March 2026

CULTURAL IMPACT ASSESSMENT

Patuharakeke Hapū

For:

Waka Kotahi

Section 2B – Brynderwyn Hills Highway

Patuharakeke
TE IWI TRUST BOARD

Ko Manaia te Maunga

Ko Whangārei Terenga Parāoa te Moana

Ko Takahiwai te Marae

Ko Rangiora te Tupuna Whare

Ko Patuharakeke te Hapu

Tihei mauri ora!

Executive summary

We, Te Pou Taiao o Patuharakeke Te Iwi Trust Board (PTITB), are the mandated voice for Patuharakeke Hapū. As ahikā, mana whenua, and mana moana of the region south of the Whangārei Harbour, we hold inherent obligations and the mana to engage in all matters that impact te taiao. This status requires high-level engagement between our leadership and NZTA Waka Kotahi regarding Section 2B – Brynderwyn Hills Highway (the Project).

We expect decision-makers to honour our rights under He Whakaputanga, Te Tiriti o Waitangi, and the Fast-track Approvals Act 2024. Our assessment is further informed by our active Waitangi Tribunal claims, WAI 745 and WAI 1308.

Waka Kotahi is seeking approvals for Section 2B of the Te Hana to Port Marsden Road of National Significance, which is intended to provide an alternative 17.6km route through the Piroa (Brynderwyn Hills) to enhance transport resilience following extreme weather events like Cyclone Gabrielle. This Cultural Impact Assessment (CIA) is intended to inform the fast-track consenting process and the long-term management of the highway corridor.

The proposed project sits within a rich cultural landscape described as the ‘footprints of our tūpuna’, including the Piroa Ranges and the catchments of the Waipu, Ahuroa, and Waihoihoi rivers. These features are connected to our hapū through whakapapa. The health and mauri of this environment, from the spiritual integrity of wāhi tapu like Te Paritū Pā to the survival of taonga species, directly affect the well-being of our people.

Time constraints and information gaps

This is a substantial and complex infrastructure project that Waka Kotahi is designing and refining in a very short time period. Project details and technical assessments have been evolving as we have been undertaking this CIA; in several cases, technical assessments had not been completed at the time of finalising the CIA.

We developed this CIA under tight deadlines and with substantial information gaps, forcing us to shift from a detailed technical review to a broader, designation-wide approach. This means our findings are less specific than usual. Where detail was lacking, we have applied a precautionary principle to our recommendations rather than making definitive assessments.

Summary of findings and certainty levels

Our levels of certainty regarding project effects vary significantly across our value groups based on the information we have received to date:

- Mana Motuhake and Whakapapa: Our levels of certainty are reasonably high. We feel confident in our assessment of these effects and have been able to make targeted recommendations to manage them to acceptable levels, provided our partnership and protection protocols are adopted.
- Climate Resilience: We are moderately certain about these effects. We acknowledge the inherent uncertainty and dynamic nature of climate change matters and the modelling that informs them.
- Mauri (Ecology): This area is highly problematic due to an unacceptable deficit of technical data. We do not know exactly what activities will occur or where they will be located, nor have we been provided with information on where our taonga species are situated within the designation. We are extremely concerned that effects could be extremely high for our tūpuna awa and pepeketua (Hochstetter frog) given the intensity of works in the Piroa – Brynderwyn Hills.

Waka Kotahi's 'outcomes-based' approach, paired with broad proposed conditions, effectively allows for the total removal of habitat within the designation boundary. We consider this approach fundamentally inappropriate. It relies on an insufficient initial understanding of project impacts and establishes a framework that lacks the necessary rigour to keep adverse effects within acceptable limits.

Table 0.1 provides a summary of the comprehensive evaluation of cultural effects that is documented in this CIA.

Table 0.1 Summary of effects on cultural values

Summary of effects on cultural values				
Value	**Effect**	**Value significance**	**Impact score WITHOUT Patuharakeke proposed management**	**Impact score WITH Patuharakeke proposed management**
Mana motuhake				
Building positive relationships that provide for our tikanga.	- Erosion of our mana. - Degradation of the natural environment and Papatūānuku.	HIGH	VERY HIGH	LOW
Our mana motuhake and right to exercise authority over our lands, waters and taonga.	- Limits on exercising our mana motuhake. - Diminish our mana whenua.	VERY HIGH	VERY HIGH	LOW
Access to traditional places and resources, which enables knowledge retention, revival and transfer.	- Restrictions on access to important sites. - Noise and vibration effects on wānanga and observing tohu. - Potential for improved access to our rohe.	HIGH	HIGH	NET GAIN
Mauri				
Our awa flow with mauri ora.	- Physical and spiritual impacts. - Disruption of kaitiakitanga. - Sediment release. - Habitat destruction. - Hydrological disruption. - Contaminant discharges.	VERY HIGH	VERY HIGH	VERY HIGH

Our repo are functioning, protected and enhanced.	- Physical and spiritual impacts. - Disruption of kaitiakitanga. - Habitat disruption. - Impacts on wetlands outside of the designation due to groundwater drawdown. - Water quality effects. - Water quantity changes. - Subsequent effects on sensitive wetland species.	VERY HIGH	VERY HIGH	VERY HIGH
Our ngahere is healthy and supports our rongoa and taonga species.	- Physical and spiritual impacts - Disruption of kaitiakitanga. - Cumulative effects of vegetation removal. - Taonga species destruction. - Introduction of edge effects and pests.	HIGH	VERY HIGH	VERY HIGH
Our manu are protected and their habitats are restored.	- Habitat fragmentation and loss of stepping stones. - Increased risk of bird strike.	HIGH	VERY HIGH	VERY HIGH
Our pepeketua are abundant.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - Vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH
Our mokomoko are abundant.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - Vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH
Safe roosting and foraging places are available throughout the landscape for our pekapeka.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - Vibration, light and noise disturbances.	VERY HIGH	VERY HIGH	VERY HIGH

Our ika can access their traditional habitats that are protected and enhanced.	-	Loss of fish passage. - Risk of mortality. - Habitat effects listed in the awa section above.	VERY HIGH	VERY HIGH	VERY HIGH
The importance of our ngārara and tuaiwi-kore is recognised.	-	Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - Vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH
Whakapapa					
The footprints of our tūpuna are recognised, protected and enhanced.	-	Disturbance of known archaeological sites. - Accidental discoveries.	VERY HIGH	VERY HIGH	MODERATE
The recovery of our Waipu Mataitai Coastal area is supported and there is no further degradation.	-	Cumulative effects of sediment and stormwater discharges.	VERY HIGH	HIGH	LOW
Effects on Te Paritū Pā are avoided.	-	Disturbance of archaeological artefacts.	HIGH	VERY HIGH	VERY LOW
Piroa is protected and enhanced and the significance of this area as the gateway to Te Tai Tokerau is elevated.	-	Spiritual, cultural and ecological effects on Piroa. - Visual, amenity and natural character effects on Piroa.	HIGH	VERY HIGH	LOW
Our urupā are respected.	-	Disturbance of ancestral burial sites.	VERY HIGH	VERY HIGH	MODERATE
The rākau rangatira within our ngahere is maintained.	-	Disruption of the wairuatanga of our ngahere and a lasting impact on the realm of Tāne Mahuta.	VERY HIGH	VERY HIGH	MODERATE

The provenance of gravel within our rohe is maintained.	- Impacts on the provenance of gravel if material is taken from one location and shipped to a site that is not within the same catchment, geological area or rohe.	HIGH	HIGH	LOW
Climate resilience				
All developments within our rohe work to achieve net-zero carbon emissions by 2050.	- Embodied emissions. - Operational emissions. - No provisions for active transport infrastructure.	HIGH	VERY HIGH	LOW
Our resilience is enhanced through strengthening our communities and natural defences.	- Physical effects on maximum flood levels and velocities downstream of the project. - Risk of limited information sharing between the project and our hapū. - Impacts on our ability to practice manaakitanga for hāpori.	VERY HIGH	VERY HIGH	MODERATE
Our climate sovereignty is protected to steer us through the climate crisis.	- Depletion of natural infrastructure. - Poor offsetting regime will undermine the values we hold for the natural environment. - Potential restrictions of managed retreat pathways.	HIGH	VERY HIGH	VERY HIGH
Succession is secured by empowering our taitamariki and whānau with the climate literacy and authority needed to thrive in a changing world.	- Potential restrictions on future settlement patterns and healthy ecosystems. - Lack of information. - Lack of taitamariki voice.	VERY HIGH	HIGH	LOW

Conclusion and next steps

Patuharakeke recognise the importance of constructing an alternative route through the Brynderwyn Hills. After consulting with our wider hapū, we have concluded that we cannot support certain components of the project in its current form. Endorsing the project in its current form would be irresponsible as ahikā, and for our duty to uphold our kaitiaki responsibilities on behalf of our atua, tūpuna and taonga. Significant undefined and unmanaged effects remain that cannot be reconciled with our cultural values.

