Assessment Revision: C, 16/02/2024	• Ground shaping in the inlet and outlet is proposed to manage flood effects, please clarify which project will have ground shaping	To better understand the flood management.	Ground shaping in the inlet and outlet is recommended on all culvert locations for all NoRs. It should be noted that the regional resource consents for ground shaping (i.e., earthworks) and stormwater outfalls will be required at a later date, and that, any future stormwater outfalls will need to be designed in accordance with Condition OPW.1 on each of the Project NoRs, requiring culvert works to take into consideration the pre and post-development flood risk.
HW14	Flood Impact Assessment Revision: C, 16/02/2024	Several culverts are identified to be upgraded or new culverts proposed to ensure flooding effects are managed. • It is unclear whether or not these changes will occur, please clarify. • Please list which culverts will be upgrade. • Please indicate which project will have new culverts.	To better understand the flood management.	• Locations of culverts to be upgraded: – NoR 2: CH 16000, CH 16660, CH 17360, CH 18240, CH 19620, CH 20820, CH 22060 – NoR 3: CH 23060, CH 23560, CH 24020 – NoR 4: same as culverts identified for NoR 2 and NoR 3 • Locations to be replaced by new culverts: – NoR 2: CH 16000, CH 16660, CH 17360, CH 18240, CH 19620, CH 19660, CH 20820 – NoR 3: CH 23060, CH 23560, CH 24020 – NoR 4: same as culverts identified for NoR 2 and NoR 3 • All culverts identified to be upgraded are also new culverts (replacement). This just means that the capacity of these new culverts should have a capacity greater than the existing ones.
HW15	Section 11 Flood Impact Assessment Revision: C, 16/02/2024	Section 11 of the Flood Impact Assessment indicates "*No more than a 10% reduction in freeboard for existing authorised habitable floors"*. • Please identify the floors where freeboard may be impacted by the proposed development.	To better understand the flood effects.	The Project will be designed to ensure no existing authorised habitable floors will be impacted by the proposed development, which will be determined through the detailed design process. The Project will ensure this is achieved through the application of Condition OPW.1 which on all Project NoRs, requiring the Project to consider pre and post-development flood risk.
HW16	Section 11	Section 11 of the Flood Impact Assessment indicates "*No increase of more than 50 mm in flood level on*	To better understand the flood effects.	• It should be 100mm. • The flood level increase is shown by the orange area/extent in Figure 10-4.

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	Flood Impact Assessment Revision: C, 16/02/2024	*land zoned for urban or future urban development where there is no habitable existing dwelling"*. Section 3 indicates *"No increase of more than 100 mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling"*. • Please clarify if it is 50mm or 100mm. • Please identify on a plan where these increases will occur. It is understood from Section 10.4 of the Assessment that an increase in flood level of up to 200 mm was identified upstream of culvert CH 16660. • Section 10.5 of the report identified recommended mitigation measures to mitigates increases in flood level. Will these mitigation measures be implemented?		• Yes, the mitigation measures will be implemented. This was a typographical error. The correct statement is *"No increase of more than 100 mm in flood level on land zoned for urban or future urban development where there is no habitable existing dwelling"*. The flood level increase is shown by the orange area/extent in Figure 10-4 of the report. Whilst potential mitigation measures have been identified and recommended, the actual mitigation measures will depend on the actual design and therefore will be determined at detailed design stage.
HW17	Specific Outline Plan Requirements Flood Hazard Proposed Draft Conditions, 16/02/2024	There is one condition for Flood Hazard (OPW.1) (and CEMP is used to managed construction effects). • Please define what is flood risk and why this was used, how does flood risk address the flood effects of the projects. What effects might not be captured in flood risk?	To better understand the flood management.	Flood risk indicates the potential flooding in the area with the consideration of the vulnerability of the location (i.e., whether flooding caused by the Project will affect nearby properties). This is mentioned in Section 3.2. As described in the responses to HW.7 to HW.10 the increase in flood hazard has been identified as contained within existing streams. Condition OPW.1 ensures that when this flood hazard is considered in combination with the design of future stormwater management devices, the post-Project flood risk defined as flood level during a 1% AEP event) are maintained at pre-Project levels outside the designation extent.
HW18	Drawing RR-0101-A	• Is the flow direction of the swale shown on drawing RR-0101-A correct? If so, where does the swale discharge to? This query is relevant to a number of swales along the designation.	To better understand the flood management.	Flows from this area will be discharged to Hingaia Stream via piped reticulation.

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HW19	AEE Revision: A, 16/02/2024	The NoRs will authorise the construction, operation, and maintenance of various structures. • The Drury South development has a number of stormwater management devices (e.g., flood basins, outfalls, etc). Will the works proposed under the NoRs impact on the functioning of existing or proposed Drury south Stormwater management devices? Please discuss. • Mitigation planting has been carried out as part of the Drury South development. Will the works proposed under the NoRs impact on the mitigation planting? Please discuss.	To better understand the flood effects.	Please refer to the response to Item PG 1 and the response to Item E1. Drury South Ltd (DSL) has been a key stakeholder in the engagement undertaken for Stage 2 of the P2B, because of the significant land holdings to the east of SH1, and interface with Drury South Interchange Connections (NoR 5).. As the road from the Drury south Interchange to Maketu road will be largely on a bridge structure, there would be limited effects on the stormwater management devices installed by Drury South. Any conflict with approved resource consents at Drury South that may arise in future will be adequately addressed through the appropriate PWA process. The amount of existing mitigation planting to be replaced will depend on the detailed design of the Project and the extent of earthworks. However, we have reviewed the mitigation planting plan submitted with consent BUN60305778 by Drury South Ltd. and the NoR footprint contains sufficient land to accommodate replacement planting if required. If conflicts are to arise in future through the detail design process, these are expected to be alleviated through a standard PWA process outlined in the response to Item P/G 1 (above).
HW20	Section 8.5 AEE Revision: A, 16/02/2024	SMAF-1 design criteria is proposed within the FUZ/greenfield environments, where discharging to freshwater streams. • The proposed designation will also cover areas that are not within FUZ/greenfield environments and discharge to freshwater streams, will SMAF-1 be used in these areas, please provide reasoning. The Hingaia Stream is actively eroding. • Please discuss if the use of SMAF-1 will be sufficient to mitigate effects on the stream environment caused by the change in land use such as erosion, instream habitat changes, etc.	To better understand the flood management.	• Regarding the concerns of the Hingaia Stream actively eroding, Chapter E1- of the AUPOP SMAF-1 is a regional consenting matter under Section 9(2) of the RMA (refer to Rule E10.4, AUPOP). The detailed design and location of stormwater outfalls to the Hingaia Stream, will be determined at the detailed design stage. Any future stormwater outfalls discharging to the Hingaia Stream will require resource consent at a later date. This process will afford Healthy Waters sufficient opportunity to assess any potential adverse effects (be it erosion and sediment control measures) on the Hingaia Stream, however this is not a matter to be addressed through the Notice of Requirement. • As above, SMAF-1 is a regional consenting matter. The Project must consider the relevant AUPOP rules at the time of construction (i.e, 15-20 years). Notably, the Project will not alter the land-use and is rather intended to enable infrastructure to be installed at a time the land use changes indicate its requirement. • As above, at the time of detailed design, it will be pertinent for NZTA to assess the state and vulnerability of the Hingaia Stream and prepare a design for any future stormwater outfalls in accordance with the requirements of the AUPOP. • It is also apparent from discussions with Healthy Waters on another project that erosion in the Hingaia Stream is an existing issue and that a wider solution to this may be required and implemented prior to the construction of the Project.

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		• Please demonstrate whether SMAF-1 is the Best Practicable Option, accounting for the existing state of the stream and its vulnerability to erosion.		
HW21	Flood Impact Assessment Revision: C, 16/02/2024	A 2.1-degree climate change has been allowed for the Projects. The AC Code of Practice for Land Development and Subdivision is being revised currently to incorporate 3.8-degree climate change allowance for the secondary network. • Please provide information on how a 3.8-degree climate change would affect the Projects.	To better understand the flood effects.	The assessment is consistent with the current standard as of February 2024, which is 2.1-degree climate change. Furthermore, The Auckland Code of Practise for Land Development and Subdivision is not an RMA document and is not pursuant to assessment of the NoRs,
HW22	Flood Impact Assessment Revision: C, 16/02/2024	Appendix A: Flood Modelling Technical Memorandum by Tonkin and Taylor has not been attached to the Flood Impact Assessment. • Please provide the Technical Memorandum. Please note further question may arise following review of the Technical Memorandum.	To better understand the flood assessment.	Please refer to Attachment 3.
Landscape Architecture				
LA1	Provision of plans	• Please provide the plans referred to in Appendix A, Appendix D, Appendix E and Appendix F of the Landscape, Natural Character, and Visual Assessment (LA)	The Assessment of Landscape, Natural Character and Visual Effects Report refers to a number of plans in these appendices, but they are not included in the document circulated. It would be helpful to provide maps of the AUP zoning overlaid with the existing and proposed designation boundaries. This information may be included in the maps referred to in Appendix D and E.	Please refer to Attachments 4, 5 and 6: • Attachment 4 – Drury Viewpoints Zoning; • Attachment 5 – P2B Designation Catchment Maps Topography and Hydrology; and • Attachment 6 – Drury Viewpoints Overlay The general arrangement plans (concept plan) for the Project are available here: Papakura to Bombay (P2B) Project Stage 2: Alteration Designation 6706 State Highway 1 – Takanini to Drury (NoR 1) NZ Transport Agency (NZTA) (aucklandcouncil.govt.nz)

