TE TUPU NGĀTAHI
SUPPORTING GROWTH

20 December 2023

Te Tupu Ngātahi
Supporting Growth
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Issued via email: andrew@scottwilkinson.co.nz; Alison.Pye@aucklandcouncil.govt.nz

Dear Andrew,

Re: Response to request for further information in accordance with section 92 of the Resource Management Act 1991 for the North Projects.

We refer to your email of 16 November 2023 requesting further information under section 92 of the Resource Management Act 1991 (RMA) in relation to the Notices of Requirement (NoRs) by New Zealand Transport Agency (Waka Kotahi) for four designations (NoRs 1 – 4) and Auckland Transport(AT) for nine designations (NoRs 5 – 13).

This letter contains the response to each request relating to traffic/transport, ecology and urban design. A separate response to the flood hazard/stormwater questions will follow in January 2024.

For ease of reference, the following table includes the request and the relevant response. Where appropriate, reference has been made to the relevant lodgement documentation that should be read in conjunction with a response.

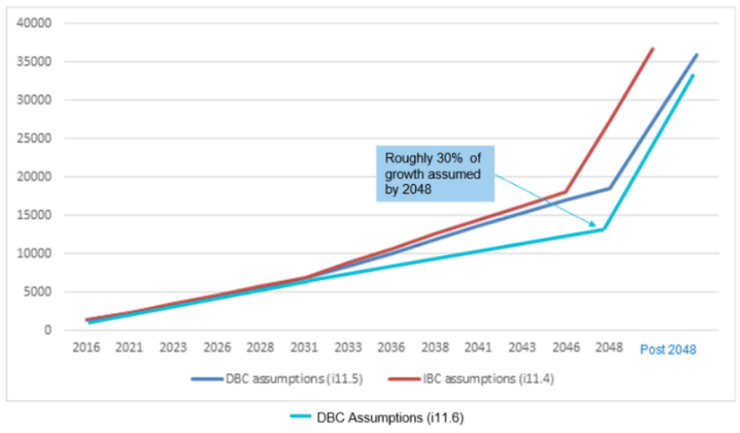
If you have any queries regarding the information contained in this response, please do not hesitate to contact me.

Kind regards

Kathleen Bunting
Planning Lead – North Projects

Response to s92 request for further information

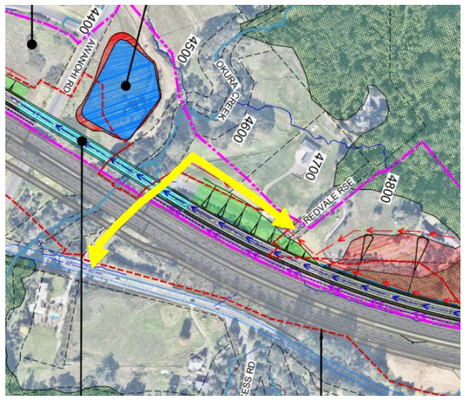
Ref	Request	Response
Traffic and Transport Effects		
1	Please confirm how downstream effects of the NoRs on the existing transport network will be managed. *Rationale: The lodgement documents do not assess the potential transport effects of the NoRs on downstream transport infrastructure. For example, NoR 9 may result in an increase in traffic through Albany village.*	AT and Waka Kotahi have an overarching responsibility to provide a safe, efficient and effective transport network. These responsibilities are and will be managed through a range of mechanisms, including: • Implementation Business Cases to confirm project outcomes; • Roads and Streets Framework and One Network reassessments to confirm modal priority; • Assessment of Integration with Network Operating Plans as per standard procedures by AT; • Detailed design commensurate with implementation works; and • Road Safety Audits to ensure appropriate and safe tie ins for all modes. In addition, the proposed conditions for all the North Projects now include the requirement to prepare a Network Integration Management Plan (NIMP), to provide greater transparency and certainty that the necessary assessment has been undertaken to understand wider network operations at the time of implementation. Furthermore, it is noted that the NORs have been proposed in response to future urban land zoning, and as such the NORs do not in themselves generate traffic or public transport demand – rather these increased demands and potential downstream effects are a result of wider urbanisation. Should the growth occur without the implementation of the NORs, there would be greater traffic effects resulting from poor connectivity and reduced alternative transport options. In relation to SH1, section 7.2.5 of the Assessment of Transport Effects (ATE) report discusses wider network effects. There is the potential that upon completion of the corridor, there could initially be upstream or downstream delays at some locations, due to the improved operation along this route. However, it is expected that the overall traffic patterns would soon stabilise, as people adjust their journeys to the overall network conditions. In relation to more permanent effects associated with the improvements to the corridor, it is considered that the additional capacity (that may otherwise exacerbate downstream congestion on SH1) can be managed, such as through high occupancy vehicle lanes, including for public transport, or freight lanes. This would be further considered in the context of wider regional and national policies at the time of implementation. In particular, this could include the relationship between the managed lanes on this section of the corridor with the adjacent section of SH1. In terms of this transport corridor, including the Rapid Transit Corridor (NoR 1), the changes in daily traffic on SH1 with the NORs are a combination of diverted / re-routed traffic from parallel corridors (Dairy Flat Highway and East Coast Road), as well as increased trips between the North growth area and the northern North Shore. This includes some people instead choosing to travel from the northern North Shore to more easily accessible jobs in the North growth area, rather than travelling south on SH1. Moreover, for trips to and from the North growth area, overall there is an expected greater increase in public transport trips than vehicle trips (just over double the percentage increase) along this corridor. Overall, it is considered that the proposed NIMP condition in addition to existing practices undertaken by AT and Waka Kotahi provide for the management of potential effects on the wider network.
2	Please provide further assessment of the transport effects from maintenance activities proposed by the NoRs. *Rationale: Section 1.1 states that part of the purpose of the ATE is the consideration of maintenance of the projects, however maintenance activities are not assessed elsewhere in the report.*	A specific assessment of maintenance activities for each NOR has not been undertaken. However, it is considered that as the indicative cross sections and designation footprints are based on appropriate Waka Kotahi or AT design standards (refer to section 3.2.1 of the ATE report), this will provide sufficient area within the designation footprints for maintenance activities (i.e. t the designation footprints are satisfactory to accommodate ongoing maintenance requirements).
3	Please confirm if the ATE assesses each NoR individually or whether the cumulative effects of the full package is being reported on. *Rationale: The ATE states that the NoRs have been considered individually, however our understanding is that while they are being reported individually, the report assesses the cumulative effects only. For example, Section 3.1, Section 4.2.3.4, Section 4.2.4, and Section 5 are ambiguous on this matter when read together.*	The assessment of transport effects has been undertaken on a whole of network approach (including cumulative effects), and where available and appropriate, a quantified assessment of effects and interdependencies by corridor has been provided. Noting that some effects (e.g. traffic) have been done on the whole network, but other effects (e.g. access, safety, etc), are on each individual NoR basis. This network approach has been undertaken within the context that the implementation of each project within the NoRs will be subject to future implementation analysis and decisions, including detailed design and outline plan preparation In addition, as identified above, the inclusion of the NIMP condition will enable further consideration of the effects of each NOR at the time of implementation, in the context of the transport network at that time.

