

South Rail – Drury and Paerata Station Projects

Appendix G – Ngāti Te Ata CIA Recommendations and Project Response

September 2021

Version 1

Prepared for KiwiRail Holdings Limited by Te Tupu Ngātahi

Ngaati Te Ata Waiohua Key Matters

Ngaati Te Ata's CIA is included in Volume 4 of this application. This document sets out the project's response to recommendations within the CIA

Category	Issue	Project Team Response
Heritage protection and recognition <i>Physical landscape</i> <i>Cultural heritage</i>	Physical landscapes are an integral part of our cultural landscape and urban development may have a significant adverse effect on these physical landscapes.	The Project technical experts, including Manawhenua who were involved throughout the assessment of alternatives, have identified features such as wetlands and streams in the Drury Central and Paerata areas and efforts were made through the Alternatives Assessment process to avoid and minimise the impact on these features in addition to reducing the earthworks required (refer to Appendix A). However, due to the need to balance the presence of such features with operational design constraints, it is necessary to reclaim the Flanagan Tributary at Drury Central and the wetland at Paerata to enable the works. The design of the stations have sought to reduce adverse effects where possible. The remaining effects have been addressed through sections 10.7 and 17.7 - Ecology of this AEE. Where relevant, offset has been proposed which will increase the native plant species within the Project areas, improve and protect higher quality landscape features and ensure no net loss of ecological value.
	Identification and preservation of landscapes is required.	
	A need to protect and preserve our remaining cultural heritage from intensification of development within the Southern area.	The Projects are located in areas already identified by Auckland Council as areas for future urbanisation and intensification to efficiently support growth that is anticipated.
	Over reliance on scheduled items (e.g. NZAA/CHI places).	
	Incomplete cultural heritage surveys.	
An accidental discovery protocol will be developed for the Projects to protect any discoveries during the enabling works phase. This will be consistent with the accidental discovery rule in Chapter E11 (Land disturbance – Regional) of the Auckland Unitary Plan: Operative in Part or any subsequent version.		
Whenua <i>Urban development</i> <i>Soil and earthworks</i> <i>Erosion and sediment control</i>	Inappropriate form, location and scale of urban development.	The appropriateness of the form, location and scale of the stations was considered through the Alternatives Assessment process and Form and Function Assessment, documented in Appendix A of the AEE.

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	<p>Increased risk of cumulative adverse effects as land uses change and development intensifies.</p> <p>Repeated strategies of planning have been implemented in this area over the last 20 years. Concerns on the stability of the current rural urban boundary and on-going pressures to expand it or remove it all together.</p> <p>Loss of important horticultural land affecting future food production.</p> <p>Future development of these areas is expected to result in a significant number of large-scale earthworks. This includes 'cut and fill' used to create roads and various subdivisions to accommodate building platforms. The thresholds for earthworks are problematic i.e. too high.</p> <p>Loss of productive capacity/value of land in the south.</p> <p>Degradation of soil from intensification of agricultural practices.</p> <p>Intensification of agricultural practices and levels of contaminants entering waterways or put onto/into land.</p>	<p>The Projects do not inform urban development or the rural urban boundary and have sought to locate in areas already identified by Auckland Council under the AUP:OP as future urban area to accommodate future growth and intensification. Therefore, both the urban intensification and the loss of the productive capacity of this land are anticipated in this zone.</p> <p>The locations of the Stations were chosen to reduce the amount earthworks required, on balance with avoiding significant features, (refer to the AEE, Appendix A: Assessment of Alternatives). Where possible, earth will be re-used on site to reduce earth movement. Construction effects are temporary and limited to the period of construction.</p> <p>The operational transportation, groundwater and noise effects in the anticipated future environment have been considered to be low. Refer to Volume 4 and sections 10 and 17 of this AEE.</p> <p>The Project has also considered future development in designing stormwater with the whole catchment and climate change in mind. Refer to Volume 4 and sections 10.10 and 17.10 of this AEE.</p>
	<p>Earthworks may have an adverse effect on cultural heritage, land stability, and the mauri of water.</p>	

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	<p>Sediment may be released into the environment, including that from contaminated soils. Potentially contaminated soil may be used as fill.</p> <p>Removal of indigenous vegetation can cause erosion.</p> <p>Soil erosion can cause sedimentation.</p> <p>Amount of sediment being released into the receiving environment.</p> <p>Activities that accelerate erosion (e.g. clearance of indigenous vegetation).</p> <p>Use of flocculants and potential for accidental overdosing.</p>	<p>To protect waahi tapu, kooiwi or taonga from being disturbed, manawhenua will be involved where appropriate during both detailed design and construction, to identify and manage adverse effects on these features. Cultural Monitoring Plans prepared in collaboration with Manawhenua are proposed as a condition on the NoRs.</p> <p>An accidental discovery protocol will be developed for the Projects to protect any discoveries during the enabling works phase. This will be consistent with the accidental discovery rule in Chapter E11 (Land disturbance – Regional) of the Auckland Unitary Plan: Operative in Part or any subsequent version.</p> <p>While no significant heritage features have been identified at either Project site, KiwiRail will obtain a General Archaeological Authority from HNZPT to modify or destroy potential archaeological sites that may be encountered. An Archaeological Management Plan will also be developed through this process. As this will be undertaken under a separate Act (Section 44(a) of the Heritage New Zealand Pouhere Taonga Act 2014), this has not been conditioned.</p> <p>Earthworks will be undertaken using sediment and erosion control measures to protect the waterways A Final Erosion and Sediment Control Plan (which will include flocculation management details, should flocculant treatment be proposed for use on site) will be prepared by a Suitably Qualified and Experienced Person (Provisional Erosion and Sediment Control Plans are provided in Volume 4 of this AEE).</p> <p>A Detailed Site Investigation will be conducted prior to works, during detailed design, to identify any contamination within the Project sites.</p> <p>Fill will preferably be re-used from within the sites, where appropriate, otherwise, only clean fill will be utilised.</p>
<p>Wai (Water) Waterways Water Quality Groundwater, recharge and water allocation Stormwater Wastewater</p>	<p>Past land uses and practices have altered and degraded waterways.</p> <p>Future urban development could adversely affect waterways e.g. loss of streams, wetlands or floodplains; reduced water quality etc.</p>	<p>The Hingaia Tributary at Drury Central and Wetland 2 at Paerata will be enhanced through native planting as offset for the loss of similar features within the Project sites. In particular, at Paerata, the proposed offset wetland area will allow for a wide range of facultative and obligate indigenous wetland plants to establish and become a self-sustaining native wetland system (proposed resource consent condition 5).</p>