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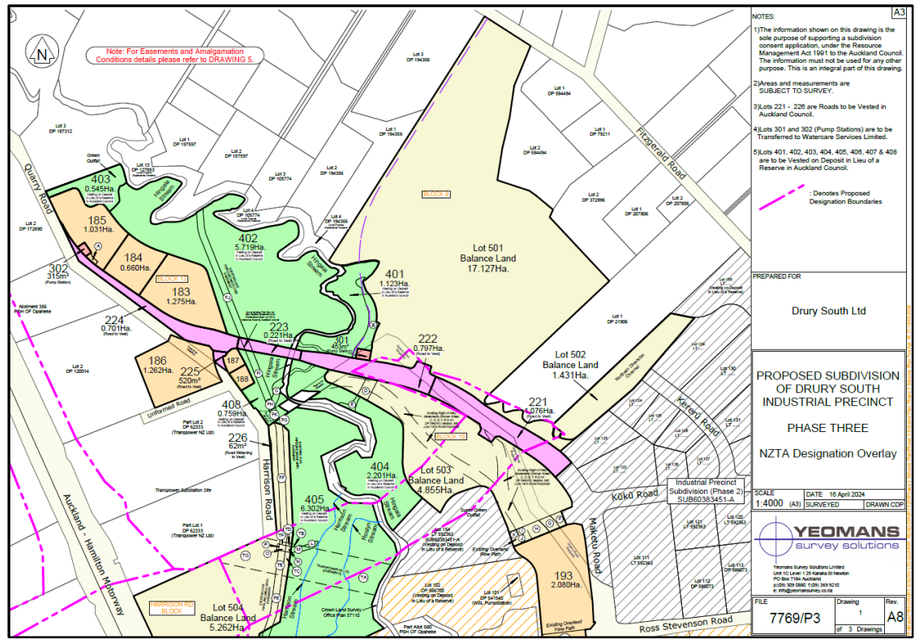
LA2	Clarification	• Please map and clarify the status of the Hingaia Stream floodplain open space near Quarry Road.	On p.34, the Assessment of Landscape, Natural Character, and Visual Effects Report describes the future environment of the Hingaia Stream floodplain near Quarry Road as public open space. It would be helpful to understand the extent of land referred to and the status of this land as 'public open space'.	The extent of the 'public open space' has been determined in accordance with the Drury South Ltd Masterplan (2024) and Proposed Phase Three Proposed Subdivision of the Drury South Industrial Precinct (shown below).. 
LA3	Clarification	• Confirm meaning of reference.	On p. 34, the Assessment of Landscape, Natural Character and Visual Effects Report notes the motorway character as increasingly 'urban' to the south. Please confirm whether this is a typo, and the reference should be to increasingly 'rural'.	This is a typo, and should be read as *'rural'*
LA4	Clarification	• Clarify land use described in Viewpoint analysis tables	For Viewpoint 11 Future land use is noted as 'Rural Living', but the land on the southern side of the Mill Road corridor is zoned Business: Neighbourhood Centre. Please clarify. For Viewpoint 14 the future land use is described as 'Future Urban Zone' – please confirm (not Mixed Housing Suburban zone).	The application Assessment of Landscape, Natural Character and Visual Effects Report should be read with the following amendments: • VP11 update to differentiate: Mixed Rural Zone (west SH1)/, Rural Production Zone (east SH1); and • VP14 update to: Drury South residential – sub precinct A

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LA5	Clarification	• Clarify how cross corridor connection between Great South Road and St Stephen's School and historical monument will be improved by NoR.	In Section 6.2 'Summary of Beneficial Effects' of the LA, the fourth bullet point identifies 'cross-corridor connection at Great South Road between St Stephen's School and historical monument'. Please clarify how the proposed NoRs will improve this connection.	A walking and cycling connection between the Project SUP to Bishop Selwyn Cairn via Great South Road was accounted for in the preparation of the concept design, however, it has not been formalised at this time. Further investigation of the opportunity to have a walking and cycling connection to Great South Road will be consider in future. Notably the Condition PC.7(g)(iv) on NoR 4 (SUP) requires, '*.. .the ULDMP(s) shall provide details of how the project: Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections'*
LA6	Clarification	• Clarify whether the assessment contained in Section 7 of the Assessment of Landscape, Natural Character and Visual Effects Report is limited to effects experienced within the designated road boundary or more broadly assesses potential landscape effects associated with each NoR alteration.	The introduction to Section 7 of the Assessment of Landscape, Natural Character, and Visual Effects Report notes that this section assesses the specific landscape and visual matters relating to alterations to NoRs 1-3. It appears that the assessment relates to effects experienced only within the designation road corridor, rather than in relation to the surrounding environment.	The effects are assessed of corridor and the adjacent environment. Effects of the project are limited as they primarily relate to upgrades of an road corridor and mainly relate to construction works and introduction of new structures at interchanges, in an area already highly influenced by SH1. *[Note: NZTA spoke to the Landscape Expert on Friday 19 April, and agreed on an approach to address this request. A further addendum to the LVA report is provided in Attachment 7 - Landscape Assessment Addendum*
LA7	Clarification	• Please clarify the assessment for NOR 4.	The effects ratings set out in tables 8-2 and 8-3 of the Assessment of Landscape, Natural Character and Visual Effects Report do not correlate with the comments in Section 8.6 (effects relating to the SH crossing of Great South Road in the vicinity of the St Stephens School entry) and the visual assessment for Viewpoints 7 and 8.	The assessment of NOR 4 as a 'whole' has low to very low effects as per table 8.2 and 8.3 assessed ratings. However, the effects of the SUP from a limited area as assessed in VP7 and 8, are higher given the close proximity of visual receivers, as a point where the SUP is elevated providing a higher level of modification. Clarification to section 8.5 summary should be read regarding the 'more than minor visual effects experienced within a limited area, as experienced by visual receivers at GSR'.
LA8	Additional detail	• Please provide a more detailed analysis of the receiving environment as it relates to the identified Landscape Character Types.	Section 4.2 of the Assessment of Landscape, Natural Character and Visual Effects Report references the categorisation of the Project route in 'Landscape Character Types' derived from the overarching Papakura to Pukekura ULDF (June 2021). However, the categorisation set out in this document contributes to the 'Vision' for the corridor, rather than an analysis of the existing environment. It sets out a broad design approach for different areas of the corridor, rather than identifying	The UDLF LCTs have been for used to define the extent of 'zones' of the landscape character types to provide consistency across reports, as a WK endorsed document. Further definition is provided (4.21 and 4.22) for each of the LCTs in regard to 'natural features' 'natural character' and 'motorway character'. These sufficiently (in line with Te Tangi te Manu guidelines chapter 4..47 typical factors and 5.0 landscape character and value) identify the defining character of the receiving road corridor and adjacent environment. NL: 4.2.2 Natural character heading to update to 'Natural features' aligning with natural character definition, limited to wetlands and stream environment

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			existing different character areas that form the context for considering the NoRs. The identification of Landscape Character Types used doesn't reflect the varied land-use pattern in areas adjoining the corridor. A more detailed analysis of this variation would better inform the following analysis of effects on landscape character.	*[Note: NZTA spoke to the Landscape Expert on Friday 19 April, and agreed on an approach to address this request. A further addendum to the LVA report is provided in Attachment 7 - Landscape Assessment Addendum*
LA9	Additional detail	• Please provide a more detailed assessment of landscape and natural character effects (Section 5.1)	Due to the broad brush identification of 'Landscape Character Types' noted above, the overall assessment of landscape and natural character effects is very brief. Further assessment, particularly in relation to the extent of the designation corridor, the potential for land modification and construction of structures should be assessed in relation to its surrounding context.	As per comment above. The assessment rationale (Table 5-1) provides a description of the effects to the landscape character and to the natural character. Note, as per Section 6 (LVA), the extent of natural character relates only to areas of existing freshwater environments, namely natural inland wetlands, and stream environments. The description provides a description of where this modification occurs.
LA10	Additional analysis	• Please provide an overarching assessment of visual effects in Section 5.2, identifying the various groups that comprise the viewing audience and setting out an assessment in relation to each of these.	Section 5.2 includes a detailed assessment in relation to a number of representative viewpoints. These are helpful to inform the visual assessment. However, this section should firstly identify the various groups that comprise the viewing audience and then provide an assessment in relation to these with reference to the viewpoint analysis. The detailed viewpoint analysis could be included as an appendix.	NL: A total of 15 viewpoints were identified within the Study Area and selected based on: • Distance from the Project (typically within 500m) and likelihood of viewing; • Desktop studies identifying significant viewpoints and residential receivers; • Publicly accessible viewpoints; and • ground-truthing visibility of Project from selected viewpoints. At a distance greater than 500m, the Project elements are unlikely to be discernible and/or screened by intervening topography and vegetation. The 'audience' of selected viewpoints are representative of views by private residents, motorists, key users (commercial areas) and from community spaces (such as schools). VP15 is representative of future recreational users within the Hingaia Stream proposed public open space. Where there was a cluster of dwellings, a representative viewpoint was selected from the dwelling closest to the Project or where views were clearest to demonstrate the worst-case scenario of potential visual effects. This band of users covers static and dynamic views. The description of users is currently in each viewpoint 'existing setting' description and Table 5-2 summary. Viewpoint assessment is in accordance with LVA guidelines Visual effects (Te Tangi a te Manu 6.25-6.27).
LA11	Additional analysis	• Please provide an analysis of potential visual effects associated with the proposed boundary of NoR 2 where it extends east to the residential	A number of residential properties interface directly with the proposed NoR boundary. Specific assessment in relation to the visual effects experienced by this audience is sought.	NL: Visual effect for Hunua Views development properties has been assessed in representative VP14 at John Main Drive/Sierra Way, Ramarama. The residential receivers, SUP users and motorists within/along Maketū Drive are most perceptive to changes within SH1 including widening of the corridor and introduction of the SUP on the far (west) side of the motorway. There is potential for this to be noticeable to receivers during construction, but the visual modification during operation would be negligible, particularly as the works on the east side of SH1 would be