Ref	Request	Response
4	Please provide a technical note outlining the modelling methodology, mode shift assumptions, calibration, validation, results, etc. *Rationale: The ATE contains limited detail on the transport modelling that has been used to inform the assessment. Please provide a technical note outlining the modelling methodology, mode shift assumptions, calibration, validation, results etc. Where possible, the modelling files should also be made available for review.*	It is not considered necessary to provide a further technical note outlining the transport modelling methodology. The approach to the transport modelling was outlined in the Appendix 3 of the ATE report. This is consistent with the transport modelling approach across the Te Tupu Ngātahi Supporting Growth programme and for strategic transport projects within the Auckland region. From a regional model perspective (MSM / SAMM), these are region-wide models used and managed by the Auckland Forecasting Centre (AFC). They are considered appropriate for project-specific use and application. Based on the AFC models, Te Tupu Ngātahi has developed versions for the purposes of assessing the NOR projects. The EMME traffic model was developed from the Penlink Model, which was approved by the AFC. The Penlink validation report can be found here: https://www.nzta.govt.nz/assets/projects/penlink/docs/penlink-toll-modelling-report.pdf. This has been peer-reviewed by Ian Clark from Flow. Refer Appendix A: Model Calibration/Validation and Appendix B: Peer Review Comments. In terms of mode shift assumptions, the regional models include Travel Demand Management assumptions like work and education travel plans etc. These reduce vehicle trip rates over time depending on location. Mode shift is a key outcome of the overall North Projects, and modal priorities are expected to change with less priority given to general traffic flow. In this regard, the future operating environment is anticipated to tolerate increased delay and queuing for general traffic, at certain intersections, at certain times.
5	Please confirm the land use assumptions used in the assessment of transport effects. *Rationale: Section 3.2 states that Land Use Scenario i11 has been used, however there is limited detail on what this includes. Please confirm the land use assumptions that have been used, and how these assumptions are relevant to growth projections for the area (for example by confirming whether these assumptions are consistent with the Future Urban Land Supply Strategic, Future Development Scenario, etc).*	The i11 land use forecasts are developed by the AFC in partnership with Auckland Council, so there is an agreed basis for the overall level of growth and spatial distribution across the Auckland Region for the forecast future year. Within the North Growth area, a forecast of the potential population and jobs has been undertaken on the basis of the full build-out of the area for a 2048+ future year. These forecasts for growth and associated adjustments match the overall forecasts for the Auckland Region which have been agreed with the AFC. The i11 land use forecasts have some differences in the timing of growth relative to both the Future Urban Land Supply Strategy (FULSS) and Future Development Strategy (FDS). The i11 forecasts are illustrated in the figure below, which shows that much of the growth is forecast to be beyond 2048, which is broadly consistent with the FDS indication of growth in the North beyond 2050. As the assessment considers the strategic transport infrastructure for the full build-out of the North Growth area, any differences in timing are primarily a matter of timing and implementation, which will be able to be addressed through the NIMP. 
6	Please provide details of the Remix file referred to in Section 3 of the ATE. *Rationale: Section 3 references a Remix file that has informed the public transport assessment. Please provide a copy of this file or provide a summary of inputs and outputs that have been relied upon.*	Please find attached (refer Attachment A) the indicative public transport network that has been utilised to inform the North Detailed Business Case and subsequent NORs. This network has been developed in collaboration with AT and Waka Kotahi Subject Matter Experts. It should be considered as indicative only and provides for possible public transport (PT) service patterns and operational outcomes, based on the proposed transport network. This network is subject to change and variations in the future in response to a range of factors, such as staged delivery of the network and supporting collector routes, changes in land use assumptions, or operational funding availability.
7	Please confirm if passenger demand and capacity has been modelled for the RTC, and what headway is required to support the estimated demand. *Rationale: Section 6.1 discusses the attributes of the RTC. Has modelling been undertaken to understand the passenger demand*	The proposed NOR1 designation footprint provides for the future ability to operate a bus-based rapid transit corridor. The modelled capacity for the bus rapid transit over a two-hour period is 4,875 people seated and a total of 6,300 people in each direction, which is expected to accommodate the predicted demand. However, the footprint is also sufficient to enable light rail. This provides flexibility to accommodate the anticipated demand for public transport associated with the Northern growth area. The more specific decisions on the rapid transport mode and frequency will be part of an implementation business case, and will be informed by wider regional rapid transit network planning at that time. Based on the predicted rapid

Ref	Request	Response
	and capacity for each station? Further, please discuss the required headway needed to cater to this demand during peak periods.	transit demand, the key components and therefore the designation footprint for the proposed rapid transit stations at Pine Valley (NOR3) and Milldale (NOR2) have been developed in collaboration with AT and Waka Kotahi Subject Matter Experts. These would also be further developed and confirmed as part of a later implementation business case.
8	Please confirm how accessibility has been modelled. *Rationale: The ATE discusses the anticipated increase in accessibility as a result of the NoR, for example in Section 6.2.1. Please confirm how accessibility has been modelled.*	The change in accessibility by public transport, such as access to jobs or other opportunities, is assessed using the regional transport model (MSM), which will identify the changes in journey times between key origins and destinations for trips associated with the North growth area. This influences the likelihood that people will utilise public transport in preference to a private vehicle, based on the time and cost of the journey. Similarly, the assessment of active mode trips has been evaluated in the SAMM to consider the potential for trip making by active modes with new or improved facilities in place, as a result of the NORs.
9	The modelling results indicate that some parts of the network may be approaching or exceeding hourly/daily capacity limits. Please comment on the extent to which the NoRs achieve the outcome of enabling AT and Waka Kotahi to operate the future network within the range of their respective expectations for network performance. *Rationale: The modelling results indicate that some parts of the network may be approaching or exceeding hourly/daily capacity limits* • *In Section 11.2.2 and 15.2.2 the report indicate 23,700 - 24,800 ADT on the corridor, which is at the upper end of what a two lane corridor can accommodate (depending on aspects such as the percentage of heavy vehicles and degree of tidal flow). This could indicate that there may be extended periods of congestion when the area is fully developed, especially if no other parallel local roads are formed* • *In Section 14.2.2 the report indicates 30,400 ADT (segment 2), which is likely well above what a two lane corridor can accommodate. This indicates that there are likely to be extended periods of congestion when the area is fully developed, especially if no other parallel local roads are formed* • *For several intersections the volume to capacity ratio exceeds 90% and is up to 100%, indicating potential capacity issues.*	We acknowledge that there are some corridors and intersections that are forecast to be operating at or near capacity at full build out in 2048+. With regard to NOR 8 and NOR 12, a four-lane arrangement is necessary to accommodate the expected traffic volumes along the segment. However, the particular lane configuration of the four lanes will be decided by AT (in accordance with its guiding policies at the time) closer to when the projects are implemented. The four-lane arrangement provides flexibility to provide both dedicated bus lanes as well as T2/T3 lanes if necessary. While different operating strategies can be confirmed at implementation, we have assumed a priority to protect the level of service for buses over light vehicles. We also do not consider widening to 6 lanes is appropriate in the context of the Project objectives and transport outcomes sought for the North Projects. For all intersections, including interchanges to the state highway network, AT and Waka Kotahi will manage the network to achieve and balance a range of outcomes, including traffic efficiency, user safety (for all modes), and prioritising movement by more sustainable modes, such as public transport and active modes. This shift from a singular focus on traffic delay to broader outcomes and prioritisation of more sustainable movements is ongoing and driven by regional and national policy directives. This includes recent policy direction around reallocating road space to favour these broader outcomes, where practicable. Collectively, this requires a broader assessment of the needs and priorities of the transport system than just localised vehicle delays at selected intersections. Mode shift towards public transport is a key outcome and objective of the North Projects, and modal priorities are expected to change with less priority given to general traffic flow. In this regard, the future operating environment is anticipated to tolerate increased delay and queuing for general traffic, at certain intersections, at certain times. With the inherent uncertainty in forecasting for a 2048+ scenario, we consider that the designations are sufficient at this stage.
10	Please confirm how and when land owners with existing vehicle accesses that are affected by an NoR will be consulted, and how effects on their vehicle crossing will be managed. *Rationale: Multiple of the NoRs indicate that future transport corridors may have raised central medians. We acknowledge that these design aspects can have positive safety and efficiency effects, however we query how and when affected land owners will be able to have input into the design process, given that many of the design aspects will be confirmed through the future Outline Plan of Works (OPW).*	**Access Queries (NOR 2 to 13)** In terms of existing properties, the overarching design philosophy for the North Projects has been to maintain driveway access where practicable and minimise impacting land for access purposes other than where necessary to re-instate driveways. Long-term designations are being sought for the transport network. Once funding is available, a detailed design process will be undertaken, utilising the most current information available including information on adjacent urban development, prevailing design standards and specific engineering details such as property levels. In this context, the detailed consideration of individual vehicle access is best undertaken at the time of detailed design and implementation (and Public Works Act processes where applicable) when the greatest certainty is available. This approach has influenced the proposed designation boundaries such that providing flexibility to reinstate driveways has been maximised.