To move forward, we require:

- Further engagement through a meaningful, ongoing partnership with NZTA Waka Kotahi to address these critical information gaps.
- Access to complete technical assessments and the Project Business Case (including the cost-benefit analysis) to understand the rationale behind the preferred solution.
- A specific and measurable set of conditions that follow the effects management hierarchy to avoid, remedy and mitigate adverse effects in the first instance.

We expect to be given the opportunity to update our CIA and recommendations as better information and complete technical assessments become available. We remain committed to working with NZTA Waka Kotahi to ensure all effects are managed to a mutually agreed level that protects our hapū, taiao and rohe. We see a range of tools that NZTA Waka Kotahi and Patuharakeke can use to address the outstanding issues this CIA identifies, including:

- Consent conditions
- A formal Relationship Agreement
- A mitigation package

Recommendations

Throughout our assessment of the cultural impacts, we make a series of recommendations to address the identified effects. We have developed these recommendations into a framework for conditions of consent.

Our conditions framework provides a specific cultural lens to be integrated into the project and is a critical part of the package of responses needed to mitigate impacts on Patuharakeke values. These are not intended to be a final suite of conditions;

they identify principal outcomes we expect to engage with NZTA Waka Kotahi on through the development and refinement of the project's conditions of consent.

The recommendations below are additional to the draft conditions of consent we were provided with on March 16 2026. Our framework should not replace any of the proposed conditions, but should sit within the wider suite of consent/designation conditions. Our conditions framework provides the minimum content requirements to address the identified impacts on our values and relationships. Because the current information provided is insufficient to define final mitigation, we reserve the right to further refine these standards and specific site requirements as appropriate technical detail becomes available.

Some recommendations will need to be implemented immediately (e.g. taitamariki training, career pathways and seed collection). These recommendations should be discussed between Patuharakeke and NZTA Waka Kotahi and agreed upon as soon as possible.

Patuharakeke Values Management Plan

We have prepared a draft Patuharakeke Values Management Plan (PVMP) (see the draft in Appendix B) and expect a condition requiring this draft to be refined and finalised. The project must be undertaken in accordance with the most recent version of the PVMP. The PVMP will sit in the same tier as the Construction Environmental Management Plan.

The PVMP condition should specify the following (at a minimum):

1. Prior to the commencement of construction activities, the requiring authority must arrange, in accordance with Condition [3], for finalisation of the draft Patuharakeke Values Management Plan. The PVMP must achieve the following purpose: To mitigate the adverse effects of the project's construction and operation on the values of Patuharakeke.
2. The person or persons identified to prepare the Patuharakeke Values Management Plan must be endorsed by Patuharakeke Te Iwi Trust Board.
3. The consent holder shall resource the development and implementation of the Patuharakeke Values Management Plan.
4. The Patuharakeke Values Management Plan must include the following, at a minimum (but is not limited to):
    a. A description of Patuharakeke values related to the project area;
    b. The involvement of Patuharakeke representatives within the project, including the roles and responsibilities of personnel implementing this

plan, including governance, procurement and operational (as outlined in the draft management plan)

c. The roles and functions of Patuharakeke within the Hapū Steering Group Terms of Reference set out below.
d. Confirmation of how Patuharakeke will engage in the project during detailed design, management plan certification, submission of outline plans, construction, and operation;
e. Communication and information sharing protocols to support Patuharakeke in understanding the state of the taiao and that provide for Patuharakeke to identify and raise issues, concerns and/or opportunities;
f. Site access protocols to ensure Patuharakeke access to the project during construction and operation;
g. Training and career pathway opportunities that will be provided for Patuharakeke taitamariki and uri;
h. Identification of mechanisms to ensure long-term access to sites of significance, including but not limited to:
    i. Piroa;
    ii. Waihoihoi awa;
    iii. Kauri forest;
    iv. Confluence of the Ahuroa, Waihoihoi and Waipu awa;
    v. Pepeketua; and
    vi. Connections and tribal pathways maunga to moana;
i. Details of a Kaitiakitanga Monitoring Programme, including activities, opportunities, locations and protocols;
j. Protocols for maintenance that will be carried out at the fenced pā sites, including a minimum of quarterly mowing
k. Patuharakeke provenance seed collection activities and supply for the project, with the aim to supplying an agreed quantity of at least 35% of the plants for the project.
l. Process to return taonga resources, such as rākau wood, and other resources impacted by the project to Patuharakeke; and
m. Details and frequency of Patuharakeke cultural inductions for construction and related teams, and cultural interpretation and mahi toi.

5. The conditions must include a clear process for refining, finalising, reviewing and approving the PVMP.

A Hapū Steering Group

It is important that there is a designated group of hapū/iwi representatives that can be the first point of contact for all project matters. We expect a condition that mandates the creation of a Hapū Steering Group and outlines their responsibilities, including (at a minimum):

1. Within 30 working days of appointing the construction team or the team responsible for progressing the project's design and construction, the requiring authority must invite hapū partners to establish a hapū steering group.
2. The purpose of the hapū steering group includes, but is not limited to, providing direction, guidance, and advice in respect of:
    a. Tikanga;
    b. Coordinating hapū partner engagement activities;
    c. Co-design, review and endorsement of the Habitat Management Plan;
    d. Implementation of relevant project consent conditions; and
    e. Undertaking karakia/opening of the project prior to construction, the road becoming operational and other times as necessary.
3. A Terms of Reference shall be developed between the consent holder and the Hapū Steering Group that includes the following:
    a. The organisational structure of the project and where the Hapū Steering group sits within that structure;
    b. Co-design protocols;
    c. A process for identifying habitats for modification or removal;
    d. A process for identifying values that sit within the Biodiversity Accounting Model to be used for habitat management
    e. A process for identifying offset and remediation locations;
    f. A process for developing and implementing the Cultural Environmental Design Framework;
    g. A schedule of meetings (monthly) between the Hapū Steering Group, NZTA Waka Kotahi and the design/construction team.
    h. Key points of engagement through the lifecycle of the Project.

Integration of cultural values

To address the current lack of necessary safeguards for sites of cultural and ecological significance, we require a conditions framework centred on a co-designed Cultural Environmental Design Framework (CEDF). This framework is essential to ensure that project design and construction are directly informed by, and responsive to, Patuharakeke values.

At a minimum, the CEDF must establish the following mandatory standards and processes:

1. A Cultural Environmental Design Framework must be co-designed with Patuharakeke to identify sites of significance adversely affected by the project, including, but not limited to, those outlined in Table 0.2.
2. The CEDF must describe the approach and program for integrating cultural mitigations into project design and construction, which is:
    a. Undertaken within the vicinity of the associated site of significance;
    b. Informed by, and responds to, the physical construction, operation and maintenance requirements of the project; and
    c. Includes cultural recognition, information and markers, informed by Patuharakeke kōrero.
3. Outline Plans must give effect to the Cultural Environmental Design Framework.