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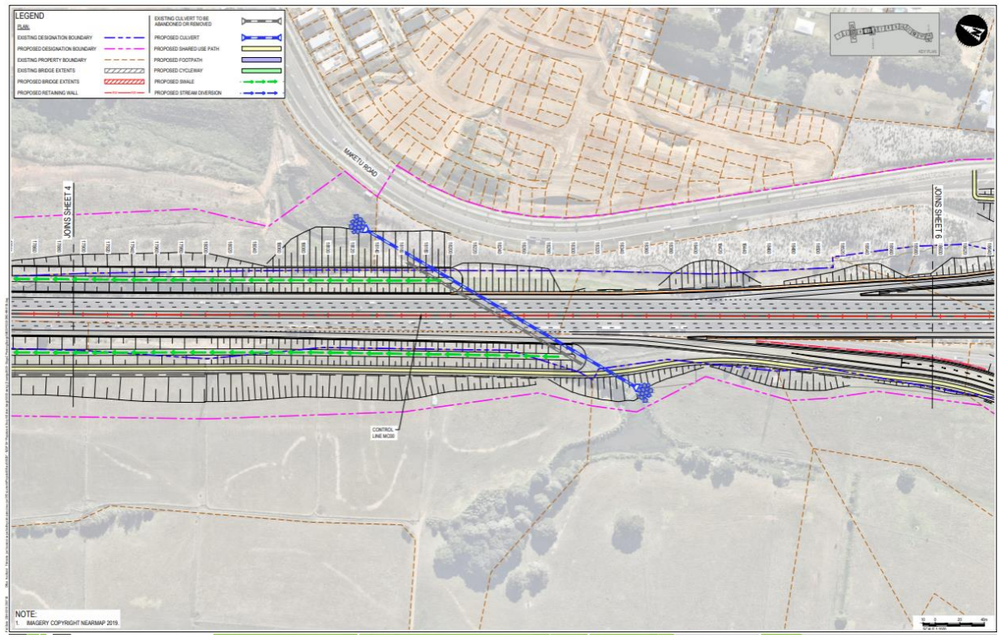
		property boundaries fronting Makatu Road.		confined to a stormwater swale, embankment works and associated revegetation – commensurate with the existing scene with a vegetated embankment to the foreground of motorway, as per General Arrangement Plans Appendix N (reference sheet 506207-0530-RDG-RR-0106-A). 
Urban Design				
UD1	Assessment sought	• Please provide an Urban Design Assessment for the NoRs	Appendix M contains the Papakura to Pukekura Urban and Landscape Design Framework (ULDF) that sets out an overarching design framework for the broader project. A specific urban design assessment is requested in relation to the NoRs being sought to better understand how the proposed alterations to existing designations and the proposed new designations will integrate with the surrounding context and meet the outcomes sought in the ULDF. In particular, the assessment should address the following: • how the new road corridor infrastructure will interface with established and likely future land use patterns;	*[Note: NZTA spoke to Urban Design Expert on Friday 19 April, and agreed on an approach to address this request. A further addendum to the LVA report is provided in Attachment 8 – Urban Design Assessment Addendum.*

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			• potential CPTED issues; • legibility for users of the SUP; • recommendations for urban design matters to address through conditions.	
Traffic matters				
T1	Assessment of Alternative Options – Ramarama Interchange	• Please provide assessment of full or Partial Closure of Ramarama Interchange to be provided to address the alternative of full or partial closure of the Ramarama Interchange?	The Alternatives Assessment undertaken as part of the P2B DBC considers three options for the Ramarama Interchange, all of which include retaining or replacing the Ararimu Road overbridge and all four access ramps. However, it is noticed that consideration could be given to the full or partial closure of the Ramarama Interchange, as the transport functions that it provides would be substantially duplicated by the proposed new Drury South Interchange. The Ramarama Interchange primarily facilitates connections between the Southern Motorway and the interchange's immediate hinterland, which, would be available via the new Drury South Interchange and its onward connections to Quarry Road, Maketu Road and Great South Road. The new Drury South interchange is to be located within 2km of the Ramarama Interchange. As elaborated below, this represents a short separation distance between consecutive motorway interchanges by comparison to the recommendations of Austroads Design principles. Not only is this inconsistent with the strategic function of a motorway, but it further risks adverse operational and safety effects resulting from excessive use of the motorway by short-distance trips between consecutive interchanges. ***Austroads Design Principles*** The primary function of a motorway is to facilitate strategic long-distance transport connections. Commensurate with the strategic transport function of a motorway, interchanges	The design team disagree with the Council's statement that Drury South Interchange will replicate the function of Ramarama Interrchange. An adequate consideration of alternative sites, routes, or methods of undertaking the works does not necessitate every alternative to be considered. A suitable range of feasible alternatives needs to be considered. For this project a comprehensive range of design options were thoroughly evaluated during the assessment of the necessary upgrades to ageing SH1 infrastructure at Ramarama Interchange. The determination of the suitable location for the proposed Drury South Interchange was made collaboratively by the Project Team in conjunction with key stakeholders such as Auckland Council, Auckland Transport, and Mana Whenua. The consideration of closing the Ramarama Interchange was disregarded at an early stage of the P2B DBC due to its inconsistency with the Project DBCObjectives, which explicitly seek to improve accessibility and utilise existing assets. Such a closure would have substantial adverse effects on the connectivity of the existing community and likely undermine the strategic objectives of the future transport network envisaged by the Supporting Growth Alliance in the Southern Growth Area. Whilst the spacing of the interchanges is beneath the ideal recommendations from Austroads, at approximately 2.25km when 3km is desired, there are numerous examples of similar or even closer interchange spacings on the Auckland motorway network that operate safely.

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			should be provided at only select locations, to avoid excessive use of the motorway by short-distance trips between consecutive interchanges. Austroads Guide to Road Design Part 4C recommends the following minimum spacing distances between motorway / 'freeway' interchanges, dependent upon the number of lanes and the geographical context (urban versus rural environment): <u>In urban areas, about:</u> • 2 km on four-lane motorways / freeways (i.e., two lanes in each direction) • 3 km on six-lane motorways • 4 km on eight-lane motorways <u>In rural areas</u>, between 5 km and 8 km Thus, following the widening of the motorway to 6 lanes, the recommended minimum separation distance between interchanges would be 5 km, based on the current rural environment, or 3 km, if allowing for the increasingly urbanised environment adjoining the motorway. Both of these recommended separation distances are in excess of the 2 km separation distance between the Ramarama and Drury South interchanges. Retaining the Ramarama Interchange in its current form presents the risk of encouraging short-distance traffic movements between the Ramarama and Drury South interchanges, which would utilise the Southern Motorway for less than 2 kilometres. High numbers of short-distance trips are not considered to be consistent with the function of a motorway, which is to facilitate strategic long-distance traffic movements. At an operational level, consecutive pairs of interchange ramps within distances of 2 kilometres or less further introduces potential for additional safety conflict, i.e., conflicting traffic streams weaving across motorway lanes upon respectively entering and preparing to exit the motorway at consecutive interchanges. As recognised in the above Austroads	