Ref	Request	Response
11	Please identify any parcels of land that may become “land locked” as a result of the NoRs, and confirm how alternative access will be provided. *Rationale: Noting that much of the land adjacent to the NoRs is anticipated to be urbanised in the future, it is important to identify if any parcels of land might have their access to the road network severed by side barriers, new intersections, grade separation or finished levels significantly different from the adjacent properties. For example, grade separation along the length of a property boundary may affect the ability to subdivide and develop the site in the future, essentially causing it to be “land locked”.* *Section 6.2.3 of the report provides a list of affected properties where new access roads will be required, including suggestions of how access can be provided. It would be helpful to Council as well as to affected parties if further information was provided, for example a concept design for each proposed access.*	In setting the designation boundaries any parcels of land where it has been determined that access is unable to be reinstated, (i.e. parcels are "landlocked" as a result of the proposed designation footprint); have been included in the designation footprint. To provide more certainty as to how this matter will be addressed, an Existing Property Access condition has also been included on all NORs (with the exception of NOR4 for SH1 Improvements) as follows: Condition: *Prior to submission of the Outline Plan, consultation shall be undertaken with landowners and occupiers whose vehicle access to their property will be altered by the project. The Outline Plan shall demonstrate how safe reconfigured or alternate access will be provided, unless otherwise agreed with the landowner.* Given that access to SH1 is already managed, and considering the nature of the strategic improvements along SH1, this access condition does not apply to NOR 4. Noting that in relation to SH1 / NOR4, all existing legally established access has a presumption of access by virtue of its approval under the subdivision sections of the RMA (or predecessors), such that ongoing access has to be maintained. Under the Government Roading Powers Act 1989 (GRPA 1989) Waka Kotahi also reviews any changes to access points / or the intensity of traffic generation at such points. The review mechanisms are different where the state highway is classified as a Limited Access Road. The condition on all other NoRs (copied above) requires consultation to be undertaken with landowners and occupiers whose vehicle access to their property will be altered by the project and the Outline Plan must demonstrate how safe reconfigured or alternate access will be provided unless otherwise agreed with the affected landowner. Where such arrangements are not possible, this may result in the need for this to be addressed through the Public Works Act. A high level assessment of the access implications of each NOR has been completed. Properties that have potential access effects have been noted in each of the respective NOR sections of the report. How these effects will be managed has also been included in the discussion of property access for the relevant sections. In addition, the project team has checked the accesses noted in the s92 comments and identified no further effects to existing properties that cannot be managed through the condition set. **Raised Medians** With regard to the provision of raised medians, during detailed design, further consideration will also be given to the need for medians and if these medians will be raised or flush. In the ATE report, it is assumed that access will generally be maintained where legal access already exists. Exceptions may include where it may no longer be safe to provide all movement access in the future, such as in close proximity to intersections, where right turn movements may not be able to be safely provided. For example, NOR9 along Dairy Flat Highway will likely have right turn restrictions, and has been assessed in this context, similar to the current restrictions (with wire rope treatments) already in place along this corridor.
12	Please provide dimensioned cross sections at key locations for each NoR. *Rationale: Cross sections for the proposed future corridors are provided in several sections of the report, however these do not include indicative dimensions.*	No dimensions have been included within the cross-sections provided in the ATE report, as the exact configuration of the carriageways will be decided closer to the implementation of the projects. The specific requirements for the corridors may change slightly in the future based on what is needed during implementation. We note that there is sufficient width within the designations to provide for all the required modes. The cross sections also enable a variable berm environment with sufficient room to provide for bus stop infrastructure, such as shelters, at a location to be determined in the future. Notwithstanding this, we have attached indicative dimensioned cross sections (refer Attachment B), showing an indicative 24m 2-lane urban arterial, an indicative 30m 4-lane urban arterial and a 4-lane urban arterial with FTN, and an indicative 20m cross-section for the RTC with active modes. These have been developed to inform the designations, and will be reviewed at future implementation to align adjacent land use that exists at that time as well as to reflect standards at the time.
13	Please confirm whether there is an anticipated interdependency between the timing for construction of NoR8 and NoR9. *Rationale: Section 11.2.8 indicates that NoR 9 does not need to be implemented prior to NoR 8. However, should NoR 8 be constructed prior to NoR 9 this might result in negative safety and efficiency effects on the rural section of Dairy Flat Highway, within NoR 9.*	The timing of implementation of both NOR8 and NOR9 will be determined in the future. We consider that while there is a relationship and interface between these NORs, there are a number of proposed conditions and existing practices that will enable these projects to be delivered independently. We also acknowledge that as a corridor over several kilometres with varying land use context, the implementation of Dairy Flat Highway will likely be delivered in stages. As such, there are several mechanisms that will support the integration of these projects (or stages of projects) with the existing network. The NIMP condition is proposed to manage potential effects resulting from the staging and implementation of the network. The NIMP will consider the following: a) The project implementation approach and any staging of the projects including both design, management and operational matters; b) Sequencing of the projects with the planned transport network, including both design, management and operational matters. In addition, the Urban Design Landscape Management Plan (UDLMP) condition is proposed to cover the integration of the Projects with the transport and urban (future urban) environment at the time of implementation. A number of existing practices are in place to manage the implications of staging and delivery of projects, these include: • Implementation Business Cases to confirm project outcomes;

Ref	Request	Response
		• Roads and Streets Framework and One Network reassessments to confirm modal priority; • Assessment of Integration with Network Operating Plans as per standard procedures by Auckland Transport; • Detailed design commensurate with implementation works; and • Road Safety Audits to ensure appropriate and safe tie ins for all modes. Overall, these measures are considered sufficient to address any potential effects relating from interdependencies.
14	Please confirm whether there is an anticipated interdependency between the timing for construction of NoR4 and NoR11. *<u>Rationale</u>: Section 14.2.6 indicates that NoR4 has an interdependency with NoR11, but not vice versa. If NoR11 is delivered prior to NoR4, what effects could this have on other parts of the network?*	The timing of implementation of both NOR4 and NOR11 will be determined in the future. The Silverdale West Structure Plan has previously identified that to develop more than 70 hectares of land for industrial purposes, a key piece of infrastructure would be the Wilks Road motorway interchange (part of NoR 4 in our applications) and the new east west arterial between the Wilks Road interchange and the intersection of Dairy Flat Highway and Kahikatea Flat Road (known as NoR 11 in our applications). However, there is the potential for NOR11 to be delivered in part (to enable access to the developing area), without a connection to the State Highway network. The more specific timing and implementation of the infrastructure to support the Structure Plan area is likely to be determined either through a plan change process, potentially identifying precinct rules / triggers, or through the broader regional planning processes of Waka Kotahi and AT. Notwithstanding those processes are already in place, the NIMP condition is proposed to manage potential effects resulting from the staging and implementation of the network.

15	Please provide further detail on the following design drawings:
	
	• Drawing NoR1: 2000 - 2300
	  ○ Redvale Rise (private road) appears to be impacted by the batter for the RTC. Please comment on how alternative access will be provided
	  ○ Wilson Road is proposed to be truncated by the RTC. Please provide commentary on how this affects the accessibility for Wilson Road, and how properties west of the RTC will gain access to the roading network
	• Drawing NoR11:3000
	  ○ Please confirm how properties near Wilks Road overpass (where the RTC is) will have vehicle access maintained.
		<u>Redvale Rise</u> – A new private access road is considered to be able to be provided within the designation using the approximate 20m width at the foot of illustrated batters (see snip below). This could then pass under the SH1 bridge to access East Coast Road (south of bridge abutment) on a similar alignment to the existing private access road. Refer to illustration below.
		
		 
		
		<u>Wilson Road</u> – Access along Wilson Road is discussed in section 6.2.2 of the ATE report. A new road could be formed within the existing paper road reserve between the southern end of Wilson Road and Ashwood Avenue (which then connects to Awanohi Road). A turning head will be provided at the northern end of the southern section of Wilson Road. As such, public road access to Wilson Road can be retained and it is recommended this is put in place prior to the construction of NoR 1- RTC, unless future development within the FUZ (following structure planning / plan changes) has already enabled a public road connection to the southern section of Wilson Road. It is considered that the integration of the existing public road (Wilson Road) with the adjacent public road network would be a matter that could be considered as part of the NIMP condition, as required, in the event that future structure planning / development had not already addressed this matter.
		