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	Increased risk of cumulative adverse effects as land uses change and development intensifies.	<p>The Project technical experts have identified wetlands and streams in the Drury Central and Paerata areas and efforts were made through the Alternatives Assessment process to avoid and minimise the impact on these features in addition to reducing the earthworks required (refer to Appendix A). The Flanagan Tributary at Drury Central and a wetland at Paerata will be reclaimed as part of the Project, however, through this, impacts on other higher value streams and wetlands are able to be avoided. The reclamation of these features will be offset so that there is no net loss in ecological value. The ecology offset areas will include a programme of establishment and post establishment protection and maintenance (fertilising, weed removal/spraying, replacement of dead/poorly performing plants, watering to maintain soil moisture, maintenance programme) of three years.</p> <p>An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that stormwater quality will be maintained through the use of a stormwater wetland and/or raingardens, utilising Auckland Council's Guidance Document 005: Erosion and Sediment Control (GD05, 2016). There is no direct discharge of any waste into waterways. The Project has also considered future development in designing stormwater with the whole catchment and climate change in mind.</p> <p>A Detailed Site Investigation will be undertaken prior to works, during detailed design, which will identify any contaminants in the soil to enable remediation. This will further remove the risk of contamination entering waterways.</p> <p>The groundwater effects in the anticipated future environment have been considered to be low. Refer to Volume 4 and sections 10 and 17 of this AEE for further detail.</p> <p>There were no maunga or tuff rings identified within the sites.</p>
	Degradation of water quality has happened at a national and local level. Adverse effects are becoming more evident.	
	Adverse effects caused by past land uses and practices such as farming, horticulture, urban development, point and nonpoint source discharges, modified waterways and decreased water flow, pest species, erosion and sedimentation, increased nutrient levels	
	Increased nutrient levels and contaminants in waters are a risk to human and animal health	
	Disruption to natural recharge of groundwater and stream base flow due to increased urban development.	
	Increased risk of cumulative adverse effects as land uses change and development intensifies.	
	Ongoing discharge of low levels of contaminants into groundwater which will adversely affect the environment and human health.	
	Protection of maunga and tuff rings as an avenue for direct groundwater recharge	
	Mixing of waters, especially clean roof water with contaminated run off.	
	Efficient use of water.	
'Clean' and 'contaminated' waters are not mixed i.e. no direct disposal of any waste into waterways, including wetlands.	<p>This matter will be addressed at detailed design in which Manawhenua will be involved.</p> <p>There are no direct discharges to waterways. Any discharges to streams will be via an appropriate stormwater treatment device such as a centralised stormwater wetland and/or raingardens.</p>	

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	<p>Highest level of stormwater treatment should be used before it is discharged into waterways. This includes, but is not limited to:</p> <ul style="list-style-type: none"> - use of 'treatment train' approach - use of raingardens/swales and green roofs - all cesspits to be fitted with a 'stormwater 360 litter trap' or 'enviro-pod' - use of the new GD01 stormwater management devices guideline as an appropriate means to support the mitigation of stormwater issues. <p>Treatment of contaminated stormwater – follow best practice.</p>	<p>An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that stormwater quality will be managed through the use of a stormwater wetland and/or raingardens, utilising Auckland Council's Guidance Document 005: Erosion and Sediment Control (GD05, 2016).</p> <p>The details of the stormwater devices to be utilised will be addressed at detailed design, in which Manawhenua will be involved.</p>
	<p>Discharge of effluent into natural water bodies is culturally offensive, land-based treatment is required instead.</p>	<p>It is likely that the Project buildings will connect into the public wastewater system, however, this is to be determined at detailed design.</p>
	<p>Effects of new urban development on existing wastewater infrastructure including increased risk of cumulative adverse effects as land uses change and development intensifies.</p>	<p>The Projects are located in areas already identified by Auckland Council as areas for future growth and intensification.</p> <p>Construction effects will be temporary and limited to the period of construction.</p>
	<p>When making decisions on future development projects, cumulative effects must be considered.</p>	<p>The operational groundwater effects in the anticipated future environment have been considered to be low, groundwater monitoring will be undertaken to manage the effects. Refer to Volume 4 and sections 10 and 17 of this AEE for more detail.</p> <p>The Project has also considered future development in designing stormwater with the whole catchment and climate change in mind. Refer to Volume 4 and sections 10.10 and 17.10 of this AEE for more detail.</p> <p>While the Paerata Wetland and Flanagan Tributary at Drury Central will be reclaimed, the ecology offset areas will include a programme of establishment and post establishment protection and maintenance (fertilising, weed removal/spraying, replacement of dead/poorly performing plants, watering to maintain soil moisture, maintenance programme) of three years (in the case of Drury Central) and five years (in the case of Paerata).</p>

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Biodiversity Indigenous vegetation Wetlands	Biodiversity is integral to Manawhenua.	An ecological assessment has been undertaken and no significant areas of biodiversity were identified. Any riparian vegetation and protected trees removed will be replaced generally with native species in appropriate locations so that there is no net loss of ecological value. The impact is lessened as the new trees grow to maturity.
	Biodiversity is under continued threat, through a lack of inadequate legal protection, incompatible adjacent land uses and human-related impacts within their catchments.	Impacts on bats, birds and lizards will be managed in accordance with the Wildlife Act. Fish passage will be provided through new culverts with improvements to extended existing culverts where practicable. In particular, proposed resource consent condition 7 in the Drury Central set requires access for native fish species to pass through the length of the Maketu culvert of the Hingaia Tributary (including any retrofitted or new section of this culvert) in accordance with New Zealand Fish Passage Guidelines 2018.
	Significant loss of indigenous flora and fauna is a primary risk to biodiversity.	
	Lack of blanket tree protection to old trees.	There are two individual trees and four groups of trees protected under the AUP:OP, within the Drury Central Project site and one group of three willow trees within the Paerata Project site. Any tree protected under the AUP:OP to be removed will be replaced at a minimum two-for-one ratio.
	Use of inappropriate trees/plants, especially exotics.	The majority of vegetation lost will be exotic species. Replacement planting will predominantly be native species. In particular, at Paerata, the proposed offset wetland area will allow for a wide range of facultative and obligate indigenous wetland plants to establish and become a self-sustaining native wetland system (proposed resource consent condition 5). Planting will be addressed at detailed design, in which Manawhenua will be involved.
	Loss of traditional trees/plants has affected our cultural landscape.	
	The health, function and extent of wetlands continues to decline.	While the smaller Wetland 1 at Paerata will be reclaimed, the larger Wetland 2 will be restored and enhanced to balance these effects.
	The health, function and extent of wetlands should be restored and enhanced.	There are no impacts on wetlands within the Drury Central site.

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	Increased risk of cumulative adverse effects as land uses change and development intensifies.	<p>The Projects do not inform urban development and have sought to locate in areas already identified by Auckland Council as areas for future growth and intensification.</p> <p>Construction effects are temporary and limited to the period of construction.</p> <p>The Project has also considered future development in designing stormwater with the whole catchment and climate change in mind. Refer to Volume 4 and sections 10.10 and 17.10 of this AEE for further detail.</p> <p>While the Paerata Wetland and Flanagan Tributary at Drury Central will be reclaimed, the ecology offset areas will include a programme of establishment and post establishment protection and maintenance (fertilising, weed removal/spraying, replacement of dead/poorly performing plants, watering to maintain soil moisture, maintenance programme) of three years (in the case of Drury Central) and five years (in the case of Paerata).</p>
Open Space and Greenways plans	Urban development along the South Rail Stations rail route should provide open spaces that protect and enhance our cultural and natural landscapes.	This matter will be addressed at detailed design, in which Manawhenua will be involved.
Sustainability Natural hazards	<p>Significant growth in Taamaki Makaurau requires Manawhenua to 'culturally accommodate' a significant amount of people.</p> <p>Ecological footprint needs to be reduced and managed. This includes reducing greenhouse gas emissions, restricting urban sprawl, and using more sensitive urban design.</p> <p>Unsustainable development is inconsistent with our cultural values, especially when does not manage wastewater and waste products appropriately.</p> <p>New development should be sustainable and self-reliant.</p>	<p>Improvement to the public transport infrastructure will encourage intensification around stations, enabling growth through a quality compact urban form.</p> <p>With the encouraged uptake of public transport, greenhouse gas emissions are expected to decrease (refer to section 20 and Volume 4 of the AEE: Assessment of Transport Effects).</p> <p>This matter will be addressed at detailed design, in which Manawhenua will be involved.</p>