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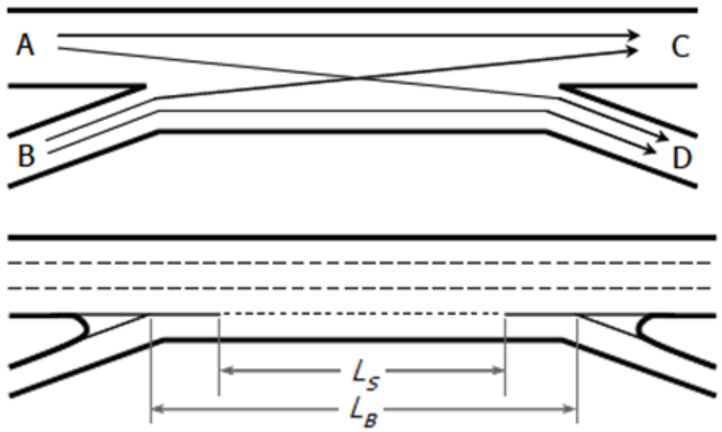
			recommendations, additional lanes on the motorway increases the length of road over which such weaving manoeuvres could be expected to take place, hence influencing longer recommended distances between consecutive interchanges. At the time of writing, any predecessor work to the Alternatives and Options Assessment of the P2B DBC has been mentioned, which may have previously considered and discounted an option for full or partial closure of the Ramarama Interchange. Notwithstanding this, further assessment of the following options on a comparative basis can be provided, considering impacts upon traffic operation and safety, both on the motorway and the parallel running local road network: (i) As proposed, the provision of north and south-facing ramps at both the Ramarama and Drury South Interchanges (as a 'reference case') (ii) Partial closure of the Ramarama Interchange, comprising closure of the north-facing ramps only (iii) Full closure of the Ramarama Interchange, of all 4 ramps	
T2	Safety and operational effects between Drury and Drury South Interchanges	• Please assess safety and operational effects resulting from the close spacing between the existing Drury interchange and the new Drury South interchange	Following on from discussion under item T1 in relation to the separation distance between the new Drury South and Ramarama interchanges, the distance between the new Drury South and existing Drury interchanges is approximately 2.25 km, which similarly falls below the 3 km separation threshold recommended by Austroads Part 4C (the 3 km parameter being based on increased future urbanisation on land adjoining the motorway). While section 4.3 of the ATE acknowledges the risk of increased speeds and increased potential for weaving movements as a result of the widening, it does not elaborate on the scope and level of risk associated with such movements nor any potential mitigatory	We have reviewed the proposed on- and off-ramp configurations and conclude that there is no weaving effect t be assessed. The Highway Capacity Manual (HCM) defines a weave as a segment of a motorway where two traffic movements ***must*** make at least one lane change each. This is illustrated in the figures below, where movements A-D and B-C are weaving movements. The weave occurs where the on-ramp and off-ramp are separated by an auxiliary lane, which forces all weaving movements to change lanes into the auxiliary lane (in the case of movement A-D) or out of the auxiliary lane (movement B-C), within the length of that weaving segment.

<table>
<tr><th>#</th><th>Category of information</th><th>Specific Request</th><th>Reasons for request</th><th>NZTA Response, dated 07/05/2024</th></tr>
<tr><td></td><td></td><td></td><td>measures which may need to be considered in the short or longer-term.

Please undertake further assessment of the potential adverse effects of additional weaving movements occurring over the 2.25 km distance between the interchanges and confirm any potential mitigatory measures. It is noted that both the Drury and Drury South interchanges would fulfil comparatively more strategic transport functions than the Ramarama Interchange, thus making options for ramp closures undesirable. However, could future traffic growth potential warrant consideration of other mitigatory measures, such as the addition of auxiliary lanes between the two interchanges, or reduced or variable speed limits?</td><td> 

There are no auxiliary lanes proposed in the Papakura to Bombay project, and as a result, no weaving movements to assess. The HCM clarifies that instances of closely-spaced on- and off-ramp combinations should be treated as isolated ramp junctions, and assessed according to the HCM’s merge and diverge capacity method. We have addressed these merges and diverges in our response to Item T3 below.</td></tr>
<tr><td>T3</td><td>Assessment of Merges and Diverges at interchanges</td><td>Please assess capacity of merges and diverges of interchange ramps according to Austroads standards.</td><td>The ATE does not include a capacity assessment of the merges and diverges of the interchanges. The Designation Layout Plans in Appendix B illustrate all interchange merges and diverges with single lane merges and diverges adjoining the motorway. Does the NOR Designation allow for the provision of alternative merge and diverge layouts on the interchange ramps if warranted (e.g., on account of high levels of heavy vehicles)?

Further assessment of the interchange merges and diverges according to Austroads standards is required to confirm the availability of sufficient capacity to avoid adverse effects, such as tailbacks onto the mainline of the motorway at diverges or traffic entering at slow speeds at merges. Relevant Austroads standards include Guide to Road Design Part 4C: Interchanges, Chapter 5 and Chapter 11, and Guide to Traffic Management Part 2: Traffic Theory, section 8.2.</td><td>We have assessed the interchange merges and diverges according to the Highway Capacity Manual (HCM) A Guide for Multimodal Mobility Analysis Chapter 14: Freeway Merge and Diverge Segments.

The HCM Freeway Merge and Diverge Segments outline the methodology for the analysis of ramps at motorway interchanges. The analysis takes demand and geometric elements of the motorway and ramps to assess the expected performance of the interchange ramps. The primary outputs are the Level of Service (LOS), capacity and operating speeds, of the merge/diverge area.

We have assessed the worst-case scenario with the Project, being the 2048 forecast year for both AM and PM Peaks. We have assessed the 3 interchanges within our Project area:
Drury South Interchange
Ramarama Interchange
Bombay Interchange
The predicted results of the interchange ramps are shown in Table 1 and Table 2 below.

Table 1: Performance for interchange ramps, 2048, southbound<table><tr><th></th><th colspan="2">AM Peak</th><th colspan="2">PM Peak</th></tr><tr><th>Location</th><th>Level of Service in merge/diverge area</th><th>Operating speed in merge/diverge area (km/h)</th><th>Level of Service in merge/diverge area</th><th>Operating speed in merge/diverge area (km/h)</th></tr></table></td></tr>
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Drury South Off-ramp	C	89	C	89
Drury South On-ramp	C	90	C	89
Ramarama Off-ramp	C	89	C	89
Ramarama On-ramp	C	91	C	89
Bombay Off-ramp	C	90	D	89
Bombay On-ramp	B	91	C	90

Table 2: Performance for interchange ramps 2048, northbound

	AM Peak		**PM Peak**	
Location	**Level of Service in merge/diverge area**	**Operating speed in merge/diverge area (km/h)**	**Level of Service in merge/diverge area**	**Operating speed in merge/diverge area (km/h)**
Bombay Off-ramp	C	89	C	89
Bombay On-ramp	D	89	C	88
Ramarama Off-ramp	C	89	C	89
Ramarama On-ramp	C	91	C	91
Drury South Off-ramp	C	89	C	89
Drury South On-ramp	C	90	C	89

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				The HCM assessment predicts that each interchange on-ramp merge area, and each off-ramp diverge area, are expected to operate at LOS C. The exceptions are the busy Bombay north-facing ramps in the commuter peak directions, which are expected to operate at LOS D. In all cases, the ramp merge and diverge areas are expected to operate within capacity in 2048, without significant queuing.
T4	NOR 5 Future Corridor – Intersection forms	• Please confirm philosophy with regards to the choice of intersection forms along the NOR5 route, which vary between roundabouts and signals	The new link road enabled by NOR5 is proposed to link with a new roundabout with Great South Road to the west, with dumbbell roundabouts at the Drury South Interchange and with a new signalised intersection with Maketu Road to the east. Inconsistency in intersection forms between signals and roundabouts along a given corridor is not generally considered to be ideal practice, although the performance assessment would appear to indicate that there are no major operational issues relative to the spacings between the intersections, e.g., excessive queue lengths. Please confirm rationale behind choices of intersection form, not only in the context of the NOR5 and P2B roading provisions, but also in the context of onward connections towards Pukekohe and eastern Drury and Papakura, both of which are expected to function as Expressway-standard routes. What is the current thinking in relation to intersection forms along both onward routes and will they be consistent with the choices of intersection form on NOR 5? Would the designation in practice allow for some flexibility in the ultimate choice of intersection form?	Each intersection is designed on a case-by-case basis considering a range of factors such as existing/proposed road environment, traffic volumes, types of users and land use. There is no particular need or rationale to repeat intersection forms along any given route, rather it would likely be more ideal to vary the road environment to help keep road users more alert and help them navigate. From a road safety, efficiency and sustainability perspective roundabouts are the preferred intersection form for this road environment. However, to design a compliant and safe roundabout does require more land than that of a signal-controlled intersection. It is anticipated that the intersection form may be revisited at a later design stage, therefore by designating for roundabouts, in most locations, flexibility is provided for a range of intersections forms to be designed in the future. A signalised intersection has been indicated at Maketu Road as this is consistent with the remainder of the Maketu corridor.
T5	NOR 5 Future Corridor – Intersection with Maketu Road	• Please undertake traffic modelling of this intersection	The intersection traffic modelling presented in Appendix C does not cover the intersection with Maketu Road. Please can a modelling assessment of this intersection be provided, to determine whether its operation and queue	The intersection modelling documented in **Appendix C** (Assessment of Effects on Transport and Traffic) includes the Maketu Road intersection. This intersection is the 5-leg roundabout that forms the eastern side of the interchange. Refer figure below from Appendix C.