		<u>Wilks Road overpass</u> – Some of the properties near the Wilks Road overpass would form part of the NoR 1 - RTC designation, when implemented, so would no longer require property access. The other properties would continue to be provided access via access roads / driveways (based on the identified Existing Property Access condition) utilising NOR11 and / or the RTC (NOR1) designation footprints. As previously noted, comprehensive development of these FUZ areas is likely to change existing levels and provide opportunities for access via other local roads at that time, which may remove the need for direct property access.

16	Some drawing sheets appear to be missing from the lodgement pack, e.g. NoR2: 2600, and NoR8: 5100. Please provide a full set of General Arrangement Drawings for each NoR.	We understand that this matter has been resolved, as the identified drawings were lodged and there may have been an issue with transfer of files to Council specialists.

Ref	Request	Response
Landscape and Visual Effects		
1	The arrangement of the document is confusing. It seems that all other documents have followed the same arrangement so seeking any further amendment to this is unlikely now. I would refer them (again) to the Nor West landscape document which considers each NoR in its entirety rather than having to refer to numerous places in the document, and at 200+ pages it's a hefty document.	The NoRs have been lodged and notified. As noted previously in our soft lodgement response of 10 August 2023, many of the effects are common across the NoRs, so the approach for assessment has been to cover common effects and then NoR-specific effects where required. If the assessment covered each of the 13 NoRs individually without grouping effects, the report would be extremely long. We also note that the specialist for North West was from a different organisation.
Ecological Effects		
1	Please amend the pre-construction ecological survey condition (Condition 20 (NOR 4), 22 (NORs 1-3), & 24 (NORs 5-13)) for the designations to include the entire development footprint and to include a survey of all native fauna. Survey findings should also be provided to Council for review. *Note that this would also require amendments to the subsequent EMP conditions (21 (a-f), 23 (a-f), and 25 (af), respectively).* Due to the potential presence of at-risk fauna that may not have specific management requirements within the proposed conditions, it is also recommended to include an advice note stating the need to comply with the Wildlife Act, such as the below. ***Advice Note:*** *All native birds, bats, and lizards are protected under the Wildlife Act 1953 (unless specifically excluded), under which it is an offence to disturb, harm, or remove them without a permit from the Minister of Conservation.* *Rationale: It is considered the lapse period of the designations means that there could be new or revised biodiversity values that may arise between the designation being granted and when it is given effect to. A PreConstruction Ecological Survey of the wider area at the time the designation is given effect to would also allow for any change in ecological values that may occur overtime, or should there be changes in legislation, best practice, and/or guidance documents that alter the interpretation of ecological values.* *The relief sought is to include the entire designation footprint for the survey, rather than being specific to 'confirmed biodiversity areas'.*	The approach to the ecological assessment and subsequent conditions address district matter ecological effects. These primarily relate to ecological connectivity and disturbance effects due to the presence and operation of the transport corridors/stations. As such, we consider it inappropriate to include the land within the designation boundaries for future survey associated with the EMP as it largely irrelevant to connectivity. We note that the area within the designation will be subject to a wide ranging suite of future regional consenting requirements (including a number of which that relate to ecology matters) prior to the projects being implemented. This is recognised by the advice note under the EMP condition. The overall effects assessment was linked to the habitat features present within the Projects' Zone of Influence (ZOI) for both the current and the likely future environment (for example it was assumed that all SEAs and SEA- like vegetation in the ZOI will remain present in the future. Similarly, it was assumed that streams and wetlands will remain present and likely to improve in ecological value in the future). Therefore, potential future improvements in ecological value have been considered. The Pre-construction Ecological Survey and Ecological Management Plan (EMP) as proposed in the conditions do not identify specific TAR bird or native lizard species and therefore any subsequent changes in the conservation status of any specific bird or lizard will be addressed by the existing condition. As noted above, regional consents and any Wildlife Act 1953 permits will be sought in the lead up to implementation along with a supporting EcIA, and will address all other ecological risks, including species under the Wildlife Act that will otherwise not be affected by district matter effects. We do not consider an advice note setting out future requirements under the Wildlife Act is necessary nor will the absence of such mean that the requirement ceases to apply. In accordance with the Outline Plan condition and the Management Plan condition, the EMP will be submitted as part of the Outline Plan. The EMP would outline how survey findings have led to the development of methods set out in the EMP. This process provides Council with the opportunity to request changes to the EMP prior to construction commencing. We note that this approach to the assessment and conditions has been applied Programme-wide across the Te Tupu Ngātahi Projects. We also note that, the overall approach to confirmed biodiversity areas has been confirmed through the Drury Arterial Network designations and supported in the recent recommendation for the Airport to Botany Project.

Ref	Request	Response
	Furthermore, the Ecological Impact Assessment (EcIA) details management required in accordance with the Wildlife Act for various species potentially present across the NoRs (e.g. at-risk terrestrial invertebrates within the boundaries of NoRs 4 and 9). However, it is queried how management measures would be adopted unless it is known the species are present. Therefore, restricting the survey to previously identified species of value could preclude such management.	
2	NoR 1, 4, 6, 7, 8, 9, 10, & 13: Please update the Bat Management Plan condition to include measures to minimise operational disturbance from noise. *Rationale: The EcIA (Page 48) details operational effects within these NoR boundaries will require a Bat Management Plan (BMP) be developed to include consideration for (amongst other items) "noise management to minimise noise disturbance at indicative bat mitigation areas"; however, the subsequent proposed condition has no such provision for noise management.*	A low noise road surface is proposed for all transport corridors and is required by the conditions. This is primarily to mitigate the effect of traffic noise on residents. A station noise condition is also proposed for NoRs 2 and 3. No other noise mitigation that would minimise operational disturbance to bats from traffic or station noise is considered practicable for an operating transport corridor or station. It is worth noting that the future context within which the transport corridors will operate, will be predominantly an urban environment with an associated increased ambient noise level. Monitoring as part of the EMP implementation will also detect and manage the effectiveness of noise management measures.
3	All (Except NoR 11): Please advise if any ongoing monitoring is proposed or required throughout the construction period to monitor resident bat populations. *Rationale: Adaptive management and robust monitoring is mentioned in regards to management of bats within the EcIA (page 48). Given that the expected construction duration for many of the NoRs is between 3 – 6 years, should the pre-construction ecological survey identify resident bat populations within, or adjacent to, designation boundaries, it is considered this should require monitoring during construction for discernible effects such as displacement.*	In order to demonstrate compliance with the objective of the EMP, in this case to minimise the effect of construction of the Project on long tailed bats, the EMP is required to include measures to minimise as far as practicable, disturbance from construction activities within the vicinity of any active long tail bat roosts that are discovered through survey until such roosts are confirmed to be vacant of bats. Monitoring will likely be identified as a measure required to confirm the presence or otherwise of long tail bats through the development of the EMP. will ensure best practice in the development, implementation and demonstration of compliance with each of the EMPs. We also note that management of effects relating to regional matters will include construction effects.
4	NoR 1, 4 & 9: Please include a condition requiring post-works certification from the project herpetologist that works were undertaken in accordance with the Lizard Management Plan. *Rationale: The EcIA (Page 62) states "A suitably qualified and experienced ecologist/herpetologist approved to oversee the implementation of the Lizard Management Plan (LMP) shall certify that the lizard related works have been carried out according to the certified LMP within two weeks of completion of the vegetation clearance works" , however, no such provision is included in the proposed LMP condition.*	The proposed Management Plans condition (under Pre-construction conditions) requires that any management plan be prepared and implemented in accordance with the requirements set out in the management plan and be prepared by a Suitably Qualified Person. This requirement will ensure that the EMP is prepared and implemented by a Suitably Qualified Person, and in the case of managing effects associated with native herpetofauna, a qualified herpetologist. Certification of management plans is not proposed or envisioned by the Outline Plan process set out in section 176A of the RMA. Demonstrating that the works have been undertaken in accordance with the relevant management plans will be the key component in demonstrating compliance with each of the designation conditions.
5	All:	We note that this issue was raised by the Panel at the recent Te Tupu Ngātahi Warkworth hearing. In response the Warkworth experts explained that the magnitude of effects assessment was undertaken in accordance with Table 10 of the EIANZ guidelines (below) and the condition has been carefully worded to ensure that any requirement to prepare an EMP or provide mitigation in the future is only triggered where there is an effect that is classified as Moderate or above.