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	Operational costs can be a barrier to trying new methods to achieve better environmental outcomes e.g. stormwater infrastructure.	An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that stormwater quality will be maintained through the use of a stormwater wetland and/or raingardens, utilising Auckland Council's Guidance Document 005: Erosion and Sediment Control (GD05, 2016). The details of the stormwater devices to be utilised will be addressed at detailed design, and Manawhenua will be involved in this process.
	Natural hazards, climate change and global warming can have a negative effect on human health, property, natural environment, and areas of cultural and spiritual significance e.g. sea level rise and increase in coastal inundation and flooding, increase in erosion and droughts, reduced viability of cultural and/or spiritual resources and activities.	An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that flooding effects will be low at the Project sites, taking climate change into account. The details of the stormwater devices to be utilised will be addressed at detailed design, and Manawhenua will be involved in this process. Earthworks will be undertaken using sediment and erosion control measures to protect the waterways. A Final Erosion and Sediment Control Plan will be prepared by a Suitably Qualified and Experienced Person (Provisional Erosion and Sediment Control Plans are provided in Volume 4 of this AEE).
	Natural hazards cannot necessarily be managed in the same manner as natural resources. Appropriate natural hazard risk management is required.	Where vegetation is removed, this will be revegetated at the completion of the Project to reduce the risk of erosion long-term.
	The effects of natural hazards can be exacerbated by inappropriate subdivision, land use or development e.g. increased frequency or severity of landslips caused by poor land management practices.	
	Increased risk of cumulative adverse effects as land uses change and development intensifies.	
Infrastructure	Provision of infrastructure is not matching the pace of urban growth.	The rail stations at Drury Central and Paerata are being provided as 'lead' infrastructure (Stage One by 2025), generally ahead of planned development, in order to alleviate this issue.
	Inadequate and deteriorating infrastructure such as wastewater and stormwater pipes are causing adverse environmental effects.	Existing culverts will be upgraded where required to meet existing and future requirements to address the impact of the stations.
	Wastewater Treatment Plants are problematic and better options exist.	Not applicable.

Ngaati Te Ata Waiohuria Key Matters

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Category	Issue	Project Team Response
	Transport options need improving to create healthy and connected communities, particularly utilising the rail potential both passenger and freight.	<p>The stations will offer an increased connectivity of the region, allowing more Aucklanders access to more parts of Auckland, with greater access to future employment and service opportunities. Growth of the Drury Central and Paerata community, schools and businesses will be encouraged as a result. This will be particularly beneficial for vulnerable groups who do not or cannot use a car to travel and can increase their social inclusion.</p> <p>Further, when stations are embedded within communities, people are more enabled to walk and cycle to and from stations, which can contribute to health benefits while increasing the resilience of the transport network by providing greater opportunities for multi-modal options.</p>
	Fast broadband is needed.	Not applicable. Stations are served by a new fibre optic cable installed along the existing rail corridor.
	Provision of infrastructure should use a water sensitive design approach.	<p>An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that flooding effects will be low at the Project sites, taking climate change into account.</p> <p>The details of the stormwater devices to be utilised will be addressed at detailed design, and iwi will be involved in this process.</p>
Urban Design	Maori culture is rarely reflected in the urban built environment of Taamaki Makaurau (Auckland).	Manawhenua will participate in detailed design and in the development of the Urban and Landscape Design Management Plan (ULDMP) to provide input into relevant cultural landscape and design matters as outlined above.
Hauora	<p>Our rangatahi are over-represented in statistics for unemployment, low education attainment, crime, substance abuse and preventable health problems.</p> <p>Our kaumaatua need access to safe, accessible and affordable transport, particularly to enable them to carry out their tribal responsibilities. They also need financial support e.g. opportunities for rates remission.</p> <p>Whaanau mental health is increasing as a result of Auckland's poor transport network, especially a lack of rail capacity. Support is required for various Ngaati Te Ata Waiohuria health and well-being initiatives including those focussed on health and rangatahi.</p>	<p>The stations will offer an increased connectivity of the region, allowing more Aucklanders access to more parts of Auckland, with greater access to future employment and service opportunities (refer to sections 10.2, 17.2 and 20.2 of the AEE for discussion on job creation and improved job accessibility). Growth of the Drury Central and Paerata community, schools and businesses will be encouraged as a result. This will be particularly beneficial for vulnerable groups who do not or cannot use a car to travel and can increase their social inclusion.</p> <p>Further, when stations are embedded within communities, people are more enabled to walk and cycle to and from stations, which can contribute to health benefits while increasing the resilience of the transport network by providing greater opportunities for multi-modal options.</p> <p>Encouraging a reduction in vehicular movement and therefore traffic congestion. This improves journey times, reliability for future freight and busses, reduces the risk of car accidents, reduces stress and increases the time available to individuals for productive activities and family.</p> <p>Not applicable – these are not matters that these Projects have influence over.</p>

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	<p>There is a lack of quality, affordable and healthy housing, especially on ancestral land.</p> <p>There are financial and regulatory barriers to developing Maaori Land, including establishing papakaaingā.</p> <p>Support for Manawhenua in the physical reoccupation of our ancestral rohe such as on marae.</p> <p>Marae can face reverse sensitivity issues especially as urban development encroaches around them.</p> <p>Manawhenua seek to reoccupy their lands.</p> <p>Create land packages for whānau and ensure benefit from Treaty Claims settlement.</p> <p>Address housing needs in the context of a high growth population.</p>	<p>The rail stations at Drury Central and Paerata are being provided as lead infrastructure, ahead of planned development, in order to enable housing and development.</p>
Air	<p>Discharges to air can reduce air quality and cause noise pollution and light pollution.</p> <p>Discharges to air can have a significant adverse effect on human health, the environment and cultural values and practises. Effects can be cumulative.</p>	<p>Reductions in vehicle air emissions (NO₂ and PM₁₀) are predicted to decrease as a consequence of the shift away from low occupancy vehicles to bus and rail services and active mode corridors (see Assessment of Transport Effects in Volume 4).</p> <p>During construction, dust will be managed to meet the permitted standards of the AUP:OP.</p>
Economic Development	<p>Lack of acknowledgement in the 2011 Auckland Council Economic Development Strategy.</p>	<p>Not applicable – these are not matters that these Projects have influence over.</p>

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	<p>Manawhenua are disadvantaged in most of the key economic indicators. This significantly effects our health and well-being.</p>	<p>As described in section 2.4.1, 10.2, 17.2 and 20.2.1 of the AEE, the Projects are anticipated to both support economic recovery from COVID-19 and bring long lasting economic benefits to the whole community.</p>
	<p>Breaking barriers to achieve economic independence that will support iwi.</p>	<p>The stations will offer an increased connectivity of the region, allowing more Aucklanders access to more parts of Auckland, with greater access to future employment and service opportunities. Growth of the Drury Central and Paerata community, schools and businesses will be encouraged as a result. This will be particularly beneficial for vulnerable groups who do not or cannot use a car to travel and can increase their social inclusion.</p>
	<p>It is a time of change and need to ensure iwi are not left behind.</p>	