Table 0.2 Sites of significance and mitigations to respond to the adverse effects

Site of significance	Mitigations to be embedded during design of the project
Piroa	A stop over area that includes a cultural gateway feature (e.g., Pou Whenua or Waharoa) and information about the significance of Piroa. Cut batters and spoil sites are contoured and revegetated to mimic natural landforms and heal visual scars on the maunga. Key areas for planting a significant Kauri Grove. A large predator control area. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and

	storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Waihoihoi awa	Avoid diversion. Investigate the creation of a Waihoihoi recreational rest area/swimming hole type reserve at the proposed diversion if possible that can also be suitable for a consent condition monitoring point. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Kauri forest	Kauri Ora assessment and protection mechanisms including Kauri Ora Hygiene stations and boardwalks (if appropriate). Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Confluence of the Ahuroa, Waihoihoi and Waipu awa	A continuation of the Waipu River walkway trail and wayfinder interpretation as per the cover photo. Safe fishing jetty. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.

Pepeketua	Develop an education program with local schools. Patuharakeke are resourced to become a trained handler for a Wildlife Act Authority. Undertake a research project to understand the populations of Pepeketua in this location. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Connection and tribal pathways maunga to moana	Design planting to (natural character, ecology and landscape) connect awa corridors, repo and bush remnants ki uta ki tai. Integrate gravel geological provenance information into our Toi strategy so gravel locations can be traced across the project. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.

4. Design Review Audits must be completed to confirm that the Project is consistent with the Core Principles and the Design Principles. The process for Design Review Audits must be set out in the Cultural Environmental Design Framework.
5. Design Review audits must be undertaken:
    a. at least three (3) months prior to the outline plan being submitted to Council; and
    b. every three (3) months until the Project is open for public use.
6. Design Review Audits must be completed:
    a. in collaboration with the Hapu Steering Group terms of reference;
    b. and with the support and guidance of suitably qualified and experienced persons; and
7. Prior to the initial Design Review Audit, the consent holder must invite the Hapū Steering Group to complete a chapter that addresses the Mana Whenua/Cultural Landscape and associated mitigations of the ‘Cultural Environmental Design Framework’.

Management Plan Framework and Performance Standards

To ensure adverse effects are managed to an acceptable level, we require a comprehensive management plan framework underpinned by specific performance standards and mandatory minimum content.

As the technical information provided to date remains incomplete, we reserve the right to further comment on the refinement of the required content and objectives of these plans once full project details are received. In addition to the incomplete draft condition suite provided by the applicant, the following suite of management plans must be developed to address the specific effects identified in this CIA:

- Ecology Management Plan
- Bat Management Plan
- Lizard Management Plan (including a Lizard Relocation Area Management Plan)
- Frog Management Plan (including a Frog Relocation Area Management Plan)
- Invertebrates Management Plan (including an Invertebrate Relocation Area Management Plan)
- Freshwater Ecology Management Plan, to include:
    - De-fishing and Dewatering Management Plan
    - Stream works Procedure
- Habitat Management Plan
- Noise and Vibration Management Plan
- Archaeology Management Plan
- Communications Plan

Habitat retention and removal

To ensure that acceptable levels of effect are not exceeded, we require a prescriptive habitat management framework that establishes clear limits on disturbance and mandatory requirements for retention.

The following tables define our views on some of the minimum retention standards and maximum removal thresholds required to maintain ecological and cultural integrity. As the applicant has not yet provided a detailed aquatic stream assessment or granular spatial data, we reserve the right to further refine these limits and the specific co-design role of the Hapū Steering Group once comprehensive technical information is received.

We expect to see all habitats listed in Table 0.3 to be retained.

Table 0.3 Retained habitats

Habitat	Area to be retained (geo-reference)
Kahikatea forest	All 9.3 ha
Tōtara forest	All 42.5 ha
Kauri Forest	All 57 ha
Awa habitat	The Waihoihoi Awa will be retained, and no diversions will take place
Repo habitats	To be set out upon receiving further information
Manu habitat	To be set out upon receiving further information
Mokomoko habitats	To be set out upon receiving further information
Pepeketua habitats	To be set out upon receiving further information
Pekapeka habitats	To be set out upon receiving further information
Kauri snail habitats	To be set out upon receiving further information
Other terrestrial habitats that can be avoided	To be set out upon receiving further information

The removal of indigenous vegetation, wetland, and stream habitat must be included and not exceed the maximum areas defined in Table 0.4.

Table 0.4 Maximum area of indigenous vegetation and wetland habitat to be removed.

Habitat type	Maximum habitat removal area (ha)
Indigenous vegetation habitat	
Anthropic tōtara forest	TBC
Broadleaved species scrub forest	TBC
Kahikatea forest	0
Kahikatea treeland	0
Kahikatea-kauri-totara treeland	0
Kahikatea-pukatea forest/native scrub/tradescantia	0
Kānuka forest	TBC

Kānuka treeland/native and exotic scrub/ranked grassland	TBC
Kauri-podocarp forest	0
Kohekohe-taraire-tawa-podocarp/broadleaf	TBC
Nīkau treeland	TBC
Planted native vegetation	TBC
Pūriri forest/rank grassland	TBC
Remnant Riparian podocarp-hardwood-kanuka treeland	TBC
Scattered podocarp-broadleaf -kanuka treeland/mixed native and exotic scrub/ranked grassland	TBC
Tōtara forest/native broadleaf scrub	0
Tōtara forest/ornamental plantings	0
Tōtara-kānuka forest/mixed native and exotic scrub/ranked grassland	0
Tōtara-kauri/broadleaf scrub	0
Natural inland wetland habitat	
Creeping buttercup	TBC
Exotic dominated: purslane, water pepper & rushes	TBC
Juncus, creeping bent, buttercup	TBC
Juncus, creeping butter cup	TBC
Juncus, Isolepis, Creeping butter cup	TBC
Raupo, Isolepsi, water purslane, Juncus	TBC
Juncus, creeping buttercup, creeping bent, Glyceria	TBC
Kahikatea with creeping bent, Gylceria, water pepper, creping buttercup	TBC
Juncus, creeping butter cup, creeping bent	TBC
Wet pasture with Juncus and creeping bent	TBC
Lower, juncus, Gylceria, creeping bent, upper wet pasture, mid, raupo, kiekie, sedges	TBC
Headwater small Isolepis and creeping butter cup	TBC
Juncus, giant umbrella sedge, Isolepis sedgeland	TBC
Creeping buttercup, cabbage tree	TBC
Raupō gully with edge willow	TBC
Stream habitat	
Stream habitat to be confirmed once we receive an aquatic stream assessment of effects.	TBC

Conditions of consent regarding habitat removal must include (at a minimum):

1. The habitats identified in Table 0.3 must be retained in their entirety. Any activity within these areas must be strictly limited to:
    a. The removal of pest plants; or
    b. Essential vegetation management for verified health and safety purposes.
2. Prior to any works, all listed habitats that are scheduled for removal must be physically delineated on-site and verified against digital mapping.
3. Any authorised removal must be offset using Stream Ecological Valuation (SEV) and Biodiversity Offset Accounting Model (BOAM), as required by the Habitat Management Plan (set out below).
4. The finalisation of any habitat removal areas, use of the ecological models and offsetting areas must be co-designed with the Hapū Steering Group.

Ecological offsetting and net gain framework (SEV & BOAM)

To ensure that all residual effects are fully accounted for and mitigated, we require a Habitat Management Plan (HMP). The HMP must make all efforts to incorporate Patuharakeke taiao values and achieve a mandatory Net Gain requirement for all affected habitats.

The final footprint and specific ecological impacts remain unconfirmed, so the HMP must be regularly updated throughout the project lifecycle. We reserve the right to further refine the specific criteria and content of the HMP once the full technical data becomes available.