<table>
<tr><th>Ref</th><th>Request</th><th>Response</th></tr>
<tr><td></td><td>Please update the EIANZ Guidelines definition to include potential future revisions of the guidelines.

<u>Rationale</u>: Concern is expressed with the definition as proposed, referring to the 2018 EIANZ Guidelines, which could be out of date when the designation is given effect to.</td><td>The Panel noted that future regional resource consents, to be obtained prior to construction would be assessed under a future version of the EIANZ.

In response, given the narrow application of the EIANZ Guidelines to the conditions (i.e. they are only used to determine whether the Project will or may have a moderate or greater level of ecological effect), the Warkworth and North project teams have further considered this issue and are proposing the following amendments to the Pre-Construction Ecological Survey Condition.

a) At the start of detailed design for a Stage of Work, an updated ecological survey shall be undertaken by a Suitably Qualified Person. The purpose of the survey is to inform the detailed design of ecological management plan by:
i. confirming whether the species of value within the Identified Biodiversity Areas recorded in the Identified Biodiversity Area [Schedule X] are still present; and
ii. confirming whether the project will or may have a moderate or greater level of ecological effect on ecological species of value, prior to implementation of impact management measures <u>with the level of effect to be</u> ~~, as~~ determined in accordance with <u>Table 10 of</u> the EIANZ guidelines <u>(or subsequent updated version of the table)</u>.
b) If the ecological survey confirms the presence of ecological features of value in accordance with Condition [XX](a)(i) and that effects are likely in accordance with Condition [xx](a)(ii) then an Ecological Management Plan (or Plans) shall be prepared in accordance with Condition [xx] for these areas (Confirmed Biodiversity Areas).

Table 10 of the guidelines as follows will be included in a new schedule appended to the conditions:

<u>[Schedule X] Table 10 of the EIANZ Guidelines</u>

<u>Table 10. Criteria for describing level of effects (Adapted from Regini (2000) and Boffa Miskell (2011))</u>
<table>
<tr><td>Ecological Value →

Magnitude ↓</td><td>Very high</td><td>High</td><td>Moderate</td><td>Low</td><td>Negligible</td></tr>
<tr><td>Very high</td><td>Very high</td><td>Very high</td><td>High</td><td>Moderate</td><td>Low</td></tr>
<tr><td>High</td><td>Very high</td><td>Very high</td><td>Moderate</td><td>Low</td><td>Very low</td></tr>
<tr><td>Moderate</td><td>High</td><td>High</td><td>Moderate</td><td>Low</td><td>Very low</td></tr>
<tr><td>Low</td><td>Moderate</td><td>Low</td><td>Low</td><td>Very low</td><td>Very low</td></tr>
<tr><td>Negligible</td><td>Low</td><td>Very low</td><td>Very low</td><td>Very low</td><td>Very low</td></tr>
<tr><td>Positive</td><td>Net gain</td><td>Net gain</td><td>Net gain</td><td>Net gain</td><td>Net gain</td></tr>
</table></td></tr>
<tr><td colspan="3">Urban Design Evaluation</td></tr>
<tr><td>1</td><td>The overall revision of NOR plans and cross-referencing of information requested within these is helpful. Revisions have also partially addressed comments regarding opportunities for integration of NORs with wider stream and wetland networks.</td><td>Noted, thank you.</td></tr>
<tr><td>2</td><td>The text of the document has had minor revisions, such as inclusion of references to wetlands.</td><td>Noted.</td></tr>
<tr><td>3</td><td>Recognition of the names of awa in the plans is positive and significant. How each part of the NOR gives effect to these names, to whakamana these awa, is yet to be understood. While bridges are noted as important opportunities for a sense of place, to what extent is the designation boundary and land available able to assist with this important outcome and direction from mana whenua?</td><td>Mana Whenua are partners in Te Tupu Ngātahi, and have been involved in option development. The Cultural Advisory Report condition requires Mana whenua to be invited to prepare a Cultural Advisory Report, at least 6 months prior to the start of detailed design. This provides a formal opportunity for Mana Whenua to feed into the design of the corridors and specifically:

o Identify cultural sites, landscapes and values that have the potential to be affected

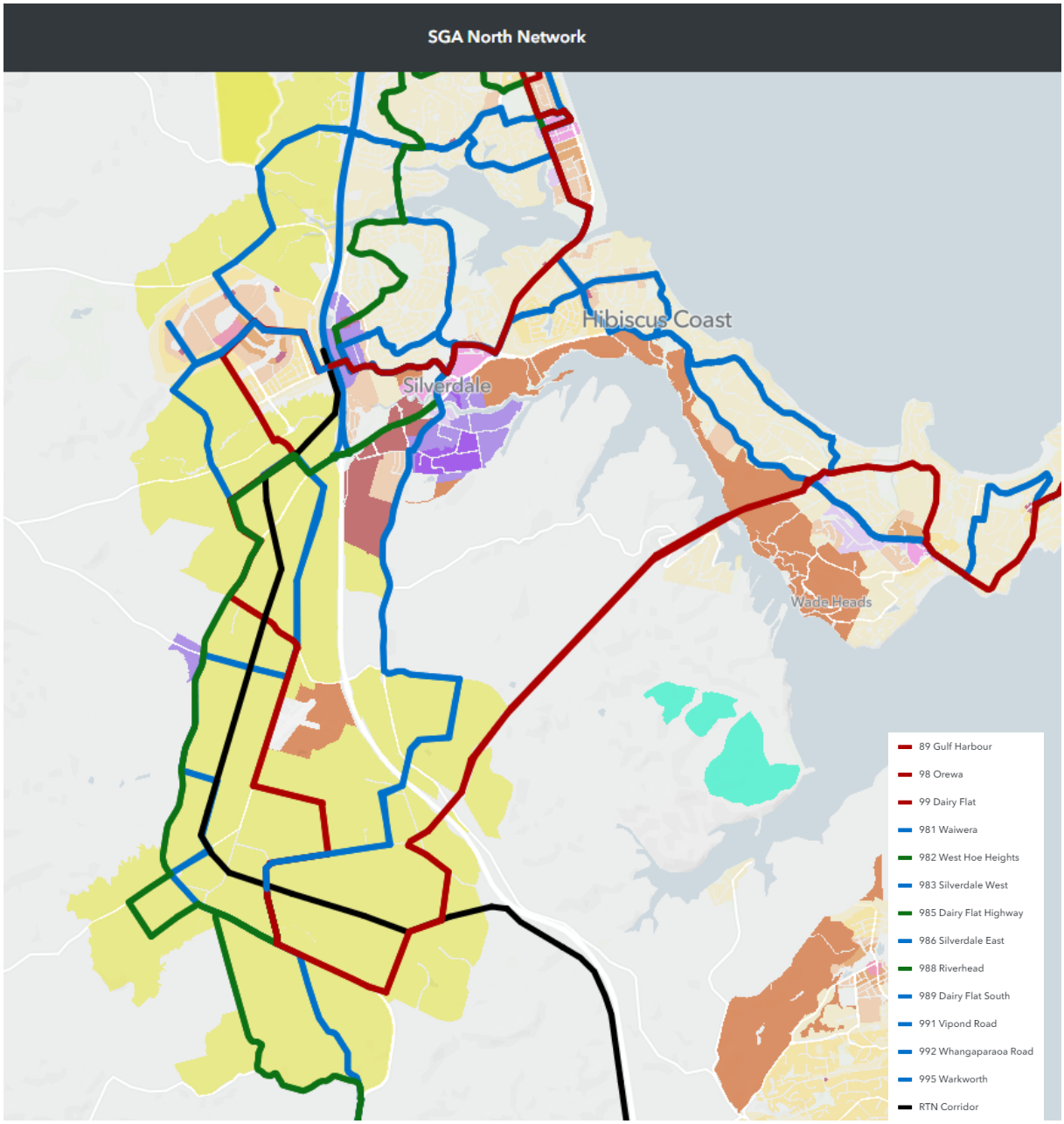
o Set out desired outcomes for management of potential effects

o Identify traditional cultural practices within the area that may be impacted on</td></tr>
</table>