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Heritage protection and recognition Physical landscapes</p> <ul style="list-style-type: none"> • Identify and protect physical landscapes including but not limited to view shafts, hilltops, tuff rings, ridgelines, streams, floodplains, estuaries and coastlines. • Protection methods supported include: <ul style="list-style-type: none"> - Building setbacks and height restrictions to achieve protection of sightlines to ridgelines and hilltops. - Provide for a green rail corridor network. - 20m setback for all stream, estuarine and coastal edges to provide for pedestrian/ cycle paths. - 'Park edge roads' should be used for residential and commercial areas that back on to streams and coastal/estuarine edges. • Wetlands/swamps should be retained and returned to their natural state. 	<p>These features have been identified through the various technical specialists working on this Project and in consultation with Manawhenua who were involved through the optioneering process. The Alternatives Assessment in Appendix A of this AEE outlines the consideration of constraints in this regard. In particular, the location of the stations sought to avoid adverse impacts on these features, although this also had to balance and align with operational requirements.</p> <p>The buildings and final layout will be designed at detailed design. KiwiRail has recommended a condition for a ULDM that invites Manawhenua to participate in its development to provide input into relevant cultural landscape and expression of relevant narratives as an integral part of the design development process.</p> <p>The conditions also require Cultural Monitoring Plans to be undertaken in collaboration with Manawhenua.</p> <p>While efforts were made through the Alternatives Assessment process to avoid and minimise the impact on streams and wetlands, (refer to Appendix A), due to the need to balance the presence of such features with operational design constraints, a wetland at Paerata will be reclaimed, therefore not meeting this recommendation. To offset this loss, a nearby, larger wetland will be enhanced through planting and will be maintained for three years. Moreover, the Drury Central Station provides for a 20m riparian margin to be achieved along the northern bank of the Hingaia Tributary where it is located within the Project footprint. On balance, the Project will achieve no net loss of ecological values overall.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p><i>Cultural heritage</i></p> <ul style="list-style-type: none"> • Waahi tapu and other sites of significance as identified in this report are protected. • Protection and management of waahi tapu and other sites of significance (including lands that are no longer in Maaori hands) should be in a manner that is consistent with the tikanga and kawa of the appropriate iwi. • Waahi tapu and other sites of significance should be restored in partnership, where required or desired, with the community, industry, local and central government. • Only iwi should have the right to modify waahi tapu. • Complete cultural heritage surveys as a priority, including within the South Rail Stations project footprint areas. • Reinstate traditional Maaori place names to recognise our cultural heritage. • Risk assessment and protection mechanisms (accidental kooiwi/artefacts/taonga discovery protocols). • Cultural heritage is less likely to be impacted on if there is a 20-metre riparian margin. <p><i>Archaeology</i></p> <ul style="list-style-type: none"> • Future ADP to be developed by iwi under review by iwi for the South Rail Stations • Continued monthly works information (feedback) • Agreement regarding cultural monitoring for the main works 	<p>Manawhenua will be involved in the station design and construction phases and to develop mechanisms to avoid or mitigate effects on manawhenua values, such as through monitoring and mitigation measures and opportunities for expression through design. KiwiRail have recommended a number of conditions that will guide ongoing input from Manawhenua while also allowing the integration of Manawhenua views into the construction and design process (refer to Appendix C of this AEE for a full list of conditions). The relevant conditions are summarised below:</p> <ul style="list-style-type: none"> • Engagement is enabled through the establishment of a kaitiaki Manawhenua engagement forum (or similar) to provide for an on-going role in the design and construction of the Projects until completion of the construction period. • Cultural Monitoring Plans to be undertaken in collaboration with Manawhenua. • The condition for the UDLMP requires that Manawhenua are invited to participate in its development to provide input into relevant cultural landscape and design matters. <p>KiwiRail does not have the authority to reinstate Maaori place names.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Whenua Urban development</p> <ul style="list-style-type: none"> • Future planning and development of the areas should have a clear vision that recognises the diversity and uniqueness of the areas. This includes the role the areas have played as the ‘food bowl of the south’ in South Auckland. • Gateways including rail entry points to town centres should appropriately reflect the character of the areas. • New development should use land efficiently, especially since urban expansion has reduced the extent of rural production land. • Manawhenua have already contributed to previous planning documents and outcomes for the wider southern area. This work should be drawn upon. • Future planning and development should be cohesive and integrated with existing urban areas. • New development should have positive environmental and cultural effects. Future South Rail Stations planning should determine where and what are ‘no-go areas’; then within those areas determine areas worthy of protection and saving and the corresponding management approach. • When making decisions on future South Rail Stations and wider development projects, cumulative effects must be considered. • Require resource consent conditions to be imposed that allow Iwi access to culturally and/or spiritually significant sites and sites of customary activities through the imposition of caveats on titles or providing for the registration of right of-way servitudes. • Ensure in all development proposals that access is retained and improved to water bodies and cultural and/ or spiritual sites. • Management plans will be required as conditions of resource consent to ensure that critical environmental and cultural considerations are taken into account and that on-going monitoring and review occurs. 	<p>The Projects are located in areas already identified by Auckland Council under the AUP:OP as future urban area to accommodate future growth and intensification. Therefore, the loss of the productive capacity of this land is anticipated in this zone.</p> <p>A form and function assessment has been conducted to determine the amount of space required for a functioning station at each location. This is described in further detail in the Alternatives Assessment in Appendix A and summarised in section 4.4 of this AEE.</p> <p>The location of the stations were also considered in the context of the future environment, informed by the AUP:OP zoning and relevant structure plans.</p> <p>The stations will be publicly accessible during operational hours. The Hingaia Tributary, once locked within private land, will now be accessible to the public and iwi from the northern side where it interfaces the station.</p> <p>KiwiRail have recommended a number of management plan conditions which will ensure environmental effects are managed (refer to Appendix C of this AEE for a full list of conditions). Manawhenua will continue to be engaged during development of these plans and through construction to address cultural considerations. Any artwork will be discussed and considered at detailed design and iwi will be involved in this process.</p> <p>The majority of vegetation lost will be exotic species and will be removed in a manner that will not result in increased soil erosion.</p>

Soil and earthworks

- **Manawhenua must first karakia whakawaatea (bless and cleanse) the areas before any works take place and then bless the site when the works have been completed**
- **Cultural monitoring agreements should be established and must be undertaken by iwi kaitiaki (alongside the project archaeologist) before and during all South Rail Stations works.**
- **Review the Auckland Unitary Plan for provisions on volume of earthworks triggers for Manawhenua oversight.**
- **Minimise earthworks and make maximum use of natural ground levels.**
- **The rural productive value of the area, as ‘the food bowl of the south’ in South Auckland must be recognised.**
- **Ensure sufficient erosion and sediment control measures are in place for earthworks. Earthworks that have the potential to impact on waterways must have sufficient measures in place to ensure that adverse effects on water bodies are managed.**
- **Riparian planting of appropriate, preferably indigenous, species must be promoted and increased to stabilise riverbanks and reduce erosion in the region. Plants should be ‘eco-sourced / whakapapa plants’ and consistent with local biodiversity.**
- **Riparian vegetation must only be removed from river, lake and coastal/estuarine margins using methods that do not result in increased soil erosion in the long term. Any short-term effects must be managed to minimise any adverse effects.**
- **When making decisions on future development projects, cumulative effects must be considered.**

Erosion and sediment control

- **Effectively manage activities that accelerate soil erosion e.g. vegetation removal and intensive agricultural practises.**
- **Effectively manage the impact of contaminated land on the surrounding environment. Ensure contaminated land is not used as fill.**
- **When making decisions on future development projects, cumulative effects must be considered.**
- **Restore and protect highly erodible lands e.g. retire highly erodible land from farming, prohibit the clearance of indigenous vegetation and soil disturbance on highly erodible land that could cause further erosion and use locally sourced indigenous vegetation during restoration.**
- **Promote the direction of funds to support local reforestation initiatives on marginal lands.**
- **Promote the adoption of best practice land and soil management that minimises soil erosion, nutrient leaching, and sediment and nutrient runoff.**

KiwiRail have recommended a number of conditions that will guide ongoing input from Manawhenua while also allowing the integration of Manawhenua views into the construction and design process (refer to Appendix C of this AEE for a full list of conditions). The relevant conditions are summarised above. This includes the requirement for Cultural Monitoring Plans to be prepared in collaboration with Manawhenua.

The appropriate regional earthworks consents have been applied for. Refer to sections 9 and 16 of the AEE for the full list of consent triggers.