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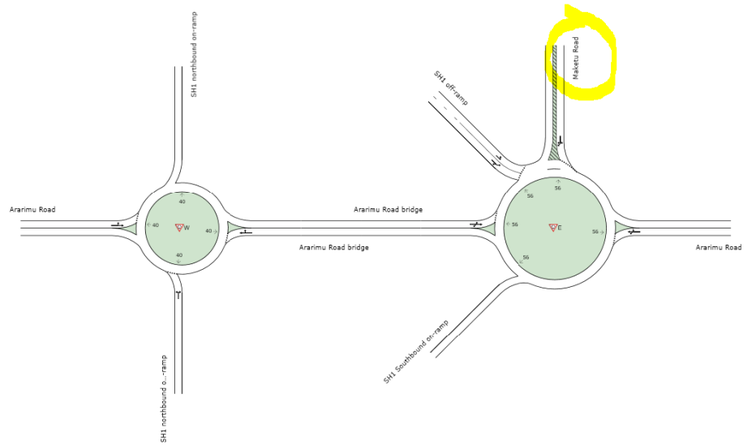
			generation will adversely impact upon the adjacent roundabout intersections to the west.	 The critical approaches to this interchange, in terms of queue potential onto the motorway, include the SH1 overbridge and the SB off ramp. No significant queues were predicted on either of these approaches (1-3 vehicles during peak periods).
T6	Crash Analysis, Chapter 5 of Assessment of Transport & Traffic Effects (ATE)	• Please provide a more detailed crash analysis, including a breakdown of crash types and crash trends along the corridor	The crash analysis in Chapter 5 is high level and provides no breakdown of crash types by location. A more detailed crash analysis, including a breakdown of crash types and crash trends by location along the corridor would assist with providing more insight into existing trends and opportunities to reduce crashes, particularly at and in the vicinity of key interchanges, where major changes are proposed. In the case of crashes near the proposed new Drury South Interchange, it would be useful if the location and outline for the interchange could be confirmed on the crash plot.	We have undertaken a crash assessment for the Project area for the time periods between 1 January 2016 to 15th February 2020, and for 1 January 2023 to 15th August 2023 (16th February 2020 to 31 December 2022 was avoided due to COVID-19 impacts)1. Our crash analysis included SH1 south of the Drury interchange (by Pitt Road) to the SH1 / Mill Road Bombay Interchange. The key findings of the crash assessment are: • A total of 193 recorded crashes • Crash numbers by severity: – 0 fatal crashes. – 6 (3%) serious injury crashes. – 45 (23%) minor injury crashes. – 142 (74%) non-injury crashes. • Crash numbers by crash type: – 38 (20%) overtaking crashes. – 64 (33%) straight road lost control / head on crashes.

[1] Two serious crashes were reported during this period one northbound and one southbound, north of the Bombay interchange where a significant grade change is present. The northbound incident involved a motorbike losing control into the central median barrier. The southbound incident involved a car being side swiped by a truck changing lanes.

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- 20 (10%) bend – lost control / head on crashes.
- 52 (27%) rear end / obstruction crashes.
- 17 (9%) crossing / turning crashes.
- 2 (1%) miscellaneous crashes.
- 0 pedestrian related crashes.

We have provided further insight into the existing crash trends along the SH1 as well as in the vicinity of key interchanges. We have also separately analysed the crash history of the location where the proposed New Drury South interchange will be situated.

The crash type and severity based on location along SH1, inclusive of the existing interchanges are provided below.

LOCATION	CRASH TYPE							CRASH SEVERITY			
	CHANGING LANES/OVER TAKING/ MERGING	LOSS-OF-CONTROL (Straight and bend road)	REAR-END/ OBSTRUCTION	CROSSING/ TURNING	PEDESTRIAN/ CYCLIST	OTHER	TOTAL	FATAL	SERIOUS	MINOR	NON-INJURY
SH1: South of Drury Interchange to Quarry Road Bridge	3 (33%)	2 (22%)	4 (45%)	0 (0%)	0 (0%)	0 (0%)	9 (5%)	0 (0%)	0 (0%)	2 (22%)	7 (78%)
SH1: South of Quarry Road Bridge to North of Ramarama Interchange	13 (25%)	25 (50%)	13 (25%)	0 (0%)	0 (0%)	0 (0%)	51 (26%)	0 (0%)	1 (2%)	14 (27%)	36 (71%)
Ramarama Interchange including interchange ramps	1 (4%)	11 (48%)	8 (35%)	2 (9%)	0 (0%)	1 (4%)	23 (12%)	0 (0%)	0 (0%)	7 (30%)	16 (70%)
SH1: South of Ramarama Interchange to Bombay Road	6 (15%)	25 (61%)	10 (24%)	0 (0%)	0 (0%)	0 (0%)	41 (21%)	0 (0%)	2 (5%)	6 (15%)	33 (80%)
SH1: South of Bombay Road to North of Bombay Interchange	6 (35%)	9 (53%)	1 (6%)	0 (0%)	0 (0%)	1 (6%)	17 (9%)	0 (0%)	1 (6%)	6 (35%)	10 (59%)
Bombay Interchange including interchange ramps	9 (17%)	12 (23%)	16 (31%)	15 (29%)	0 (0%)	0 (0%)	52 (27%)	0 (0%)	2 (4%)	10 (19%)	40 (77%)
Total Study Area	**38 (20%)**	**84 (43%)**	**52 (27%)**	**17 (9%)**	**0 (%)**	**2 (1%)**	**193**	**0 (0%)**	**6 (3%)**	**45 (23%)**	**142 (74%)**

- In the total search area, 60% of crashes occurred on SH1, away from existing interchanges. Loss of control accounted for 43% of all crashes, with a significant portion happening between Quarry Road Bridge and Ramarama, as well as South of Ramarama to Bombay. A combined 26% of these occurred at Ramarama and Bombay interchanges.
- The most common crash type at the Ramarama interchange is loss of control (11 occurred), followed by rear-end crashes (8 occurred). There was only 1 crash related to lane changes at the Ramarama Interchange. There were no reports of fatal or serious injury crashes at the Ramarama Interchange. Minor injury crashes totalled 7, with 16 non-injury crashes.
- Bombay interchange accounted for 27% of total crashes in the area, with rear-end and crossing/turning crashes each comprising 30% of these incidents. This is relatively large percentage considering the

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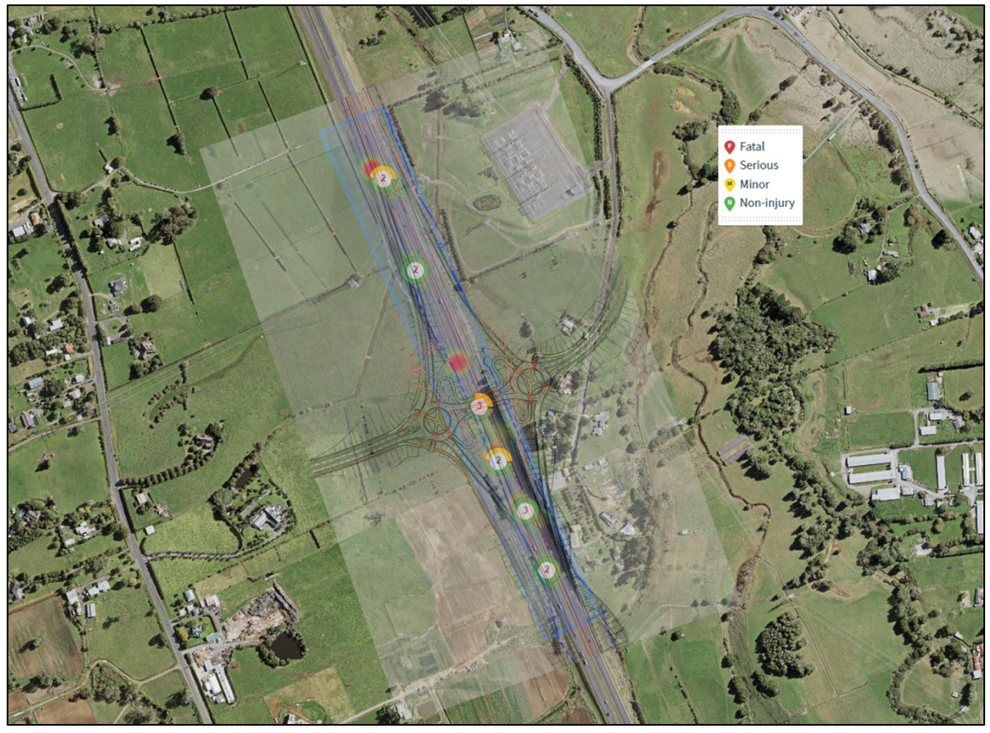
				search area covered a large area. Additionally, there were 2 serious injury crashes, 10 minor injury crashes, and 40 non-injury crashes recorded at this interchange. The crash history for the proposed segment of SH1 for the New Drury South Interchange is the following. *Figure 0-1: Crash search results for the Segment of SH1 within the vicinity of the proposed New Drury South Interchange*  Within the segment of SH1 where the proposed New Drury South interchange is located, there were a total of 14 crashes recorded during the observed period. Among these crashes, 11 were non-injury incidents, while the remaining 3 were minor injury crashes. The breakdown of crash types includes 7 loss of control/head-on crashes, 3 overtaking crashes, and 2 rear-end crashes. One of the minor injury crashes involved a truck changing lanes without checking its blind spot for adjacent vehicles. Another minor injury crash was a typical rear-end collision, while the last minor injury incident involved a loss of control leading to the vehicle hitting the central barrier and spinning out of control. Overall, there are no notable crash trends that suggest this segment of SH1 would be unsuitable for the New Drury South interchange. The safe system approach acknowledges that people make mistakes and are vulnerable in a crash. While mistakes are inevitable, deaths and serious injuries from road crashes are not. Notably, the majority of the crashes (97%) did not result in serious injuries or deaths. Two out of the six serious crashes occurred along Mill Road at the Bombay Interchange and involved turning and failing to give way to straight oncoming vehicle. Three of the six crashes occurred along SH1 between