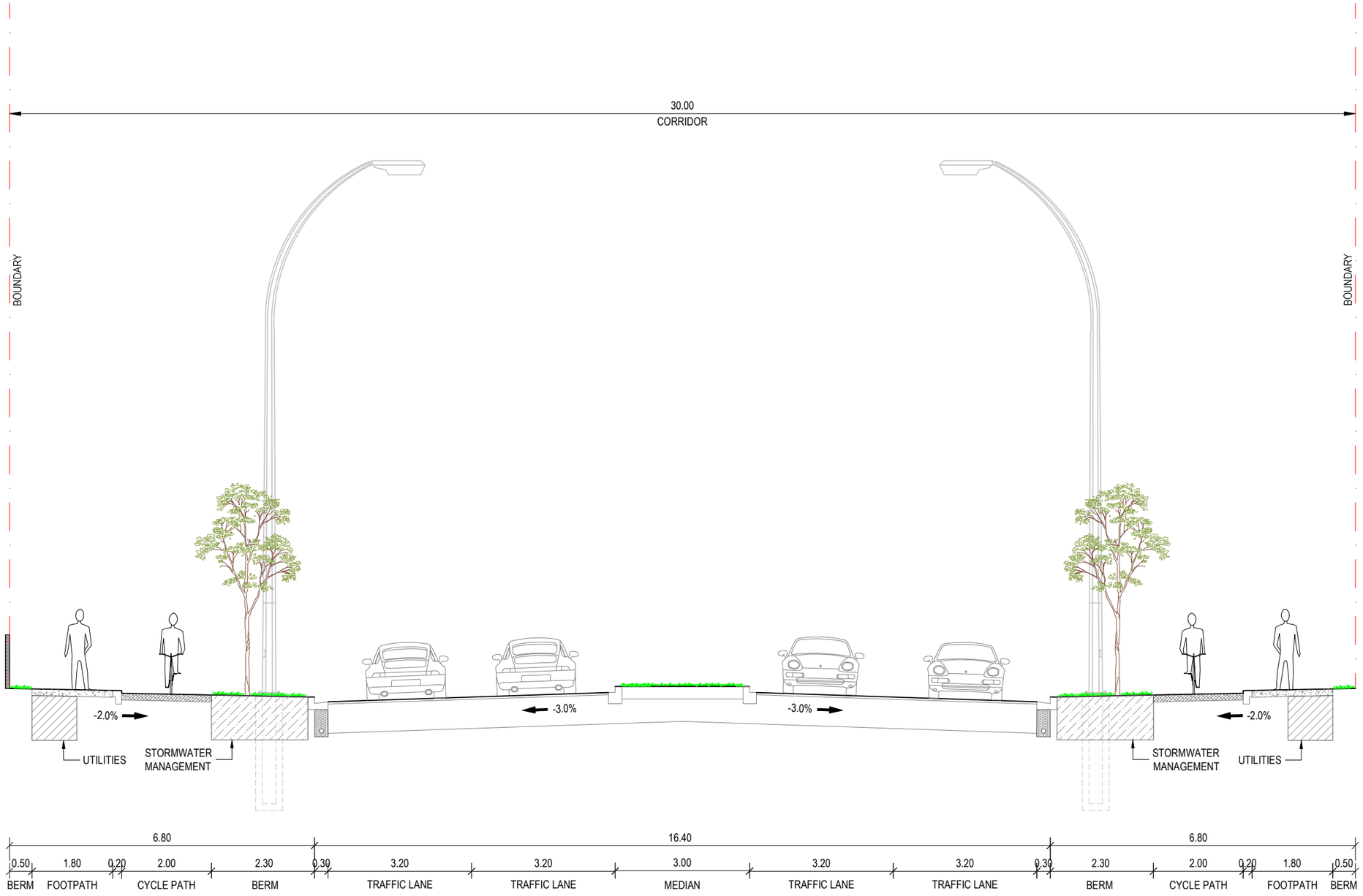
Ref	Request	Response
		o Identify opportunities for restoration and enhancement of identified cultural sites, landscapes and values o Identify cultural matters and principles that should be considered in the preparation of the ULDMP. The Urban Landscape and Design Management Plan (ULDMP) condition requires the preparation of ULDMPs as part of the outline plan process. Mana Whenua are to be invited to participate in the development of the ULDMP(s) to provide input into relevant cultural landscape and design matters including desired outcomes for management of potential effects on cultural sites, landscapes and values identified and discussed as part of the preparation of the Cultural Advisory Report. This process will provide the opportunity to provide the most appropriate design response to the features mentioned (awa etc.) as part of the detailed design of these corridors. The use of the surplus land within the designation boundary will be determined on a case-by-case basis, depending on the future adjacent land use, natural features, such as riparian margins, esplanade reserves, wetlands, or flood plains.
4	There is a wider context that is referred to such as the position of schools, that appears to have informed design decisions but is not shown at a wider scale in the drawings reviewed, or described how this wider contextual plan was determined.	The main Assessment of Environmental Effects (AEE) provides a more detailed description of the Strategic Context for the projects. The Auckland Unitary Plan includes limited live zoning in this area, generally focused on urbanised areas, and areas currently being developed, such as Milldale. The Silverdale West Dairy Flat Industrial Area Structure Plan has been prepared and signals industrial and heavy industrial land use across this area. The Auckland Future Development Strategy identifies the area for future development, with development anticipated in the area from 2030 – to beyond 2050. The Auckland Council Draft Spatial Land Use Strategy identifies a potential future town centre in Dairy Flat, and the location of potential local centres to the north-west of the Dairy Flat area. The assessment has recognised these locations, and it is assumed that future destinations and activity nodes will be identified and where appropriate, responded to, as part of a future structure planning exercise. The location of existing schools and a proposed future school site to be designated in the area has been acknowledged in the UDE. The context of the area will continue to morph and change and the preparation of the ULDMP is the most appropriate tool to reflect the changing context, particularly the following clause. *To achieve the objective, the ULDMP(s) shall provide details of how the project:* *(i) Is designed to integrate with the adjacent urban (or proposed urban) and landscape context, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones;* (ii) *Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections;*
5	Some comments regarding specific NORs have been incorporated while others remain as questions that are still open. However it is acknowledged some of these design questions remain as future opportunities that require exploration at future design stages, such as interaction with awa, or local road speeds and crossings for pedestrian and active mode permeability.	This is correct. The designation corridor/station designs are based on an indicative concept design. The designation boundaries have been informed by the indicative concept design and the boundary provides sufficient flexibility to accommodate the corridor/station typology considered to be required for the area. Therefore, there will be a number of detailed design matters that will need to be determined through the detailed design process. These will be informed by the future context as more information becomes known about how these areas will be developed. This is addressed by the ULDMP condition as below. The ULDMP will input into the detailed design of the corridors. Specifically Clause c) and d) require **(emphasis added):** *(c) To achieve the objective, the ULDMP(s) shall provide details of how the project:* *(i) Is designed to **integrate with the adjacent urban (or proposed urban) and landscape context**, including the surrounding existing or proposed topography, urban environment (i.e. centres and density of built form), natural environment, landscape character and open space zones;* *(ii) **Provides appropriate walking and cycling connectivity to, and interfaces with, existing or proposed adjacent land uses, public transport infrastructure and walking and cycling connections**;* *(iii) Promotes inclusive access (where appropriate); and* *(iv) Promotes a sense of personal safety by aligning with best practice guidelines, such as:* *a. Crime Prevention Through Environmental Design (CPTED) principles;* *b. Safety in Design (SID) requirements; and* *c. Maintenance in Design (MID) requirements and anti-vandalism/anti-graffiti measures.* *(d) The ULDMP(s) shall include:* *(i) a concept plan – which depicts the overall landscape and urban design concept, and explains the rationale for the landscape and urban design proposals;* *(ii) developed design concepts, including principles for walking and cycling facilities and public transport; and* *(iii) landscape and urban design details – that cover the following:* *a. Road design – elements such as intersection form, carriageway gradient and associated earthworks contouring including cut and fill batters and the interface with adjacent land uses and existing roads (including slip lanes), benching, spoil disposal sites, median width and treatment, roadside width and treatment;* *b. Roadside elements – such as lighting, fencing, wayfinding and signage;* *c. Architectural and landscape treatment of all major structures, including bridges and retaining walls;* *d. Architectural and landscape treatment of noise barriers;*