The locations of the Stations were chosen to reduce the amount earthworks required (on balance with avoiding significant features). Where possible, earth will be re-used on site to reduce earth movement.

The Projects have been located in areas already identified by Auckland Council under the AUP:OP as future urban area to accommodate future growth and intensification. Therefore, both the urban intensification and the loss of the productive capacity of this land are anticipated in this zone.

Earthworks will be undertaken using best practice sediment and erosion control measures in accordance with GD05 to protect the waterways during construction. A Final Erosion and Sediment Control Plan will be prepared by a Suitably Qualified and Experienced Person (Provisional Erosion and Sediment Control Plans are provided in Volume 4 of this AEE).

The majority of vegetation lost will be exotic species and will be removed in a manner that will not result in increased soil erosion. All replacement planting will be native species and eco-sourced where practicable. Planting will be considered at detailed design through the management plans, such as the UDLMP which manawhenua will be involved in.

A Detailed Site Investigation will be conducted prior to works, during detailed design, to identify any contamination within the Project sites.

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<ul style="list-style-type: none"> • Encourage research directed at developing technology and management practices that will minimise nutrient leaching and runoff. • When undertaking earthworks applicants must strive to achieve a much higher percentage of sediment retention onsite i.e. strive to meet best practice such as GD05, rather than just meeting 'bottom line' minimum requirements such as TP90. There are proven ways to reduce the amount of sediment entering the ecosystem and those which are supported are: <ul style="list-style-type: none"> - create a series of sediment pools instead of just one fore bay silt pond - use of filter/compost socks around cesspits and drains - use of an organic flocculent rather than chemical, when a flocculent is necessary. There are a variety of organic flocculent available currently on the market e.g. HaloKlear. - use of super silt fences in conjunction with silt ponds as a 'treatment train approach' - in the absence of silt fences use silt ponds, hay bales 	

Wai Waterways

- **The South Rail Stations development (and future development) should protect, rehabilitate and enhance waterways, especially where previous land use has degraded it.**
- **Preserve the physical integrity of receiving streams.**
- **Streams are well integrated with town centres with use of stream management plans and special policy requirements (green space, infrastructure, wider riparian margins).**
- **Development around streams/awa is limited to maintain access, preserve amenity, retain views and protect water quality e.g. use of 20m setbacks, use of park edge roads, rail corridor, lower density housing.**
- **Address existing use rights e.g. Industrial land discharges.**
- **Transport network planning across the wider southern area must consider stormwater treatment infrastructure.**
- **Involvement in stormwater management planning and kept informed of the processing of the network discharge consent for the area.**
- **Council to provide watercourse assessment reports which provide baseline information on the existing condition of waterways.**
- **Decisions on use of reserves or similar provision in subdivision applications shall give priority to protecting the water body health regardless of the water body or subdivision size.**
- **When making decisions on future development projects, cumulative effects must be considered. Proposed developments shall demonstrate how they have considered and applied development principles that enhance the environment including, but not limited to how the development:**
 - **Preserves and preferably enhances the natural hydrologic functions of the site**
 - **Identifies and preserves sensitive areas that affect the hydrology, including streams and their buffers, floodplains, wetlands, steep slopes, high-permeability soils and areas of indigenous vegetation**
 - **Maintains recharge of aquifers with clean uncontaminated water**
 - **Effectively manages natural hazards**
 - **Considers beneficial re-use on-site of stormwater and wastewater**
 - **Considers water conservation**
 - **Provides for visual amenity consistent with the surrounding environment**
 - **Minimising stormwater impacts to the greatest extent practicable by reducing imperviousness, conserving natural resources and ecosystems, maintaining natural drainage courses, reducing use of pipes, and minimising clearing and grading**

The Project technical experts have identified wetlands and streams in the Drury Central and Paerata areas and efforts were made through the Alternatives Assessment process to avoid these features and minimise earthworks (refer to Appendix A). Assessments of these water features were also undertaken (refer to Volume 4: Assessment of Effects on Ecology and sections 10.7 and 17.7 of this AEE) to determine the quality of these water bodies.

A wetland at Paerata and Flanagan Tributary at Drury Central, will be reclaimed, therefore not meeting this recommendation. Due to the need to balance the presence of such features with operational design constraints, it is necessary to reclaim the Flanagan Tributary at Drury Central and the wetland at Paerata to enable the works. The effect of this has been addressed through sections 10.7 and 17.7 - Ecology of this AEE, where appropriate offset has been proposed which will increase the native plant species within the Project areas, improve and protect higher quality landscape features and ensure no net loss of ecological value.

The Project has also considered future development in designing stormwater with the whole catchment and climate change in mind. An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that stormwater quality will be maintained through the use of a stormwater wetland and/or raingardens, utilising Auckland Council's Guidance Document 005: Erosion and Sediment Control (GD05, 2016). There is no direct discharge of any waste into waterways. This assessment further concludes that flooding effects will be low at the Project sites, taking climate change into account. The details of the stormwater devices to be utilised will be addressed at detailed design, and Manawhenua will be involved in this process.

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<ul style="list-style-type: none"> • Providing runoff storage measures dispersed through the site's landscape with a variety of detention, retention, and runoff practices • Where they will be of benefit, encouraging the use of mechanisms such as rainwater harvesting, rain gardens, roof gardens, and onsite storage and retention • Where they will be of benefit, encouraging the use of stormwater treatment devices including on-site treatment systems, allowing for emergency storage and retention structures • Such areas that have unavoidable impervious areas, attempt to break up these impervious areas by installing infiltration devices, drainage swales, and providing retention areas • Minimise imperviousness by reducing the total area of paved surfaces • Maintain existing topography and pre-development hydrological processes. <p><i>Water Quality</i></p> <ul style="list-style-type: none"> • Ngaati Te Ata Waiohua aspire to have waters that are drinkable, swimmable, and fishable with the water quality at least at the level it was before the European settlers arrival. • When making decisions on future development projects, cumulative effects must be considered. 	