The HMP must be co-designed with and endorsed by the Hapū Steering Group, and must include the following mandatory standards:

1. The consent holder shall prepare and implement a Habitat Management Plan (HMP). The HMP shall be co-designed with and endorsed by the Hapū Steering Group. The purpose of the HMP is to:
    a. Manage residual construction effects on indigenous habitats;
    b. Quantify the values of existing habitats using the following methodologies:
        i. The Stream Ecological Valuation (SEV)
        ii. The Biodiversity Offsetting Accounting Model (BOAM);
    c. Design an offset (and if required compensation) package to achieve a net gain of ecological values for:
        i. ngāhere

ii. repo
iii. awa
iv. manu
v. pekapeka
vi. pepeketua
vii. kauri snail
viii. mokomoko;

d. Implement, monitor and report on measures to confirm a net gain in ecological values for each habitat type has been achieved;
e. Wherever possible, account for Patuharakeke taiao values within the offsetting models, monitoring, reporting and approaches to implementation;
f. Require updating the models during detailed design, construction, and for 3 years post-operation[1] to ensure all residual effects are accounted for; and
g. Confirm that all plant material used or seed sourced for the purpose of offset planting must be sourced from the rohe in which it is to be planted and/or otherwise eco-sourced. Where the plant material used, or seed sourced, for the purpose of offset planting is not able to be sourced from the rohe in which it is to be planted and/or cannot be otherwise eco-sourced, the HMP must set out a process of consultation with the Hapū Partners to confirm an alternative source.

2. The HMP must be completed at least 60 working days prior to construction starting.
3. The HMP shall be fully implemented within 12 months of project completion.

Offset implementation and permanent protection

To secure and maintain offset sites long-term, we require a legally binding protection framework. This framework ensures that any habitat loss is met with an offset that is not only physically implemented but legally protected in perpetuity. We expect to see the following matters covered in the conditions of consent (at a minimum):

1. Offset and compensation measures must be developed whenever any of the listed habitats are to be damaged or destroyed.

[1] Post operation review is required to ensure stream loss associated with groundwater drawdown has not occured over a greater area than expected.

2. No habitat clearance or water body diversion/loss occurs until the legal mechanisms for offset delivery are fully executed and verified.
3. The consent holder must provide Patuharakeke and other relevant parties written confirmation that enduring legal agreements have been finalised prior to any vegetation clearance, water body diversions, or water body loss occurring.

Example mechanisms include land purchase, agreements involving covenanting, whenua rāhui, or similar registered title instruments.

Additions to the Ecology Management Plan

We require a co-designed Ecology Management Plan framework that embeds Patuharakeke tikanga into all operational protocols. This framework must ensure that species translocation and habitat clearance are not merely managed, but are governed by the following mandatory standards and endorsement processes:

1. Tikanga-led translocation protocols for mokomoko, pepeketua, ika, and tuna.
2. Operational controls, including pre-clearance checks for mokomoko and nesting manu, and strict vegetation clearance timing restrictions.
3. Taonga species protection, including de-fishing protocols that require the translocation of all taonga species.
4. All initial plans and subsequent amendments must be developed with, and formally endorsed by, Patuharakeke.

These recommendations are the minimum to address effects on our hapū values and should be incorporated into the existing requirements for the Ecology Management Plan in the draft conditions of consent.

Edge effect buffer planting

Edge effects have the potential to have significant adverse effects on our taonga flora and fauna species. We expect to see a condition that specifically manages these effects, for example:

1. Subject to landowner agreement on private property, indigenous buffer planting must occur on any terrestrial bush and wetlands remnants that are within 200m of the final road alignment. Buffer planting must:
    a. Be between the project and the adjacent habitat.
    b. Be a minimum of 10 meters deep, except in locations where 10m width is not available within the site due to existing tracks or roads.
    c. Consist of species suited to the adjacent habitat.

d. Consist of indigenous plant material sourced from the local rohe or eco-region.
e. Undertake fencing, if required, to exclude stock.

Artificial lighting

Conditions are required to ensure artificial lighting associated with the project does not result in any direct light spill onto streams, wetlands or ngahere. Compliance with such a condition may be achieved through lighting design or buffer planting and subsequent canopy closure, thereby protecting the natural habitat.

Operational stormwater

We require a prescriptive stormwater framework that mandates nature-based treatment and verifiable water quality standards. This framework ensures that treatment is integrated into the landscape as a primary defence, rather than a secondary consideration.

The design, performance, and timing of stormwater infrastructure must be conditioned to meet the following (at a minimum):

1. All operational runoff must be treated through dedicated, indigenous-planted swales or wetlands prior to environmental discharge.
2. To ensure maximum effectiveness, quality treatment devices (wetlands/swales) must be separated from volume management devices (ponds/basins) wherever practical.
3. Systems must be engineered to remove at least 75% of total suspended solids and provide a total barrier to hydrocarbons and litter.
4. All treatment infrastructure must be fully functional and verified prior to the road opening for public use.

Sediment and Erosion Control Standards

To prevent the degradation of downstream aquatic habitats, we require a prescriptive erosion and sediment control framework.

As the construction methodology remains high-level, we reserve the right to refine these performance triggers and escalation protocols once the Site-Specific Erosion and Sediment Control Plans (SSESCPs) are provided for technical review. At a minimum, the following mandatory standards must apply (through conditions):

1. All works must adhere to the most stringent available standards. Where a Site-Specific Plan identifies a higher protection level than regional defaults, the higher standard shall be the mandatory baseline.
2. Works within stream beds must be undertaken when dry wherever practicable.
3. All clean water run-off must be diverted away from exposed earth to prevent erosion at the source.
4. All sediment retention devices must be designed and operated to meet strict water quality performance triggers:
    a. Clarity: 100mm or greater (measured by Secchi disc).
    b. pH Levels: Maintained between 5.5 and 8.5.
5. Any breach of these triggers must initiate an immediate investigation and reporting process. Corrective actions must be implemented within five working days.
6. If triggers are missed in two consecutive rounds or three times within six months, the framework must mandate an escalated response to ensure the 100mm clarity standard is restored immediately.
7. A report summarising the investigation and the response measures required must be provided to Patuharakeke and other relevant parties such as the Regional Council in writing within five working days of the performance trigger not being met.

Freshwater ecology monitoring and response framework

We require a comprehensive freshwater monitoring framework that utilises robust baseline data and specific biological triggers.

As the final locations for these monitoring stations must be informed by the completed aquatic stream assessment, we reserve the right to refine these triggers and frequency requirements once that data is provided. At a minimum, the conditions of consent must include:

1. A mandatory sequence of baseline, routine (monthly/quarterly), event-based (rainfall triggers), and post-construction monitoring at both upstream and downstream locations, wherever practicable.
2. Regular (monthly) assessment of pH, deposited sediment, algal cover, water depths, water velocity, wetted channel width, water clarity and photos of stream bed to track physical habitat changes.
3. Quarterly monitoring of macroinvertebrates and fine sediment must adhere to strict performance benchmarks. A greater than 20% negative shift in median

fine sediment, QMCI, or ASPM scores (compared to upstream or previous data) must initiate immediate response actions.
4. Where triggers are exceeded, the conditions must require the implementation of corrective measures to restore ecological values to pre-exceedance levels.
5. Full records of all monitoring data and subsequent response actions must be provided to the Hapū Steering Group and other relevant parties such as the regional council to ensure transparency and cultural oversight of awa health.

Kauri biosecurity and pathogen management framework

The current 'outcomes-based' approach does not adequately address the high risk of introducing or spreading kauri dieback (Phytophthora agathidicida) during large-scale earthworks. To protect the integrity of the kauri forest, we require a prescriptive biosecurity framework.

Because the specific location of works relative to individual kauri has not been fully mapped, we reserve the right to refine these exclusion zones and hygiene protocols once the detailed design and soil profiling are provided.