Ref	Request	Response
		e. ***Landscape treatment of permanent stormwater control wetlands and swales;*** *f. Integration of passenger transport;* *g.* ***Pedestrian and cycle facilities including paths, road crossings and dedicated pedestrian/ cycle bridges or underpasses;*** *h. Historic heritage places with reference to the HHMP;* *i. Reinstatement of construction and site compound areas, driveways, accessways and fences;*
6	However, it is uncertain what opportunities and design moves are set at this design stage and therefore should be further interrogated- e.g. while NOR 12 remains designed as a four lane thoroughfare, are there opportunities to narrow this in part or introduce other connections at later design stages, or is this set now and therefore has the need to be interrogated further at this design stage?	As noted above, the designation corridor designs are based on an indicative concept design. The designation boundaries have been informed by the indicative concept design and the boundaries provide sufficient flexibility to accommodate the corridor typology considered to be required for the area. The designation corridors have been designed to match the anticipated form and function of the corridors, as explained in the main AEE. This includes the transport needs and outcomes for particular corridors, such as the potential for four lanes on some corridors. For some of these corridors they may involves two lanes or general traffic and two bus lanes or multi-vehicle lanes. More information is provided in the ATE and relevant parts of the AEE. The ULDMP condition will require the future design of the corridors to consider and respond to the future land use adjacent to the corridor. As an example for NoR 12, there is the opportunity to integrate the corridor with the future local network to facilitate ease of access to the future Dairy Flat Town Centre location. The ULDMP condition is required to show how the corridor is designed to integrate with the adjacent urban context. It is at this stage the form of the town centre can be considered. It is anticipated that future planning processes, such as structure planning, and the resource consent process will determine the layout of the local road network and how this connects and interacts with the strategic arterials. The UDLMP is required to be submitted as part of an Outline Plan pursuant to s176 of the RMA, which will provide Council the opportunity to comment on the document and the design of the corridors.
7	It may be useful to understand how these future opportunities may play out, or their scope and limitations for change based on the design set in this work phase.	As noted above, the designation boundaries provide for flexibility in the road corridor and intersection design. These will be determined through the detailed design process which will respond to the ULDMP document and the design responses directed by this process. Due to the uncertainty of future land use form and the long-term timing of development, out to 2050 and beyond, the level of flexibility in the design of the corridors is intentional and will provide flexibility to achieve land use and transport integration required to be addressed as part of the UDLMP process.

Attachment A – Indicative public transport network



Attachment B – Indicative cross-sections (with dimensions)



Standard cross section to be used for arterials with no strategic PT function. Four lane cross section with FTN (below) should also be used for engagement to demonstrate that the additional lanes could be used for Public Transport in the future.

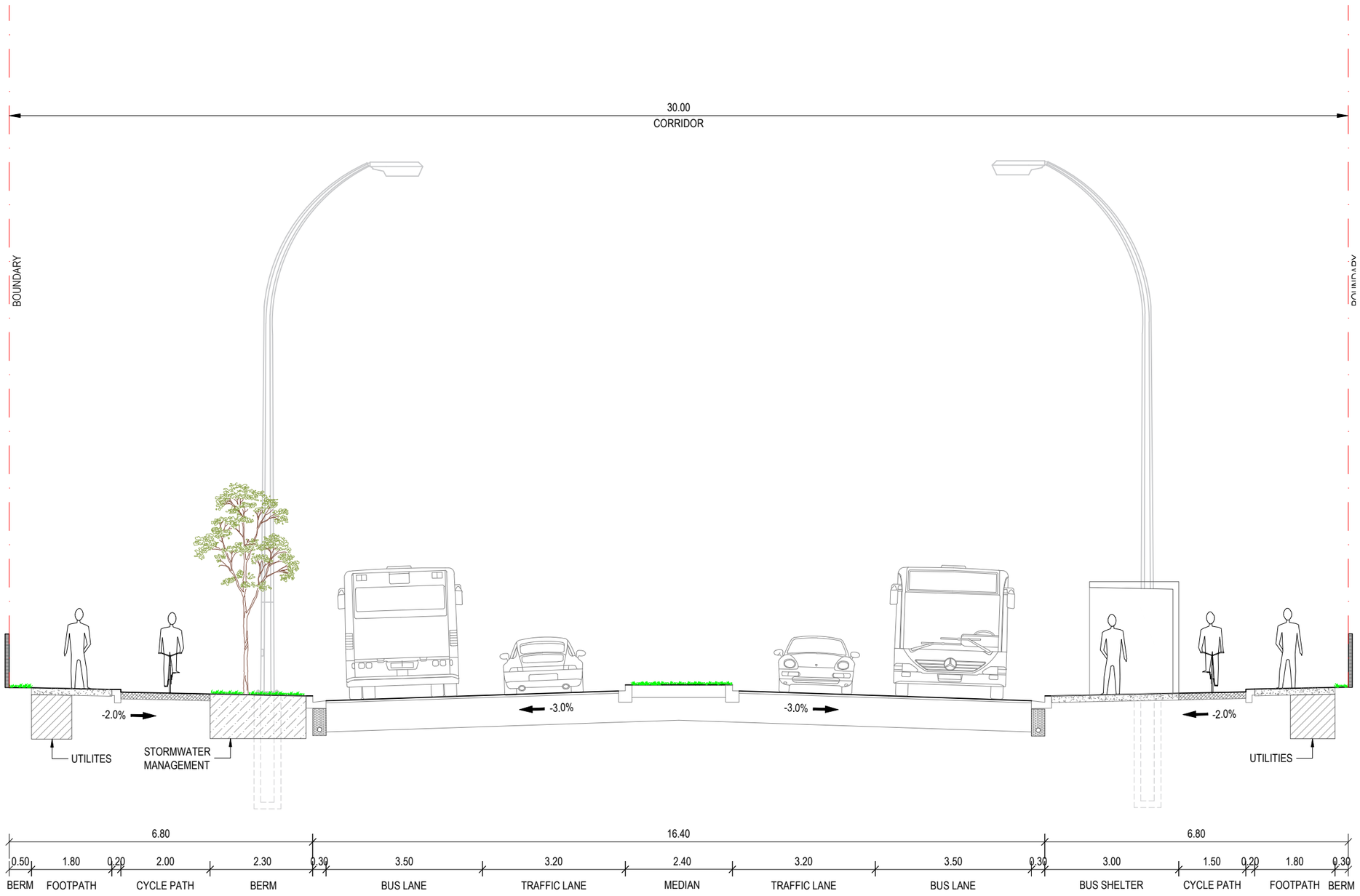
FOUR LANE ARTERIAL - 30M

Rev: A | 1:100@A3

SUPPORTING GROWTH ALLIANCE
GENERIC CROSS SECTIONS

TE TUPU NGĀTAHI Supporting Growth

NZ TRANSPORT AGENCY WAKA KOTAHI



This shows both a station scenario (right side) and a mid-bock corridor scenario (left side). The majority of the corridor will be mid-block, so the left side cross section should be used and duplicated in both directions (so that the cross section is symmetrical). This will simplify the design process.

NOTE:
This cross section demonstrates the potential of the corridor to accommodate a bus stop shelter in place of the ped/berm/furniture zone shown on the other side. The corridor is able to provide the flexibility for a number of dual uses.