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p><i>Groundwater, recharge and water allocation</i></p> <ul style="list-style-type: none"> • Ensure groundwater recharge to retain base flows within streams, and to keep aquifers recharged. • Commissioned reports are undertaken to carry out an initial groundwater study based on information and results from previous studies. Ngaati Te Ata Waiohua request to be updated and informed, as these reports become available. • Support the promotion of innovative green business initiatives and practices. For example, the use of low-impact building materials, packed gravel or permeable concrete instead of conventional concrete or asphalt, to enhance replenishment of ground water. • When making decisions on the South Rail Stations project and future related development projects, cumulative effects must be considered. • The water allocation framework must be underpinned by the following principles: <ul style="list-style-type: none"> - Recognition that Manawhenua iwi have rights and interests in water. - Unauthorised water takes are subject to immediate enforcement action to ensure a level playing field for all water users. - All water takes (excluding those required for civil or general emergency) should be accounted for within the allowable limit. - The framework for allocating water to users should focus primarily on ensuring the health and well-being of waterways and secondly on contributing to the long-term economic, cultural, spiritual, environmental, and social well-being. • The water allocation framework must cater for all catchments and particularly consider catchments: <ul style="list-style-type: none"> - that have no significant current or foreseeable demand pressure - that continue to have water available for use and a trend of increasing demand towards full allocation - that are fully allocated - Where water is over allocated and all or any of that over allocation needs to be phased out 	<p>A groundwater assessment provided in Volume 4 and summarised in sections 10.11 and 17.11 of this AEE concludes that the effects on groundwater are low, this will be provided to manawhenua. A Detailed Site Investigation will also be undertaken prior to works which will identify any contaminants in the soil to enable remediation. This will further remove the risk of contamination entering waterways.</p> <p>The use of low impact construction and building materials will be considered at detailed design and during construction, and iwi will be involved in this process.</p> <p>There are no water takes proposed.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Stormwater</p> <ul style="list-style-type: none"> • When making decisions on future development projects, cumulative effects must be considered. • 'Clean' and 'contaminated' waters are not mixed i.e. no direct disposal of any waste into waterways, including wetlands. • Highest level of stormwater treatment should be used before it is discharged into waterways. This includes, but is not limited to: <ul style="list-style-type: none"> - use of 'treatment train' approach - use of raingardens/swales and green roofs - all cesspits to be fitted with a 'stormwater 360 litter trap' or 'enviro-pod' - use of the new GD01 stormwater management devices guideline as an appropriate means to support the mitigation of stormwater issues. 	<p>The details of the stormwater devices/mechanisms to be utilised, building materials, visual amenity and the use of stormwater, wastewater and water during operation will be considered at detailed design.</p> <p>The area of imperviousness has been determined by the form and function assessment, described in Appendix A, within the Alternatives Assessment. It is influenced by Auckland Transport and KiwiRail policies/codes, anticipated demand and operational/functional requirements.</p> <p>Due to the proposed earthworks and imperviousness and treatment needs, the existing and pre-development topography and hydrological processes will not be maintained. Impacts to these features were sought to be reduced through constraints mapping during the Alternatives Assessment (Appendix 1), however, were balanced against other features and operational requirements during specialist scoring.</p>
<p>Wastewater</p> <ul style="list-style-type: none"> • Land-based treatment of effluent is preferred. • Exploration of natural processes rather than mechanical to treat wastewater, including vermiculture. • When making decisions on future development projects, cumulative effects must be considered. 	<p>Wastewater will likely be disposed of via the public network where available and where not available other methods will be considered in detail design development.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Biodiversity</p> <ul style="list-style-type: none"> • Embrace and empower kaitiakitanga and rehabilitate and heal the natural systems that support us all. • Restore iwi capacity to manage our natural and physical resources according to our own preferences. • Support iwi monitoring of the effectiveness of environmental regulation in the protection of our cultural resources, biodiversity, waahi tapu and other taonga within our respective rohe. • Policies, planning, and best practice must ensure no further net losses of valuable ecosystems, and a measurable expansion of areas of regionally and culturally significant vegetation. • Support area specific planning provisions such as riparian planting requirements. • Promote the use of ‘eco-sourced / whakapapa plants’ that are indigenous plants and trees from within the South Rail Stations footprint. • Establish new and enhance existing ecological corridors as a high priority. • Implement programmes such as riparian planting and protect sensitive receiving environments and protect and enhance water quality e.g. all permanent waterways to be fenced from livestock and planted, where appropriate, with indigenous vegetation to minimise the effects of land use practices and enhance biodiversity. • Remove or reduce pest species (plant and animal) from existing locations and prevent establishment in new locations. • Proposed developments must demonstrate how they have considered and applied development principles that enhance the environment including, but not limited to how the development: restores the capacity of ecosystems - creates or maintains ecosystems that function without human intervention. • Encourage landowners to take out protective covenants to protect remnant stands of indigenous vegetation. 	<p>The effect of biodiversity has been addressed through sections 10.7 and 17.7 - Ecology of this AEE. Where appropriate, offset has been proposed, which will increase the native plant species within the Project areas, improve and protect higher quality landscape features and ensure no net loss of ecological value.</p> <p>The majority of vegetation lost will be exotic species and all replacement planting will predominantly be native species. Manawhenua will be invited to participate in the development of the UDLMP to provide input into relevant cultural landscape and design matters.</p> <p>A programme of establishment and post establishment protection and maintenance for the wetland and stream offset planting (fertilising, weed removal/spraying, replacement of dead/poorly performing plants, watering to maintain soil moisture) will be implemented.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p><i>Indigenous vegetation</i></p> <ul style="list-style-type: none"> • Tree surveys should be undertaken to identify all native trees. • All trees over 200 years should be protected (without the need to individually identify them). • Ngaati Te Ata Waiohua to have input in the selection of appropriate indigenous trees and plants, and involvement in the design of wetland planting. A preferred planting list is included in Appendix D. • Ngaati Te Ata Waiohua does not support the removal of native trees. If the condition is degraded to such an extent that the tree(s) is no longer viable then we expect significant mitigation native planting to be undertaken. • Promote the use of eco-sourced / whakapapa plants and trees from within the South Rail Stations footprint where possible. Eco-sourced / whakapapa plants must be used where adjacent to areas of high ecological and conservation value and should be encouraged for all landscape plantings elsewhere. • When making decisions on future development projects, cumulative effects must be considered. • Source native trees and plants from Manawhenua nurseries • Planting exercises in accordance with the maramataka (Maaori lunar calendar) 	<p>A tree survey has been undertaken within each proposed designation; however, the ages of the trees listed are unknown. This is recorded in the Assessment of Effects on Arboriculture in Volume 4 of this AEE. All trees protected under the AUP:OP to be removed will be replaced at a two for one ratio.</p> <p>A Stream Enhancement and Management Plan at Drury Central and a Wetland Restoration and Enhancement Plan at Paerata will be prepared which will achieve no net loss in ecological value and provide a minimum of 10m of riparian planting width along the Hingaia Tributary. At Paerata, the Wetland Restoration and Enhancement Plan will include an array of wetland and wetland edge native plants (including a mosaic of permanently submerged wetland vegetation and low-growing shrubby species with thick, strong root systems) to achieve a minimum 80% native wetland plant canopy cover three years from establishment and measures to protect the wetland in perpetuity (such as with covenants).</p> <p>The Alternatives Assessment (Appendix A) describes how areas of significant biodiversity/vegetation were avoided during the decision-making process for the locations of the stations.</p> <p>KiwiRail have recommended an UDLMP that invites Manawhenua to participate in its development to provide input into relevant cultural landscape and design matters.</p>