We expect the co-design of a Kauri Dieback Biosecurity Plan (KDBP) to appropriately manage the potential risks of the project in terms of disease transport and spread. The KDBP should be mandated through a condition of consent and include the following standards:

1. The project must satisfy all rules of the Kauri National Pest Management Plan. This includes the installation of permanent hygiene foot stations and dedicated vehicle wash stations at all entry and exit points for identified kauri areas.
2. The framework must mandate the physical marking of Kauri Hygiene Zones (KHZs) on the ground. These zones will govern strict protocols for the collection, treatment, and containment of soil from all personnel and equipment.
3. The KDBP must be submitted to the Hapū Steering Group for endorsement at least 40 working days prior to any works within 30 metres of any kauri. This plan must include comprehensive mapping of 'Affected' versus 'Unaffected' kauri and detailed soil moisture profiling to determine safe operational conditions.
4. A mandatory training and education programme must be implemented for all contractors to ensure full compliance with KDBP procedures and the specific biosecurity obligations of the rohe. For example: https://www.kauriprotection.co.nz/national-plan

5. The KDBP must be prepared in direct consultation with the Hapū Steering Group and other relevant parties such as the Department of Conservation, to ensure cultural and ecological alignment.

Culvert and fish passage framework

To prevent the fragmentation of aquatic corridors, we require a prescriptive design and monitoring framework for all instream structures. This framework ensures that fish passage is not merely an aspirational goal, but a verifiable and maintained performance standard.

As the specific dimensions and locations of culverts are yet to be finalised, we reserve the right to refine these design criteria and success metrics once the detailed hydrological data is provided. The following standards must be integrated into a condition for a co-designed Culvert and Fish Ramp Design, Monitoring, and Maintenance Plan (CDMMP):

1. All temporary and permanent culverts in natural waterbodies, as well as fish ramps, must be engineered to enable uninterrupted fish passage.
2. The CDMMP must define a site-specific design approach for every structure, underpinned by clear, measurable measures of success to verify that passage has been achieved.
3. A mandatory monitoring programme must be established to track both hydrological and structural integrity, alongside biological surveys to confirm the presence and movement of target species through the culverts and fish ramps.
4. The framework must outline a proactive maintenance schedule for the life of the consent. Crucially, it must include a pre-defined remediation process to be triggered immediately if surface flow is lost or if design benchmarks are not met.
5. A formal process must be established to review and update the CDMMP in direct partnership with Patuharakeke, ensuring the framework remains fit for purpose as the project progresses.

Archaeological protection and site management framework

The current proposal fails to offer the necessary spatial or procedural certainty required to protect our irreplaceable cultural landscapes. To ensure the physical and spiritual integrity of our tūpuna whenua, we require an archaeological framework that prioritises avoidance and management.

The following mandatory standards must be integrated into the conditions for a co-designed Archaeology Management Plan (AMP):

1. All pā sites listed in Table 0.5 must be avoided. This includes a mandatory 20-metre exclusion buffer around the edge of all archaeological features as delineated by GPR.
2. Protective fencing must be installed prior to any construction activity within the associated zone. Within these fenced areas, machinery operation is strictly prohibited except for essential surface tracking (where no alternative exists) or the installation of the protection fencing itself.
3. A maintenance regime, including a minimum of quarterly mowing, must be established for all fenced pā sites to prevent degradation.
4. An Accidental Discovery Protocol and the overarching AMP must be co-developed with the Pou Ahurea Roopu and Patuharakeke. This framework must explicitly define:
    a. Decision-making protocols regarding the archaeology of our whakapapa.
    b. Comprehensive management strategies for the accidental uncovering of kōiwi (human remains) and taonga tūturu (in place prior to construction start).
    c. Specific tikanga-led approaches for information gathering prior to any authorised destruction of known features.
5. The AMP must establish clear roles and communication lines, ensuring mana whenua maintain oversight of all archaeological matters throughout the project's duration.

Pest management and ecological restoration

We require a prescriptive pest control framework that establishes clear performance standards and long-term commitments.

As the spatial extent of mitigation is yet to be confirmed, we reserve the right to refine these targets once detailed ecological data is provided. Before Patuharakeke can provide further advice, the following requirements must be addressed through consent conditions:

1. Specific areas for intensive pest control and the duration must be identified, with a primary focus on Piroa.
2. The conditions must establish clear, measurable suppression targets for all compensation measures to ensure a verifiable net gain in biodiversity.

3. The conditions must establish clear, measurable monitoring targets for mokomoko, pekapeka, pepeketua and invertebrates to ensure a verifiable net gain in biodiversity.

Aggregate supply and geological integrity

While we understand the project is not currently seeking to secure material within the main works consents, the sourcing and movement of aggregate represent a significant cultural and environmental impact. To maintain the integrity of our whenua, we require aggregate supply conditions that prioritise local reuse and the preservation of geological provenance.

As the final material requirements and sourcing strategies are yet to be confirmed, we reserve the right to refine these standards once the detailed design and construction methodology are provided. The following mandatory principles must be integrated into any future material supply conditions:

1. The project must prioritise the reuse of excavated material within the project corridor. This is essential to ensure that whenua remains within its rohe and to minimise the environmental footprint of importing external fill.
2. If aggregate must be imported, the procurement process must prioritise local quarries within the rohe. This ensures that the physical materials used in the project maintain a consistent geological connection to the landscape.
3. The provenance of gravel must be formally integrated into the project's Toi Strategy. This ensures that the sources of all imported materials are recorded, traced, and acknowledged across the project's life cycle.
4. Any material supply strategy – including extraction, transport, or storage – must ensure that all physical and incidental effects on Te Paritū Pā are avoided entirely.
5. Patuharakeke must be formally engaged during the detailed design and subsequent consenting phases to review and endorse the selected material sources.

Climate resilience and emissions framework

The 'outcomes-based' approach fails to account for the long-term climatic impacts of the project or the preservation of the Mauri and Mana Motuhake value groups. To ensure the project is truly resilient and consistent with low-carbon objectives, we require a prescriptive climate and emissions framework.

As critical data regarding flood modelling and business case rationale remains outstanding, we reserve the right to refine these requirements once full technical information is provided. The following mandatory standards must be integrated into the project's design and delivery:

1. An Embodied Emissions Strategy must be co-designed and developed during the detailed design phase to identify, assess, and implement a long list of emissions reduction options for both the construction and operational phases.
2. A shared-use path for walking and cycling must be constructed for the entire length of the alignment to support climate-resilient transport
3. The conditions of consent must define specific performance standards to prevent adverse downstream impacts, including:
    a. Maximum flood levels for downstream properties and infrastructure.
    b. Mitigation of instream velocity changes resulting from new infrastructure, including the use of blue-green solutions.

Before we can provide final advice on the Climate Resilience value group, we must be allowed the opportunity to review:

- A full assessment of instream velocity and flood-level changes.
- The Project Business Case and Cost-Benefit Analysis to verify the rationale behind the preferred solution.

Table of Contents

1 Introduction

This Cultural Impact Assessment (CIA) outlines the potential and actual effects of the project on us, Patuharakeke. It identifies how these impacts can be avoided, remedied, minimised, offset and compensated for if required, which is a key part of the consent process. This CIA has been written with Te Pou Taiao o Patuharakeke Te Iwi Trust (Te Pou Taiao)[2] and reflects the kōrero, values and whakaaro of Patuharakeke Hapū. The Patuharakeke Te Iwi Trust Board endorses this CIA as the mandated entity of the Patuharakeke Hapū.

The document reflects our understanding of the project and includes our evaluation of its potential and actual impacts. To help you understand the importance of managing these effects, we describe our cultural heritage, environmental values, legal rights, and why the well-being of the taiao (environment) is central to us. We also set out our effects management recommendations to help inform our position on the project. This CIA is a foundation for ongoing discussions.