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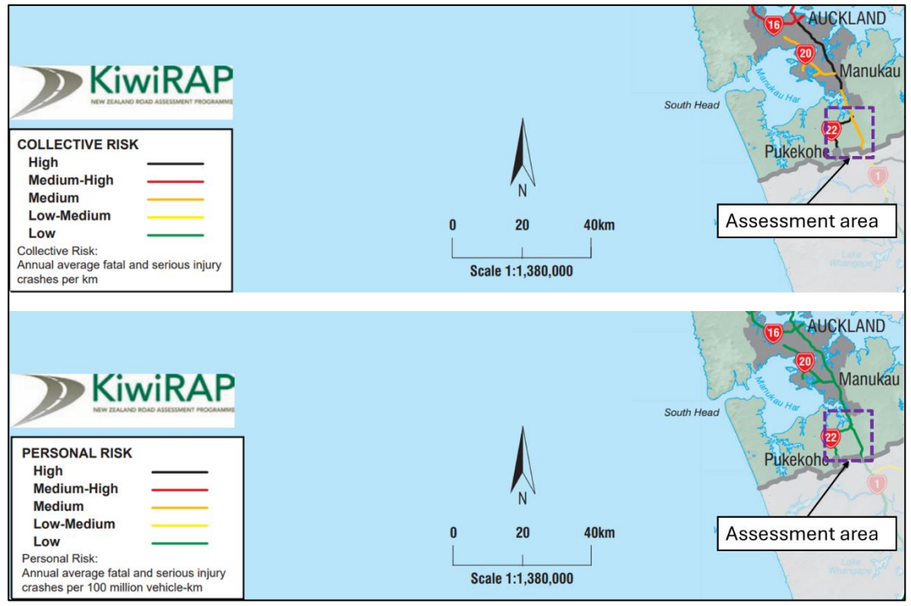
				Ramarama and Bombay and the remaining serious crashes occurred along SH1 just south of Quarry Road. Two crashes involved motorcyclists, which are a vulnerable road user type and more susceptible to serious injuries compared to other private vehicles. Most crashes were loss of control or head-crashes on straight sections of road which is not unexpected for the Auckland Motorway network environment due to the high-speed environment. The low number of losing control at a bend, turning or crossing related is expected as SH1 is mostly straight. There are no pedestrian crashes recorded as pedestrians are not permitted on the motorway.
T7	Safety – Assessment of KiwiRAP ratings	• Please confirm current and future KiwiRAP ratings for SH1 Southern Motorway and SH22	The ATE Report does not include an assessment of Kiwi RAP ratings for collective and personal safety risk along the Stage 2 section of the P2B Southern Motorway corridor, nor along the adjoining length of State Highway 22. An assessment of KiwiRAP ratings is required both on this section of the Southern Motorway and along SH22, including confirmation as to whether the safety ratings would improve as a result of the proposed improvements.	KiwiRAP is a road safety assessment program that evaluates the safety performance of New Zealand's rural state highway network. It is part of the International Road Assessment Programme (iRAP), which collaborates with government and non-government organizations in over 70 countries to identify safety shortcomings and recommend practical road improvement measures. KiwiRAP employs three main protocols: Risk Mapping, Performance Tracking, and Star Rating, to analyse crash data, traffic volumes, and road engineering features. The data and assessment presented in this report are based on the KiwiRAP Risk Maps and Performance Tracking results for the years 2007-2011, as well as the Star Ratings released in 2010. These assessments provide a comprehensive view of the safety performance of the state highway network during the specified period, allowing for meaningful comparisons and insights into safety trends. Collective Risk, often termed crash density, quantifies the total number of fatal and serious injury crashes per kilometre along a road segment. Typically, higher traffic volumes contribute to increased Collective Risk. Conversely, Personal Risk assesses the risk level for individual road users on a specific state highway section. Personal Risk considers the traffic volumes on each road section, providing a detailed assessment of safety risks for individual travellers. <u>2012 KiwiRAP assessment:</u> The 2012 KiwiRAP collective and personal risk map is shown in Figure below.

Figure 0-2: 2012 KiwiRAP Collective and Personal Risk Maps



Stage 2 Project Area (SH1 – Drury to Bombay)[2]:

- Collective Risk: 0.07 (Medium Risk Band)
- Personal Risk: 0.8 (Low Risk Band)

The Collective Risk rating of 0.07 for the Stage 2 project area on SH1 indicates a moderate level of risk, which is within the medium risk band. This rating is derived from the annual average of fatal and serious injury crashes per kilometre of road. Despite this, the Personal Risk rating of 0.8, which considers the risk per 100 million vehicle kilometres, falls within the low-risk band. This suggests that while there is a moderate level of risk per kilometre, the risk to individual road users is relatively low.

SH22 (Drury to Pukekohe):

- Collective Risk: 0.23 (High Risk Band)
- Personal Risk: 3.8 (Low Risk Band)

On SH22, the Collective Risk rating of 0.23 places it in the high-risk band, indicating a significantly higher level of risk compared to the Stage 2 project area on SH1. This rating is attributed to the higher number of fatal and serious injury crashes per kilometre. However, the Personal Risk rating of 3.8 falls within the low-risk band, indicating that while the overall risk per kilometre is high, the risk to individual road users is relatively low.

It should be noted that the most up-to-date Risk assessment and map is from 2012, which was over 10 years ago compared to the Stage 2 P2B project. As such, we have assessed the collective and personal risk using the crash search data obtained (last 5 years avoiding the COVID-19 period) and given a score based on KiwiRAP's Risk Rating criteria, below.

<table>
<tr><th>#</th><th>Category of information</th><th>Specific Request</th><th>Reasons for request</th><th>NZTA Response, dated 07/05/2024</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><th>Risk Rating</th><th>Collective Risk
Average annual fatal and serious injury crashes per km</th><th>Personal Risk
Average annual fatal and serious injury crashes per 100 million vehicle-km</th></tr>
<tr><td>Low</td><td>≤0.039</td><td><4</td></tr>
<tr><td>Low-medium</td><td>0.04≤0.069</td><td>4≤4.9</td></tr>
<tr><td>Medium</td><td>0.07≤0.10</td><td>5≤6.9</td></tr>
<tr><td>Medium-high</td><td>0.11≤0.189</td><td>7≤8.9</td></tr>
<tr><td>High</td><td>0.19+</td><td>9+</td></tr>
</table>
The total number of fatal and serious injury crashes on SH1 within the project area is 0 and 6 respectively as shown in Appendix B of the report. The search period was 5 years, with a length along SH1 of approximately 11 km. This results in an average annual fatal and serious injury crashes per km of 0.109 which classifies it under the medium to medium-high risk band for Collective Risk.

For Personal Risk, the volume of average annual traffic was obtained using Waka Kotahi’s State Highway traffic monitoring annual average daily traffic. Based on the Collective Risk score, the Personal Risk determined with the volume of traffic on SH1 is 0.56. This puts it into the Low-Risk rating band, suggesting that the risk to each individual driver is low.

The following are the proposed road upgrade changes with the Stage 2 P2B Project that will impact safety and crash rates.
• SH1 3 lanes from Drury to Bombay
• New Drury South SH1 Interchange
• Upgrades to Ramarama and Bombay Interchange
• Pukekohe Arterials and Connections
• SH22 Upgrades

The Project anticipates a rise in traffic on SH1, potentially increasing crash rates in high-traffic areas. However, the improved geometric layout, including a new 4.0m wide shoulder, paved median with 2.5m wide shoulders, and enhanced median barriers is expected to lower crash risk and severity. Furthermore, the rise in traffic on SH1 will result in lower volumes and crash rates on the surrounding local network, which tend to be high speed rural roads with a high personal crash risk.

The introduction of the Drury South Interchange implies a potential increase in crash risk compared to the current absence of the interchange. Despite this, the use of engineering geometric design standards and a safe systems approach is expected to minimize the occurrence and severity of crashes. The upgrades and
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[2] KiwiRAP Risk Maps and Performance Tracking (2012) for Northland and Auckland Region. The segment for the rating is from Drury to Pukeno, immediately south of Bombay.