Ngaati Te Ata Waiohau Recommendations

Recommendation	Response
<p>Wetlands</p> <ul style="list-style-type: none"> • Support the establishment of programmes to restore and expand wetland habitat. These programmes should be developed and implemented to achieve a measurable increase in the quality of wetlands, and should ideally include, but not be limited to: <ul style="list-style-type: none"> - restoring existing wetlands - removing and/or controlling plant and animal pests - using technology such as constructed wetlands where this is feasible - expanding the size of those wetlands where this is feasible - re-establishing wetlands adjacent to lakes and rivers where land is available, and conditions remain suitable for wetlands - identifying and setting aside government and local authority owned land for the creation and enhancement of wetlands. • When making decisions on future development projects, cumulative effects must be considered. • Water levels of all significant wetlands shall be maintained and stabilised to prevent further deterioration in wetland ecological condition and, where possible, wetland water levels shall be restored to enhance habitat and expand wetland area. Where necessary, this shall be achieved by placing restrictions on the amount of surface and subsurface drainage installed adjacent to wetlands. • Ensure that all land use practices that have the potential to impact on wetlands have efficient sediment, drainage, discharge, fertiliser application, and riparian buffer control practices in place to ensure that adverse impacts on wetlands are prevented. • No discharges of point or non-point source wastewater to ecologically or culturally significant wetlands. • All stormwater discharged to ecologically or culturally significant wetlands shall be treated in such a way that ensures the ecological condition and cultural use of the wetland is not compromised. • Establish or maintain 'buffer zones' of appropriate indigenous plant species around all significant wetlands to protect them from the effects of land use and to help reduce fluctuations in wetland water levels. • Where appropriate land is available, and it is feasible, flood plains shall be restored to function as natural overflow areas along rivers and streams and to link more naturally with adjacent wetlands. 	<p>A Wetland Restoration and Enhancement Plan at Paerata will be prepared which will achieve no net loss in ecological value and provide up to 20m of riparian planting width along the Hingaia Tributary. At Paerata, the Wetland Restoration and Enhancement Plan will include measures to protect the wetland from development, so it is protected in perpetuity (such as covenants). Manawhenua will be engaged with on the preparation of these plans.</p> <p>The Project ecologist used a Biodiversity Offset Accounting Model to calculate the area of wetland enhancement/planting required to achieve No Net Loss in ecological value. The Biodiversity Offset Accounting Model will be re-calculated at the time of detailed design to form the basis of a detailed Wetland Restoration and Enhancement Plan, which shall as a minimum include a methodology for the wetland enhancement and restoration to achieve no net loss.</p> <p>There will be minimal impact to the water levels of the remaining wetland. This is described in the Assessment of Effects on Hydrogeology in Volume 4.</p> <p>Stormwater will be captured and discharged via treatment devices into the stream at Paerata, which will travel to the wetland to be used for offset. An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that stormwater quality will be maintained through the use of a stormwater wetland and/or raingardens, utilising Auckland Council's Guidance Document 005: Erosion and Sediment Control (GD05, 2016). There is no direct discharge of any waste into waterways.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p><i>Open Space and greenways plans</i></p> <ul style="list-style-type: none"> • Cultural values and Manawhenua associations should be known and understood before the type and location of open spaces are decided. • Tikanga Maaori and customary activities should influence how parks and open spaces are planned, developed and managed. • The focus should be on visually and physically connecting the Taamaki Makaurau network of parks, open spaces and streets to create opportunities for residents to move around their neighbourhoods and to enhance native biodiversity. • We should have First Rights of Naming reserves and open spaces. • Require subdivision and new development to provide open space/reserves next to oceans, lakes and rivers. This will protect the water body, allow access, increase biodiversity, and enhance ecosystems. • Open space buffer zones and internal neighbourhood parks should be encouraged. • Encourage the use of 'park edge roads' along open space zones and esplanade or recreation reserves. • Develop greenways plans that provide cycling and walking connections that are safe and enjoyable, while also improving local ecology and access to recreational opportunities. • We should continue to be involved in the development of a Blue-Green network for Taamaki Makaurau. 	<p>The project will integrate with the surrounding land use and transport networks and provides walking and cycling access. Details of treatment of public areas at stations will be addressed at detailed design, and iwi will be involved in this process.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Sustainability Sustainable Development</p> <ul style="list-style-type: none"> • Support energy efficiency, transition away from fossil fuels and zero waste minimisation initiatives. • New development should incorporate sustainable options and housing/buildings should achieve at least a 6-star level from New Zealand Green Building Council 'Homestar' (or equivalent). This includes but is not limited to green roofs, solar panels and recycling of water and other resources. • New development should have positive impacts on the environment e.g. enhance water quality, increase biodiversity connections, and remediate contaminated land. • Significantly improve stormwater and wastewater management and treatment to acknowledge our cultural values. • Support the use of LID (Low impact design) principles in all new subdivisions and developments. 	<p>The rail stations at Drury Central and Paerata are being provided as lead infrastructure, ahead of planned development, in order to enable housing and development. In general, the Projects offer a more sustainable way to travel and is focussed on efficiently serving the urban environment anticipated for both present and future generations. This will have a positive impact on the environment as reductions in vehicle air emissions (NO2 and PM10) are also predicted to decrease as a consequence of the shift away from low occupancy vehicles (see Assessment of Transport Effects in Volume 4).</p> <p>The details of the building materials, stormwater devices to be utilised will be addressed at detailed design.</p> <p>It is likely that the Project buildings will connect into the public wastewater system, however, this is to be determined at detailed design.</p> <p>Manawhenua will participate in the development of the ULDMP to provide input into relevant cultural landscape and design matters.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Natural hazards</p> <ul style="list-style-type: none"> • New land use and structures shall avoid creating actual or potential adverse effects, including an increase to the risk or magnitude of a natural hazard event. • Preference is given to any new or changing land use, subdivision or development avoiding, rather than mitigating, any natural hazard. • Existing land use, activities, and structures in areas where natural hazards occur are encouraged to change land use or activities and shift, abandon or suitably modify structures to withstand the potential effect of a natural hazard event. • Encourage low-lying areas prone to flooding to be turned back into wetlands rather than using for urban development such as housing. • Risk of adverse effects on human, cultural, spiritual, or environmental well-being shall be prioritised over risks to individual properties when assessing natural hazard risks and/or the need for hazard protection structures. • Where it is practical, and environmentally, culturally, and/or spiritually preferable, a 'soft' engineering solution should be utilised over a 'hard' solution (e.g. the use of swales rather than concrete channels). • If an existing or proposed natural hazard protection structure adversely affects human, cultural, spiritual, or environmental well-being then alternative solutions are encouraged and expected. • Hazard management structures, activities, and schemes and their ongoing function should strive to maintain and restore ecosystem function and habitat, and cultural and/or spiritual well-being. • Where there is existing development and the effects on cultural and/or spiritual values and the environment are adverse, the concept of 'managed retreat' should be applied. This means existing structures are not replaced or maintained, and no new structures are allowed to be erected. • Where culturally and/or spiritually sensitive sites or sites of significance are subject to natural hazards, in which human intervention has played no role, then we should be advised to enable our correct protocols and procedures to be adopted to address the situation. • The cumulative adverse effect of land use and structures on natural hazards shall be avoided or managed consistent with the above recommendations, such that there is no increased risk to human life, structures, cultural, spiritual or environmental wellbeing. 	<p>Floodplains and areas of potential instability were identified through the various technical specialists working on this Project and in consultation with Manawhenua who were involved through the optioneering process. The Alternatives Assessment in Appendix A of this AEE outlines the consideration of constraints in this regard. In particular, the location of the stations sought to avoid adverse impacts on these features, although this also had to balance and align with operational requirements.</p> <p>An assessment undertaken by a stormwater expert is attached in Volume 4 and summarised in sections 10.10 and 17.10 of this AEE. It concludes that, while the stations are located within floodplains, flooding effects will be low at the Project sites and neighbouring buildings, taking climate change into account. The details of the stormwater devices to be utilised will be addressed at detailed design and iwi will be involved in this process.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Infrastructure</p> <ul style="list-style-type: none"> • Actively explore alternative wastewater treatment and disposal options including removal of trade wastes, recycling of grey water, disposal to land (or other innovative methods) and not using water as a waste transport system. • De-emphasise road building and car parking and create people-friendly environments, including pedestrian and cycling networks. • Reduce current transport congestion levels. • Support fast broadband rollout including to rural areas. • Support and encourage the use of water sensitive design in the provision of infrastructure. • Ngaati Te Ata Waiohua wish to obtain any redundant rail sleepers and poles, wooden material and any other material that is available for the use within our marae(s), landscaping and carved Pou, and such. 	<p>It is likely that the Project buildings will connect into the public wastewater system, however, this is to be determined at detailed design. Grey water recycling will be developed in the detail design development of the building footprints.</p> <p>When stations are embedded within communities, people are more enabled to walk and cycle to and from stations, which can contribute to health benefits. The station includes cycle facilities and connections to a future active mode corridor. While there is parking associated with the development of these stations, this is necessary to support the operation of these stations and encourage use as the currently rural area around Paerata and Drury Central urbanise.</p> <p>Encouraging a reduction in vehicular movement and therefore traffic congestion. This improves journey times, reliability for future freight and busses, reduces the risk of car accidents, reduces stress and increases the time available to individuals for productive activities and family.</p> <p>Kiwirail is open to re-use of materials from construction, such as sleepers and poles. This can be discussed at the engagement forum during detailed design with manawhenua.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Urban Design</p> <p>Te Aranga Principles should be incorporated and activated into the South Rail Stations project.</p> <ul style="list-style-type: none"> • Refer to Ngaati Te Ata Waiohua Design and Ngaati Te Ata Waiohua Design Principles • Future development should show how Te Aranga Principles have been considered and applied and measured through the state of “mauri”. This includes but is not limited to how the development understands, acknowledges and incorporates the diversity and uniqueness of the development location (socially, culturally, spiritually, economically, and environmentally), and whether it provides for visual amenity consistent with the surrounding environment. • Other urban design values should also be incorporated. For example, Ngaati Te Ata Waiohua support the use of ‘park edge development/park edge roads’ as a design feature. These can help foster a sense of ownership, increase safety and surveillance (e.g. deterrent to illegal dumping), increase visual and landscape amenity, and a higher likelihood or better opportunity to protect our cultural values. • This is supported and we wish to be actively engaged regarding Te Tupu Ngaatahi and KiwiRail’s commitment to; <ul style="list-style-type: none"> a) Incorporate elements of storytelling / cultural history into the design of the Train Stations and pedestrian bridges and station platform changes (e.g. using patterned pressed concrete panelling and story boards). These design aspects will be developed following further engagement with Manawhenua and both the Papakura and Franklin Local Boards; b) Future development of both the rail corridor (green corridor) and the South Rail Stations should show how Te Aranga Principles have been considered and applied. Also, the Tuhimata Crossing. Oopaheke paa and Te Maunu-aTuu are significant tuupuna places and must be commemorated and acknowledged. The associated streams Ngaakoroa and Oopaheke are of ancestral and cultural significance to Manawhenua and must be incorporated into the design for the stations. c) Prepare a landscaping plan (to be provided to Auckland Council as part of the Outline Plan) that includes the use of native fauna to “green up” and soften the station’s appearance. 	<p>The buildings and final layout will be designed at detailed design. KiwiRail have recommended a condition for an UDLMP that requires Manawhenua to be invited to participate in its development to provide input into relevant cultural landscape and design matters. The principles of urban design for the stations are detailed in the Urban Design Evaluation in Volume 4 which acknowledges that future architectural design response of the station and interchange facilities will need to consider the underlying identity drivers of the surrounding context such as:</p> <ul style="list-style-type: none"> • the landscape character drivers • the urban space qualities of the proposed centre and the surrounding high-density land uses • Manawhenua cultural values and narratives (including design principles e.g., Te Aranga Principles) <p>Acknowledgement of the areas cultural heritage and landscape will be addressed at detailed design, and iwi will be involved in this process.</p> <p>The Hingaia Tributary at Drury Central has been incorporated into the designation and design of the station. This stream will be enhanced as part of offset for the removal of a smaller Flanagan Tributary that currently runs along Flanagan Road in a swale.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Hauora Health and well-being of our people</p> <ul style="list-style-type: none"> • Auckland Council / Auckland Transport / KiwiRail to support: <ul style="list-style-type: none"> - our various health and well-being initiatives - Manawhenua kaumatua to be appointed to the project and remunerated to provide cultural support to all employees that will build and construct the stations - Park and ride free parking permits for our Manawhenua kaumaatua and kuia - healthy lifestyles, recreation and sport for our people - our whare oranga associated with marae through collaboration and funding - upskilling and training of our rangatahi - reducing beneficiary dependency and the attainment of meaningful employment - our rangatahi as first home buyers - the safe transport of our kaumaatua in support of their tribal duties and their mobility - our access to quality affordable housing - iwi housing including their location, design quality, funding, and removal of regulatory compliance costs - Intensive pastoral care support for all Maaori employees and to be delivered by Maaori and for Maaori - Adopt a Maaori hauora model for the project based on “Te Whare Tapawhaa” (Sir Mason Durie) to give effect to the health and wellbeing of Maaori employees and all staff that will build and construct the stations. - Te Whare Tapawhaa activation spaces incorporated into the thinking and planning of the design and built environment, where people can go and enhance their health and wellbeing. 	<p>When stations are embedded within communities, people are more enabled to walk and cycle to and from stations, which can contribute to health benefits. The stations will offer an increased connectivity of the region, allowing more Aucklanders access to more parts of Auckland, with greater access to future employment and service opportunities. Growth of the Drury Central and Paerata community, schools and businesses will be encouraged as a result. This will be particularly beneficial for vulnerable groups who do not or cannot use a car to travel and can increase their social inclusion.</p> <p>Encouraging a reduction in vehicular movement and therefore traffic congestion. This improves journey times, reliability for future freight and busses, reduces the risk of car accidents, reduces stress and increases the time available to individuals for productive activities and family.</p> <p>The establishment of a station, including the car parking and bus interchange in these communities will enable greater access between Paerata, Drury Central and the rest of Auckland.</p> <p>The buildings and final layout, including of open space, will be decided at detailed design. KiwiRail have recommended a condition for a ULDMP that requires Manawhenua to be invited to participate in its development to provide input into relevant cultural landscape and design matters.</p> <p>Otherwise, not applicable to establishing a designation or obtaining resource consent for these Projects. However, KiwiRail will remain in discussion with Manawhenua over the construction of the stations.</p>