In this CIA, we detail our ancestral obligations and deep connection to the affected area, the ongoing importance of our traditional practices in managing the environment and its resources, and the critical value we place on safeguarding the mauri (life force) and the well-being of the whenua (land), and wai (water) within our rohe (tribal area).

To gain a better understanding, we suggest reviewing these key documents too:

- Patuharakeke Strategic Plan 2020-2025
- Patuharakeke Hapū Environmental Management Plan 2014
- Patuharakeke Hapū Environmental Management Plan 2014 – DRAFT Climate Change Update 2025
- Waitangi Tribunal documents related to Wai 745 and Wai 1308

Te Pou Taiao has an established relationship with the New Zealand Transport Agency (NZTA) / Waka Kotahi that spans more than a decade and has been in discussions on previous iterations of this project since at least 2017. A Terms of

[2] A subcomittee of the Patuharakeke Te Iwi Trust Board

Reference (TOR) has been agreed between the parties to establish a framework for engagement, collaboration, and involvement between NZTA Waka Kotahi and PTITB with regard to the project.

The TOR outlines the principles, roles, and responsibilities of both parties and acknowledges and aligns with He Whakaputanga, Te Tiriti o Waitangi, Te Ara Kotahi – NZTA Waka Kotahi Māori Strategy, the Patuharakeke Hapū Environmental Management Plan, and our Strategic Pou and our Mana Whakahono a Rohe Agreements. The TOR provides a pathway for engagement and input to identify any cultural values associated with the site and to prepare this assessment of effects. It can also anchor mitigations in support of consent conditions.

2 Our understanding of the project

2.1 Overview

Warkworth to Te Hana, Te Hana to Port Marsden, and Port Marsden to Whangārei are three of the Roads of National Significance (RoNS) that have historically been identified for upgrades to improve safety and efficiency for travel between Tāmaki Makaurau and Te Tai Tokerau. Two of these RoNS traverse the Patuharakeke rohe and have the potential to affect our relationships and values associated with our whenua, such as our wāhi tupuna, wāhi tapu, wāhi wairua, tūpuna awa, repo, rākau Rangatira, and many other marine, freshwater, and terrestrial taonga species.

Section 1 of the Project, Warkworth to Te Hana has already been designated and consented. Appeals were resolved in the Environment Court in November 2023 with a revised set of resource consent and designation conditions. Property purchases are currently underway, and construction of Section 1 is anticipated to begin by the end of 2026.

In addition to improving travel efficiency and safety between Tāmaki Makaurau and Te Tai Tokerau, the Project will address the critical resilience issues the current highway faces. The existing State Highway 1 (SH1) through the Brynderwyn Hills was closed for a total of 73 days following the extensive damage caused by Cyclone Gabrielle and other major weather events in early 2023. Road closures were common prior to emergency resilience works that were carried out in November 2025. There was a small slip on the Brynderwyn stretch of SH1 in the January 2026 extreme rain event, but the road remained open.

The RoNS programme has been reintroduced in the Government Policy Statement for Land Transport (GPS) to achieve the Government's strategic priorities, including supporting economic growth and productivity. Under the GPS, all RoNS will be four-laned, grade-separated highways, and all funding, financing and delivery options will be considered to deliver them as quickly as possible. The GPS notes that NZTA Waka Kotahi project specifications should take a 'no frills' approach and should focus on the delivery of the primary transport objectives that most cost-effectively deliver on the strategic priorities in the GPS. It is our belief that the 'no frills' cannot be at the expense of the natural environment and adequate cultural effects management.

Sections 2 and 3 of the Project are split into five subsections, comprising:

- Section 2A – Te Hana to south of the Brynderwyns
- Section 2B – Brynderwyn Hills (alternative to the current State Highway 1 route through the Brynderwyn Hills and the subject of this CIA).
- Section 2C – Finlayson Brook Road to Port Marsden Highway
- Section 3A – Port Marsden Highway to State Highway 15 Loop Road
- Section 3B – Urban Whangārei

These subsections are illustrated in Figure 2.1.

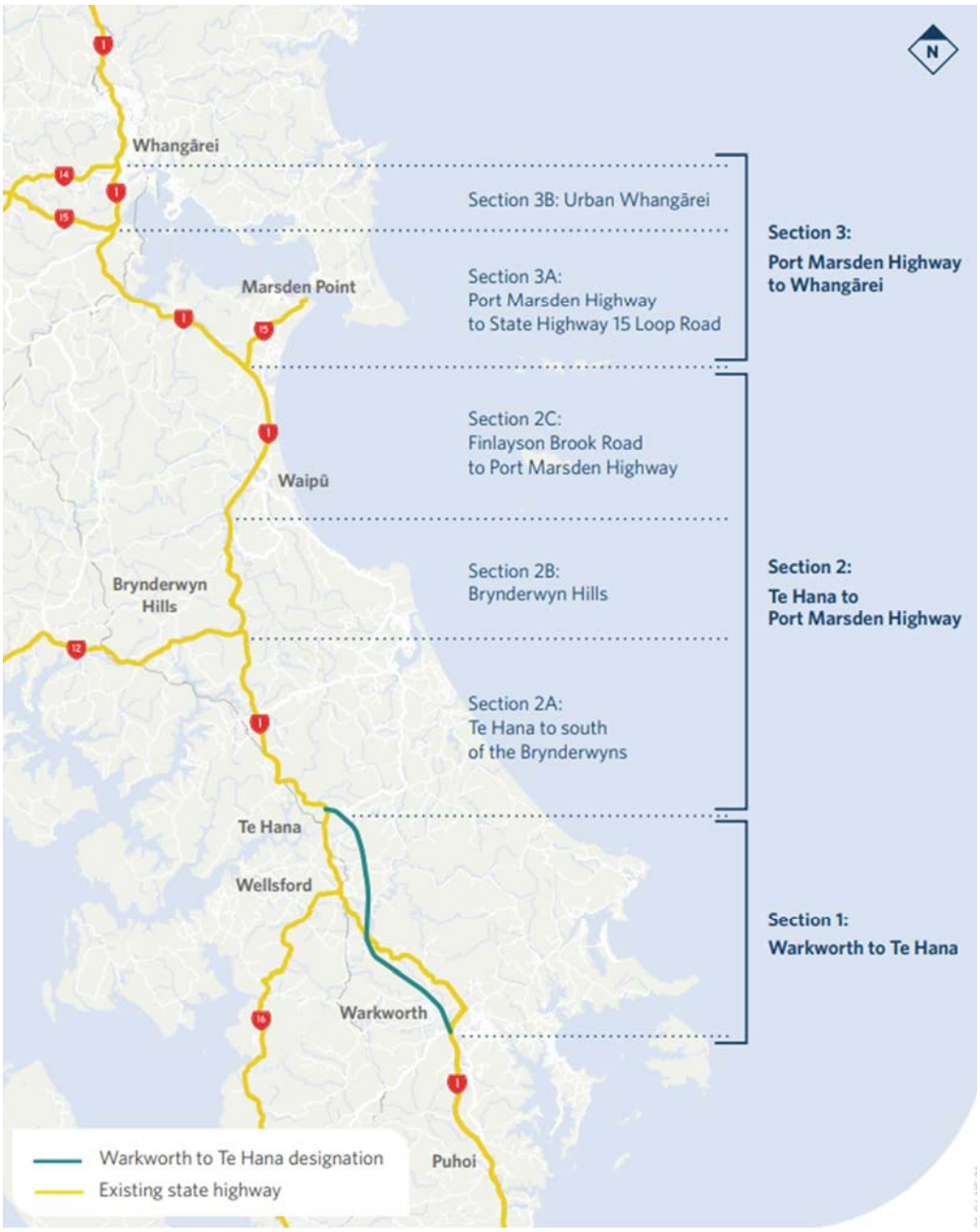

Figure 2.1 Sections of Northland Corridor (Source: NZTA Waka Kotahi)

2.2 Planning approach

The Fast Track Application states that the Section 2B project adopts an ‘outcomes-based’ approach. We understand this approach to obtaining planning approvals is intended to provide a designation area where environmental impacts are managed through performance-based conditions rather than a fixed, final road design. This model is designed to give NZTA Waka Kotahi significant flexibility in the final placement of the highway and its associated infrastructure during the detailed design stage.