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				changes to the Ramarama and Bombay Interchange will reduce crash rates and severity due to the new roundabout and signalised configurations. SH22 will see a reduction in traffic as the Pukekohe Arterials connection to the Drury South interchange will serve as an alternate route, shifting demand away from SH22. This will reduce the chances of crashes occurring on SH22. The increased chances of a crash occurring due to increased traffic from the Project is potentially offset by the lower severity of the crashes. KiwiRAP only assesses fatal and serious injury crashes, therefore, the Collective and Personal Risk ratings are likely to remain similar to the assessment given above.
T8	Shared User Path (SUP) – Function, Operation and Volume	• Please clarify transport functions and usage of SUP	While the ATE Report refers to there being expected benefits of the SUP, it does not elaborate on its intended transport functions, operation and expected levels of usage. For example, is it expected to cater primarily for leisure trips, commuter and practical / everyday trips, or combinations of these? Do the intended transport functions align well with the connections being provided onto the SUP at the key interchanges and any other locations? Are any 'soft measures' being proposed to enhance use of the SUP and encourage modal shift from car trips, e.g., travel demand management initiatives? Is any count data or other survey data available for the existing section of SUP between Papakura and Takanini, which may offer insights into expected usage and likely functioning of the SUP south of Drury?	The SUP is designed to serve a multifaceted role in the transportation network, catering to various user groups and trip purposes. While the ATE Report acknowledges the expected benefits of the SUP, it does not provide detailed information on its specific transport functions, operational strategies, or projected usage levels. However, based on general principles and best practices in active transportation planning, we can give insight into several key aspects: 1. **Trip Purposes:** The SUP is expected to accommodate a range of trip purposes, including but not limited to leisure activities, commuting, and practical or everyday utility trips. This inclusive approach aims to promote active modes of transport and provide a safe and convenient route for pedestrians, cyclists, and other non-motorized users. 2. **Connections with interchanges:** The intended transport functions of the SUP are designed to align well with the connections provided at key interchanges and other locations along its route. This alignment integrates with existing infrastructure and encourages sustainable travel choices. With the SUP, users can use the path to travel between Drury, Ramarama and Bombay without the need for a vehicle (and importantly to and from future intermediate locations, as the area urbanises and additional local connections to the SUP are provided). 3. **Travel Demand Management:** To enhance the use of the SUP and encourage modal shifts from car trips, various soft measures may be proposed. These could include travel demand management initiatives, promotional campaigns, educational programs, and incentives to encourage active modes, similar to the existing SUP between Takanini and Papakura, namely the 'Southern Path'. The Southern Path has received a variety of positive feedback as outlined in this article from Waka Kotahi[3]. The new SUP for Stage 2 will incorporate similar soft measures to encourage use. 4. **Expected Usage:** We have drawn on data from AT's automated counters for the completed Southern Path between Takanini and Papakura. This SUP was used by on average 220 daily trips in 2023, including 120 pedestrian trips and 100 cycle trips. Broadly, we expect similar numbers of trips on the proposed southern extension, but note that demand will grow over time as the area urbanises. In addition, we have assessed Strava heatmap data to identify movements in the surrounding network in the vicinity of the Project area. Strava is an app/tool that allows runners, cyclists and active lifestyle users to connect together and track their activity. They have a feature called Global Heatmap which identifies roads/places based on the frequency of activity. As shown in Figure , it appears there is a relatively high activity in the surrounding networks and parallel routes such as Great South Road west of SH1. This shows an existing demand for rural recreational cycle trips in the area, some of which can be expected to transfer to the new SUP.

[3] https://www.nzta.govt.nz/media-releases/newly-opened-southern-path-allows-for-picturesque-harbour-views-supports-active-travel-modes/

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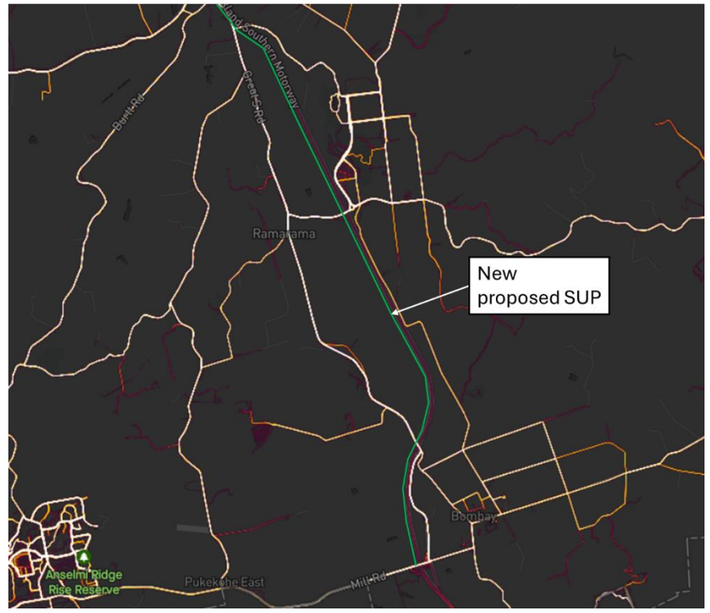
				Figure 0-3: Strava Heatmap in the vicinity of the Project area 
T9	Construction Traffic Management Plan (CTMP) Conditions	• Is there proposed to be a condition for network performance monitoring?	While the ATE and conditions refer to an outline approach for a prospective CTMP to avoid, remedy or mitigate adverse effects during the construction phase, the ATE appears to provide little insight in relation to the scope and nature of problems to be addressed during the construction phase. A condition is required to establish and monitor minimum network performance parameters to be achieved during the construction phase, including maximum increases in journey time and traffic volumes, along both the motorway and any diversionary routes. In the event of thresholds being exceeded, appropriate Travel Demand Management (TDM) measures should be identified where practicable. Appropriate thresholds for excessive travel times to be determined based on average travel times surveyed over the selected routes prior to the commencement of works.	At present there is no condition requirement to monitor network performance during construction. The request for a condition is noted and NZTA will consider this issue further post notification of the NoRs.

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Ecology				
E1	Drury Crossing	• Please clarify what the implication is in terms of NoR 5 preventing the consent holder (Drury South Limited) implementing their consent conditions, or if they have already been implemented what the mechanism would be that ensures the development effects remain offset?	The lodged application material recognises that the 'Drury South Crossing development area' is subject to resource consent BUN60305778 (Over the entirety of the Drury South Industrial Precinct and Drury South Residential Precinct areas). BUN60305778 requires planting along the Hingaia River and its tributaries (referred to as Harrison, Stream Roslyn Stream and Transpower Stream) to offset the development's impacts. BUN60305778 also requires that this planting be either protected in perpetuity by a suitable legal mechanism or vested to Council.	Please refer to the PWA response in **Item P/G 1** Drury South Ltd (DSL) has been a key stakeholder in the engagement undertaken for Stage 2 of the P2B, because of the significant land holdings to the east of SH1, and interface with Drury South Interchange Connections (NoR 5). Engagement has been ongoing with representatives of DSL as early as the optioneering phase, and determination of the location of the proposed Dury South Interchange best discussed in the Assessment of Alternatives Report at Appendix K. Notably, NZTA will continue to work closely with DSL in developing the detailed design and will ensure to resolve any conflicts that may arise with their approved development consents (BUN60305778). Where any future conflicts may arise, there are adequate provisions within the PWA process and space in NoR 5 to mediate these conflicts between both parties.
E2	Ecological Reporting	• Please confirm the use of the relevant terms and related assessment.	There is a discrepancy in the application of the EIANZ (2018) assessment framework in the EcIA (from table 6-28 onwards). The EcIA gives the magnitude of effect as 'Very Low' and the level of effect as 'Negligible'. Within the EIANZ guideline, the magnitude of effect ranges from Negligible – Very High (i.e., Very Low is not a category); and the level of effect can range from Very Low to Net Gain (negligible is not a category). It is considered that these terms have been used interchangeably, and the assessment has carried forward on this assumption.	We agree that '*negligible'* and *'very low'* have been incorrectly tabulated in **Table 6-28.** We note however that both the ecological value and magnitude of effect can be described as *'negligible'*, as is intended in the Assessment of Ecological Effects Report (**Appendix F**), and therefore that the resulting level of effect is *'very low'*. These adjustments will not change the residual levels of effect or requirement for impact management.
E3	Ecological Reporting	• Please elaborate on the justification for the 50 m search radius in terms of sufficiency to address impacts on nesting birds and why the search radius is 50m, but the setback distance is reduced 20 m? It would have been anticipated that these setback and search distances would need to be species and activity specific.	To address the disturbance and displacement of native birds to construction activities the EcIA recommends that: *Prior to any works beginning a nest bird survey should be undertaken of wetland areas within 50 m radius of the works footprint. If nesting native birds are detected, then a 20 m buffer surrounding the nest should be clearly demarcated and works not completed within this buffer until birds have fledged".* [emphasis added]	Potential wetland birds are likely to be observed more than 20 m from potential nest habitats (e.g birds on ponds), hence the proposed condition is a precautionary measure to ensure robust pre-construction survey to inform potential for such habitats. We have applied a 20 m set-back for active nests and consider this to be sufficient on the basis that the nests of identified potentially present wetland species (e.g. dabchick, spotless crake), will be visually well hidden in dense or on floating vegetation- and therefore visual disturbances would be minor at 20 m. Such locations within the NoRs are generally very degraded environments which are subject to existing anthropogenic disturbances to which they would be expected to be habituated.