Ngaati Te Ata Waiohua Recommendations

Recommendation	Response
<p>Air</p> <ul style="list-style-type: none"> • Encourage industry to implement industry best practice or best practicable option for improving air quality. • Support for light rail. • Promote public transport to reduce vehicle emissions. • Manage the effects on amenity values of an area due to contaminants, dust, odour, light, or noise. • When making decisions on future development projects, cumulative effects must be considered. 	<p>Dust will be managed during construction to meet the permitted AUP:OP standards. Suitable dust management measures will be implemented in accordance with the Construction Environmental Management Plan (CEMP) for the Project and are anticipated to include:</p> <ul style="list-style-type: none"> • Water carts to minimise dust during earthworks • Covered trucks hauling material onto and offsite • Mulching and top soiling of exposed earthworks <p>During operation, the anticipated reduction in traffic congestion enabled by the provision of access to rail, will improve air quality at a local level, reducing vehicle air emissions (NO₂ and PM₁₀). This is further detailed in section 20 of the AEE.</p>
<p>Economic Development</p> <ul style="list-style-type: none"> • Te Tupu Ngaatahi (Auckland Transport and Waka Kotahi) with the support of KiwiRail to provide support for the achievement of our economic independence including through provision of expertise and funding. • Explore employment, apprenticeships, cadetships opportunities for our people within the project and throughout the project life cycle. • Provide Ngaati Te Ata Waiohua whaanau businesses with procurement opportunities within the project and explore opportunities for our iwi to maintain these assets. • 15-20% of the sub-contract value for the South Rail Stations project to be afforded to Manawhenua businesses and Maaori businesses. • Planning and policy provisions that allow us to realise value and sustainable income from our asset holdings and future economic opportunities. • Any future tendering development processes for the project Ngaati Te Ata Waiohua and our Manawhenua relations to be afforded the opportunity to co-write the tender documentation and to be a part of the tender evaluation processes. • With regards to the proposed amenities for the South Rail Stations, Ngaati Te Ata Waiohua and other Manawhenua businesses to be afforded the opportunity to explore business opportunities within the station locations e.g. café, hospitality, tourism, taonga shops, i-site etc. 	<p>The Projects will provide economic benefits to the Paerata and Drury Central communities, as described in sections 10.2, 17.2 and 20 of the AEE.</p> <p>These recommendations have not been considered for resource consent/designation purposes, however KiwiRail will remain in discussion with Manawhenua over the construction of the stations.</p>