Generally, the technical assessments provided to us have used an ‘indicative alignment’ approach within the proposed designation to outline the anticipated effects. Most technical assessments indicate that the effects will be similar regardless of where the alignment is located within the designation. The final alignment, including the design and placement of bridges, culverts, stormwater systems, spoil disposal areas, and landscaping, will be refined and confirmed during the detailed design stage. The groundwater assessment is a notable difference and indicates effects will need to be reassessed during detailed design.

We believe it is necessary to differentiate between the terminology used by the project and the functional reality of the proposal. While the applicant frames this as an ‘outcomes-based’ system, we characterise it as a **construction envelope** approach. From our perspective, the project currently prioritises engineering flexibility over defined cultural and environmental limits. It effectively creates a spatial boundary for construction activities without first establishing the necessary exclusion zones or maximum effect limits required to protect our taonga and uphold the effects management hierarchy.

2.3 Section 2B area

Section 2B is the middle component of the Te Hana to Port Marsden Highway and will provide an alternative route through the Brynderwyn Hills (Figure 2.2). Section 2B will extend approximately 17.6km from Baldrock Road (near Kaiwaka) in the south to Millbrook Road / The Braigh (north of Waipu) in the north, traversing the Brynderwyn Hills (Woodhouse, 2026).

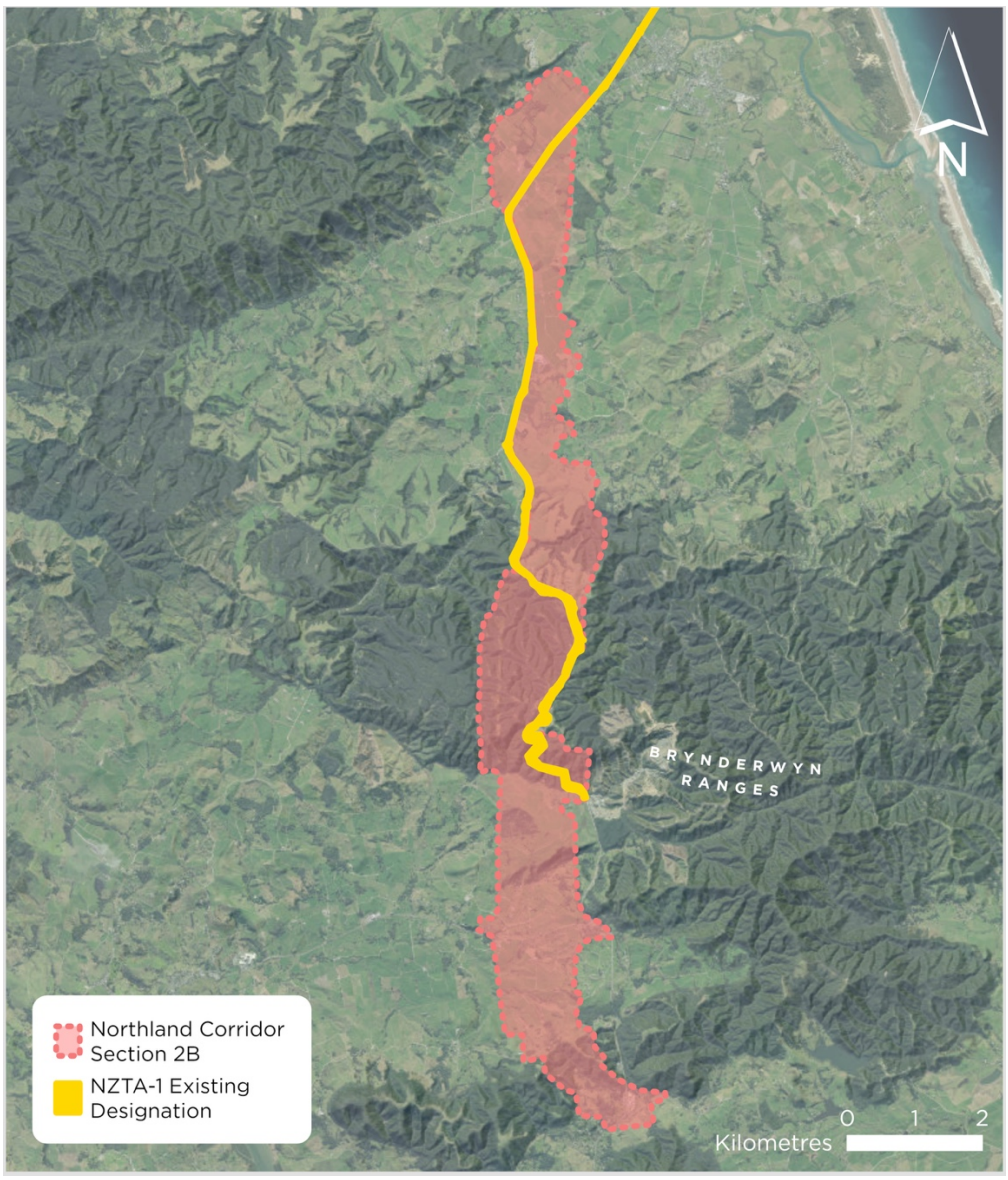

Figure 2.2 Section 2B preferred alignment[3]

The Project (Section 2B) proposes a new four-lane highway designated for a speed of 110 km/h. At the time of writing this assessment, the road design had progressed to an indicative alignment within a wider 'proposed designation' corridor. The alignment begins at Baldrock Road, passing to the west of the existing SH1, climbing through the Brynderwyn Hills, and descending into the Waipu valley to rejoin SH1

[3] This map is based on maps in the technical assessments we were provided, and on our understanding that 4km have been excluded from the north of the proposed designation due to a borrow site not going ahead.

near The Braigh. The project is designed to handle predicted traffic growth up to 2054 and improve route security.

The designation is divided into four earthworks zones:

- Zone 1 (Northern Lowlands): Located on the alluvial plains near Waipu. This area requires significant fill embankments to raise the road above flood levels.
- Zone 2 (Brynderwyn Hills): Characterised by steep terrain and high ecological value. This zone requires deep cuts (excavations) into the ridgeline and passing through indigenous forest.
- Zone 3 & 4 (South of Brynderwyns): Undulating terrain connecting the hills to the SH12 interchange and terminating near Baldrock Road.

2.3.1 Bridges and interchanges

No new bridges are proposed across watercourses[4]. All waterway crossings are proposed to be managed via culverts and diversions (see Sections 2.3.3 and 2.3.6).

Four new bridge structures are proposed to provide grade-separated crossings for local roads and the existing state highway:

- SH12 Interchange Overbridge (BR01): A 33-metre, single-span concrete bridge carrying the SH12 interchange over the new mainline.
- SH1 Brynderwyn Overbridge (BR02): A 120-metre, three-span steel composite bridge carrying the existing SH1 over the new mainline on the northern side of the Brynderwyn Hills. This bridge will maintain the existing SH1's functionality for local access.
- Glenmohr Road Overbridge (BR03): A 37.5-metre, single-span concrete bridge carrying the realigned Glenmohr Road over the new mainline.
- SH1 Waipu Overbridge (BR04): A 37.5-metre, single-span concrete bridge carrying a realigned section of the existing SH1 over the new mainline near Finlayson Brook Road.

In addition, the Project proposes three main interchange and tie-in connection points along the alignment to integrate the new highway with the existing road network:

[4] The Ahuroa River is proposed to be bridged, however these works fall within the 2C package. Therefore no further assessment is provided in this CIA.