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E4	Ecological Reporting	• Depending on the response above (E2 -4), please update the Ecological Management Plan conditions accordingly.	It is also noted that the condition uses the terms should, which infers that activities could be undertaken in this setback, which would appear to undermine the intent of the setback. This is also exacerbated by the reference to activities not being completed in the setback, which infers that they could commence and progress.	We agree that this wording should be amended (proposed amendments underlined) to give stronger effect, as follows: *Prior to any works beginning a nest bird survey shall be undertaken of wetland areas within 50 m radius of the works footprint. If nesting native birds are detected, then a 20 m buffer surrounding the nest shall be clearly demarcated and works not undertaken within this buffer until birds have fledged"*
E5	Conditions - All	• To ensure this assessment remains current at the time of implementation, is it intended to update the reference to be 'industry best practice'?	References to EIANZ guidelines. It is accepted that the 2018 EIANZ guidelines are current industry best practice, but with an extended lapse date being sought for the NoRs of 20 years, this may not be the case at the time of implementation.	The ecological assessments to date have been carried out using the EIANZ guidelines which have identified the relevant ecological values and their location. Consistent with other ongoing NZTA projects, NZTA will accept amendments to refer to updated versions of the EIANZ Guidelines. This allows for some updating over time but not for an entirely different assessment regime to apply in the future that could be misaligned with the assessments undertaken to date.
E6	Conditions - All	• Is it intended that the conditions are updated to utilise absolute and minimum standards specified?	The conditions include references to 'as far as practicable', 'reasonably practicable', most notably in respect to the Ecological Management Plan condition. These terms are defined (in the condition set) it is unclear who's opinion would be informing these assessments, and they would not be robust enough for Council to take enforcement action on (if should it ever be required).	Ecologists would generally rely on engineers and project managers as to what *'practicable'* is. Regarding the Ecological Management Plan (EMP) this management plan is to be submitted with an outline plan for a Stage of Work and must be prepared by a Suitably Qualified Person(s). The management plans will be provided to the Council for the purposes of information through the outline plan of works process.
E7	Conditions - All	• Is it intended to update the conditions to reflect the need for the plan (ULDMP) to contain the necessary supporting technical information, which confirms that the planting offsets or compensates for any high vegetation / fauna habitat values, if required, and as proposed in the EcIA?	Both the AEE and the EcIA make reference and recommendations for a Restoration Planting Plan; however, this is not covered in the proposed conditions set. If this recommendation is intended to be included within the Urban and Landscape Design Management Plan (**ULDMP**) then the condition will need to be updated	As stated on the proposed condition sets for each of the Project NoRs (refer to Condition EC.2 for NoR 1 and CC.29 for NoR 2-5): ***Advice Note:*** *Depending on the potential effects of the Project, the regional consents for the Project may include the following monitoring and management plans:* *i. Stream and/or wetland restoration plans;* *ii. Vegetation restoration plans; and* *iii. Fauna management plans (eg avifauna, herpetofauna, bats).* As the effects associated with the removal of protected vegetation, namely from Significant Ecological Areas (SEAs) or areas of high ecological value are a regional consent matter, they will require resource consent application at a later date. To avoid any confusion the applicant would consider amending the above advice note (ii) to reference a; *Restoration Planting Plan*. Furthermore, we note the Council should ensure their assessment is limited to district plan when assessing the NoR applications, and that vegetation removal, results in effects both at a district and regional plan level, for reference the differences are summarised below:

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E8	Conditions - NoR1	• It is intended that the ecological survey results or the Ecological Management Plan are to be included in the list of material to be reviewed at the Outline Plan of Works. See the existing wording for the NoR 2 conditions. Is it intended to update the general condition 1 of NoR 1?	Currently there is no mechanism to enable Council to review the Ecological Management Plan, nor the ecological survey information.	We disagree with the Council's concern. The proposed approach is equivalent to the accepted approach used by Waka Kotahi as part of the Supporting Growth programme. The results of the pre-construction surveys aren't required to be provided to the Council, but they are the trigger for preparing the Ecological Management Plans (EMP), and Construction Condition 29 (CC.29) requires the EMPs to '*submitted to the Manager for information'*, i.e. Outline Plan of Works, where comment can be provided. **General Condition 1 (GC.1)** does not reference the Stage 2 Project Area, to avoid complicating the application to alter the designation with previous alterations to SH1 Designation 6706, the General Conditions for Stage 2 are contained within **General Condition 2 (GC.2)** shown below. **GC.2 (GC.2 is applicable to Stage 2 Project Area only)** (a) Except as provided for in the conditions below, and subject to final design and Outline Plan(s), works within the designation shall be undertaken in general accordance with the Project description and concept plan in Schedule 1: (b) Where there is inconsistency between: (i) the Project description and concept plan in Schedule 1 and the requirements of the following conditions, the conditions shall prevail; (ii) the Project description and concept plan in Schedule 1, and the management plans under the conditions of the designation, the requirements of the management plans shall prevail. As you will note, GC.2 requires that where inconsistencies occur between the concept plan and requirements of the management plans, the management plans will prevail. In this case the provisions of the Ecological Management Plans will prevail.
E9	Conditions - NoR1	• Is it intended to update pre-construction condition to remove reference to management plans being required by resource consent?	Wording clarification.	This text will need to be amended across all Project NoRs, except for NoR 1. The text for Condition PC.1(d)(iv) should read only; *'All relevant management plans ~~as per the requirements of the resource consents; and~~'* **Pre-construction site meeting** **PC.1** At least five working days prior to the Start of Construction, a preconstruction meeting shall be arranged with the Manager as follows: (a) The meeting shall be located on the Project site unless otherwise agreed; (b) The meeting shall include representation from the contractor who will undertake the works; (c) The meeting shall include the project archaeologist (d) The following information shall be made available at the pre- construction meeting: (i) Conditions of consent; (ii) Timeframes for key stages of the works authorised under this consent; (iii) Contact details of the site contractor and other key contractors; (iv) All relevant management plans as per the requirements of the resource consents; and (v) A copy of any archaeological authority if obtained for the project works. (e) Representatives of the Waka Kotahi Southern IIG shall be invited to attend the pre- construction meeting.
Arboriculture				
Arb1	NOR4	• Please confirm whether there has been any consideration of alternative designs and/or	Discussion is not provided in any of the reports on alternatives which may avoid removal of	Please refer to the Assessment of Alternatives Report (**Appendix K**) provided in the application package for each NoR.

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<tr><th>#</th><th>Category of information</th><th>Specific Request</th><th>Reasons for request</th><th>NZTA Response, dated 07/05/2024</th></tr>
<tr><td></td><td></td><td>construction methodologies which could allow retention of the Notable London plane trees</td><td>these trees. Or at least minimise the number of trees requiring removal.</td><td>Section 8.1 of the Report outlines the design options investigated at St Stephen’s School (NoR 4), which were assessed using a Multi-Criteria Assessment (MCA). There were two design options investigated, which sought to minimise the impact on Notable London Plane Trees at St Stephens School.

Reference: Papakura to Bombay (P2B) Project Stage 2: Shared User Path (NoR 4) NZ Transport Agency (NZTA) (aucklandcouncil.govt.nz)</td></tr>
<tr><td>Arb2</td><td>NOR4</td><td>• Please provide confirmation of what mitigation is being put forward for the removal of the notable London plane trees. Is it mass planting of native trees elsewhere or is it replacement planting of London Plane trees as an avenue aligning the realigned driveway access at the site?</td><td>There is inconsistency across the specialist reports (Arboriculture / Landscape & Visual / AEE) as to what is proposed as mitigation.</td><td>The NoR application considers the various impacts of removing Notable Trees, recognising that trees hold multiple values such as heritage, ecological significance, landscape visual, and arboricultural effects.

Each specialist report addresses the effects related to a specific discipline, and the Pre-Construction Condition 7 (PC.7) on NoR 4 St Stephens School Planting Plan has been developed to address these diverse effects.

In summary, the following effects are briefly outlined below.

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<tr><th>Value</th><th>Effect</th><th>Specific Mitigation</th></tr>
<tr><td>Arboricultural</td><td>Removal of Notable Trees</td><td>The area of Notable Trees to be replanted at a 1:1m^2 in accordance with the Project UDLF, and in consultation with St Stephens School and Mana Whenua, whom both have indicated a preference for native re-planting.</td></tr>
<tr><td>Landscape Visual</td><td>Loss of natural screening of the SH1 corridor from public viewpoints on Great South Road</td><td>Re-planting along the SH1 corridor to soften views from Great South Road. Requiring trees to reach a mature height greater than 10m.</td></tr>
<tr><td>Heritage</td><td>Historical association of the trees with the St Stephens School</td><td>Effect on the local heritage values is expected to be minor without mitigation in place, as the ‘avenue’ of London Plane Trees has already been compromised by the extension of the SH1 Corridor.</td></tr>
<tr><td>Ecology</td><td>Potential terrestrial ecology habitat.</td><td>Pre-construction survey to determine presence of native species, and requirement of ecological management plans.</td></tr>
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As per the assessment of effects above, the removal of the ‘avenue’ alignment of London Plane trees was not identified as a significant adverse effect. Furthermore, replanting of the avenue of trees along the realignment to the site access could mean that NZTA would be required to maintain the SH1 designation over private property access at 1832 Great South Road. This is generally not a desired outcome for both NZTA and the property owner, St Stephens School. It should be noted that the St Stephens School Planting Plan will be developed in collaboration with the school to address the identified adverse effects and take into account the interests of the property owner.</td></tr>
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