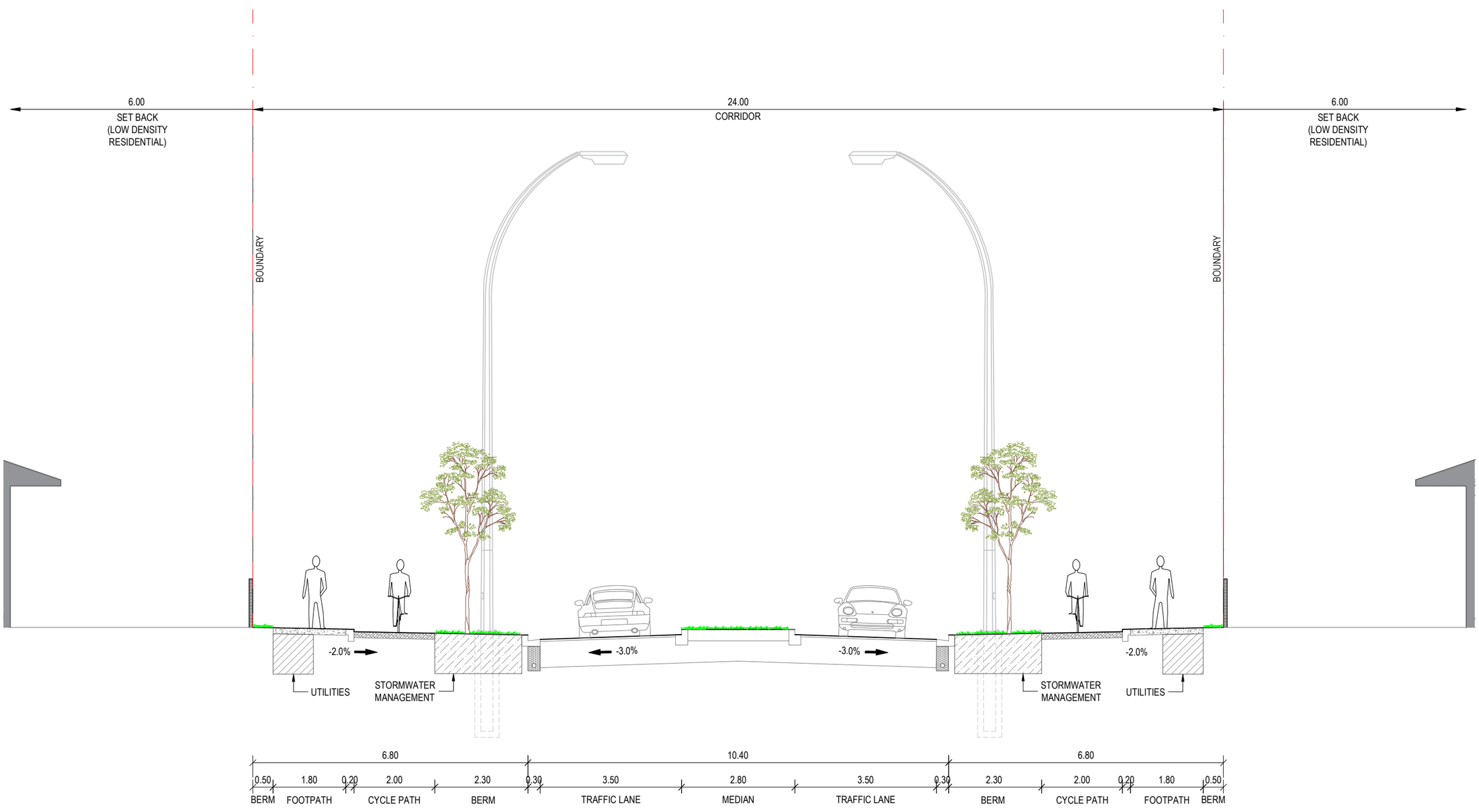
FOUR LANE FTN ARTERIAL - 30M

Rev: A | 1:100@A3

SUPPORTING GROWTH ALLIANCE
GENERIC CROSS SECTIONS

TE TUPU NGĀTAHI Supporting Growth

NZ TRANSPORT AGENCY WAKA KOTAHI



Standard cross section to be used for a 2 lane arterial.

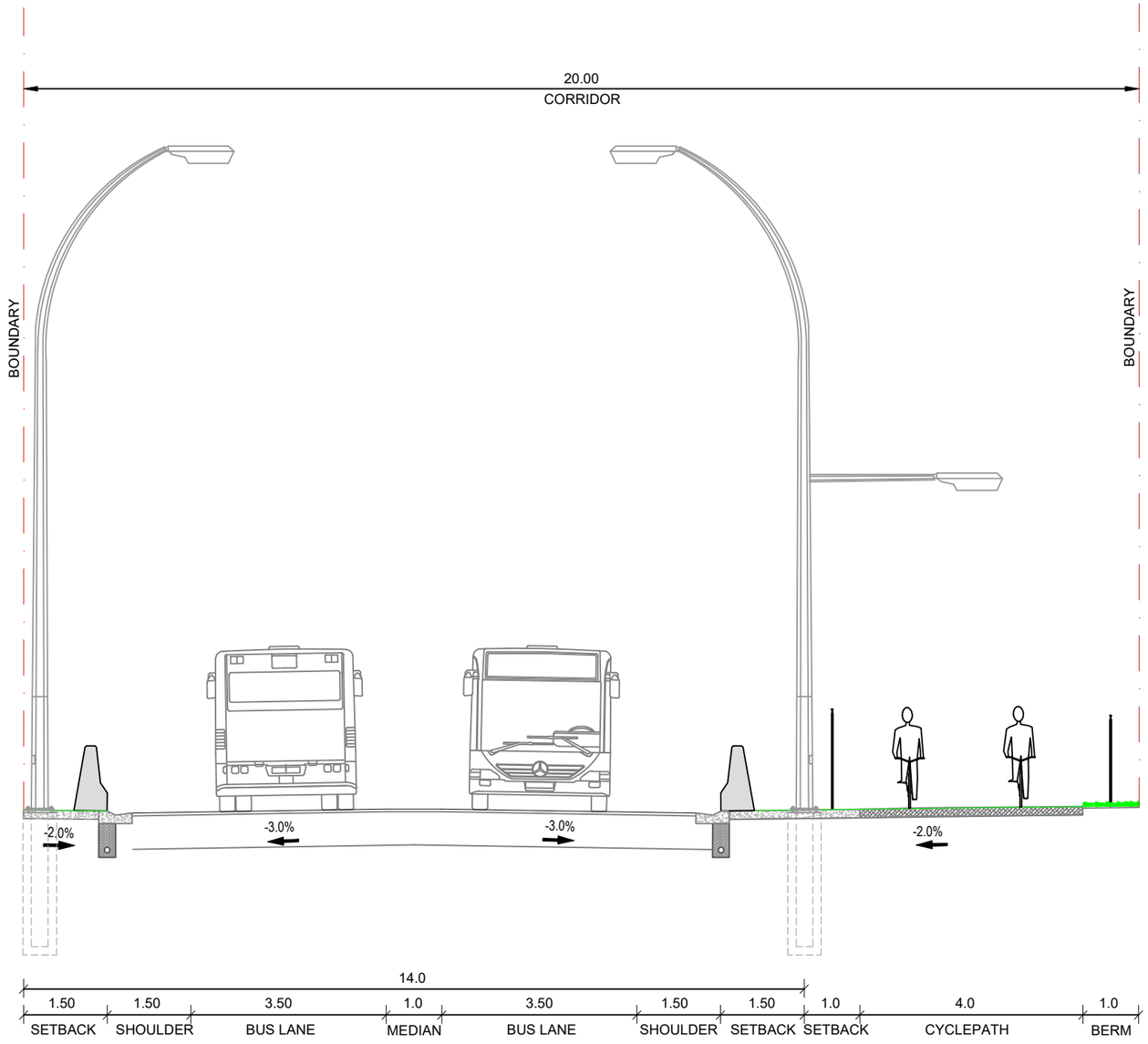
TWO LANE ARTERIAL - 24M

Rev: A | 1:100@A3

SUPPORTING GROWTH ALLIANCE
GENERIC CROSS SECTIONS

TE TUPU NGĀTAHI Supporting Growth

NZ TRANSPORT AGENCY WAKA KOTAHI



RURAL RTN BUSWAY - 20M

Rev: A | 1:100@A3

SUPPORTING GROWTH ALLIANCE

GENERIC CROSS SECTIONS

TE TUPU NGĀTAHI Supporting Growth

NZ TRANSPORT AGENCY WAKA KOTAHI