- Baldrock Road / Existing SH1 Tie-in (Southern end): An interim at-grade roundabout will connect the new four-lane mainline to the existing SH1 and Baldrock Road. This connection will remain in use until the adjacent southern section of the Northland Corridor (Te Hana to south of the Brynderwyn Hills) is constructed.
- SH12 Interchange: A permanent, grade-separated diamond dog-bone interchange will be constructed just north of the existing SH12. This will provide a critical regional connection westwards towards the Kaipara District.
- Waipu/The Braigh Tie-in (Northern end): An interim at-grade interchange will be located between the Ahuroa River and Waipu. This design features a roundabout at Millbrook Road, which connects to another roundabout on the eastern side linking to the existing SH1 and The Braigh. This interim arrangement is designed to accommodate traffic until the adjacent northern section (Section 2C) is constructed, at which point it will be upgraded to a full grade-separated interchange.

2.3.2 Utilities

The alignment is constrained by, and interacts with, other regionally and nationally significant infrastructure.

The project requires the physical relocation of a section of the Maungaturoto gas (First Gas High Pressure Pipeline) mainline at the southern end of the alignment (Earthworks Zone 4) (NZTA Waka Kotahi, 2026a). A proposed earthworks cut directly clashes with the existing pipeline (between approximately CH 24,400 and 25,100), so the pipe will be relocated outside of the cut zone. The installation of utility pipelines below the groundwater table may require temporary construction pit dewatering to create dry working conditions (Soltau, 2026).

The project will interact with, and potentially require the protection or relocation of, local network assets including Northpower electricity networks (including a proposed 33/11kV sub-transmission line), various fibre optic and telecommunications trunks (Taitokerau Fibre, Chorus, Eon Fibre / One NZ), and mobile/radio transmission towers (such as the Whangārei Amateur Radio Club, which is impacted by an earthworks cut in the Brynderwyns) (NZTA Waka Kotahi, 2026a).

Works will also navigate existing urban water supply infrastructure managed by the Whangārei and Kaipara District Councils, including an underground water main near the proposed Waipu Interchange that will need consideration during construction to

ensure compliance with utility protection standards (Hasan-Zadeh, 2026; NZTA Waka Kotahi, 2026a).

2.3.3 Stormwater and flooding

All stormwater runoff from the newly constructed state highway surface will be captured and diverted to treatment devices prior to being discharged into nearby streams (NZTA Waka Kotahi, 2026a). Wherever practicable, the design aims to keep stormwater flows within their catchment of origin to prevent unnatural accumulation of flows and downstream stream erosion (Hasan-Zadeh, 2026). Clean runoff from non-contaminating areas (such as fill batters and some cut slopes) will be diverted away from treatment devices to prevent overload of their treatment capacity (NZTA Waka Kotahi, 2026b).

The project relies on Water Sensitive Design principles to manage water flow and remove contaminants like sediment, zinc, and copper (Hasan-Zadeh, 2026). The preferred treatment method is constructed stormwater wetlands (NZTA Waka Kotahi, 2026a). In flatter, low-lying areas – such as the Waipu alluvial plains – wetland swales will be used instead to minimise the need to build high road embankments (Hasan-Zadeh, 2026). For ramps, interchanges, and modified local roads with traffic volumes exceeding 3,000 vehicles per day, treatment swales will be used (NZTA Waka Kotahi, 2026a).

Extended detention will be provided within the stormwater wetlands and wetland swales to hold water for longer periods after rain, allowing pollutants to settle and mitigating stream erosion (NZTA Waka Kotahi, 2026b). The project does not propose specific peak flow attenuation (holding back water to reduce peak flood volumes), instead, the highway design will be tested against regional flood models to ensure overall flood levels are acceptable (NZTA Waka Kotahi, 2026a).

As above, no new bridges over watercourses are proposed as part of the Section 2B works (Section 2.3.1). Watercourses will instead be crossed using culverts. These culverts are designed to convey a 1% Annual Exceedance Probability (AEP) (100-year) storm event, accounting for future climate change projections, while maintaining a minimum 500mm freeboard (safety buffer) between the peak water level and the edge of the road (NZTA Waka Kotahi, 2026a).

Based on the indicative Culvert Schedule provided in the Assessment of Operational Stormwater Effects, there are currently 71 culverts proposed for the project:

- 48 culverts along the Main Alignment
- 23 culverts associated with Local Roads

However these culvert numbers and locations are subject to change. The exact number, sizes, and fish passage requirements are proposed to be refined and confirmed during the Detailed Design stage of the project (Hasan-Zadeh, 2026).

Where advised by the project ecologist and deemed practicable, culverts will be designed to accommodate fish passage (Hasan-Zadeh, 2026). The standard approach to fish passage in lowland or low-gradient culverts will be substrate material, usually combined with baffles or spat ropes. At specific locations where a drop inlet serves as the primary inlet for the culvert (such as spoil fill sites or at 'hanging valleys'), no fish passage is offered. In multi-barrel culverts, fish passage will only be provided for one of the culverts (Hasan-Zadeh, 2026).

To protect the road corridor and manage overland flows, cut-off drains will be installed at the top of cut slopes to intercept surface water and safely divert it away from the road (Hasan-Zadeh, 2026). The project also proposes adjusting the road's vertical alignment to avoid creating low points in cut sections and refining culvert capacities to reduce upstream headwater ponding (NZTA Waka Kotahi, 2026b).

2.3.4 Earthworks and contouring

The project requires significant earth movement, estimated at approximately 13 million m³ of cut and 7.4 million m³ of fill (Table 2.1)[5].

[5] This table is based on the information that was available to us at the time of writing. We acknowledge that the quantities will change based on the exclusion of the northern borrow site from the designation.

Table 2.1 Anticipated earthworks and pavement quantities (NZTA Waka Kotahi, 2026a, p. 44)

	Zone 1 Volume	Zone 2 Volume	Zone 3 Volume	Zone 4 Volume	Total
Total cut (m^3)	821,984	5,582,435	2,442,032	4,570,027	13,416,478
Cut to road embankment (m^3)	18,715	4,377,488	1,407,155	1,029,611	6,832,969
Cut to spoil onsite (m^3)	803,269	1,204,947	1,034,877	3,540,416	6,583,509
Imported fills (e.g. road aggregates) (m^3)	175,000	125,000	50,000	75,000	425,000

- Total cut: The total volume of material excavated across all earthworks activities.
- Cut to road embankment: The portion of excavated material that is suitable for re-use in the construction of road embankments and other engineered fills.
- Cut to spoil onsite: The volume of material that is not required for embankment construction and is placed into on-site spoil areas within the Designation boundary.
- Imported fills (e.g. road aggregates): Materials that cannot be provided from site-won sources and are brought in from off-site suppliers.

These numbers are indicative only, and are subject to change during the detailed design process. The indicative earthworks quantities do not preclude the contractor, once appointed, from removing material from the site for commercial or operational reasons. Any removal would be undertaken in accordance with the requirements of consent conditions, construction environmental management plans, and applicable transport controls.

Extensive cuts are required in the Brynderwyn Hills (Zone 2) and south of the hills (Zone 4) to achieve suitable gradients. Large amounts of spoil will be produced and require associated local disposal. Excess spoil will be placed in designated spoil sites within the designation.

Zone 1 (Waipu) is entirely made up of raised fill embankments so requires imported material. Material supply will likely be required in Zone 1 proximity.

We understand that no borrow site has been secured within Project Designation, however material will need to be borrowed to some extent to complete the project. No further information has been provided at the time of writing this assessment.

Best practice erosion and sediment control measures will be installed before any bulk earthworks begin and maintained throughout the five-year construction period (NZTA Waka Kotahi, 2026a). These controls will be detailed in specific Erosion and Sediment Control Plans (ESCPs). Specific measures identified in the proposed construction methodology include:

- Silt fences
- Sediment ponds
- Diversion drains, which includes installing cut-off drains at the top of cut slopes to intercept surface water and safely divert it away from the exposed earth to reduce scouring
- Stabilisation treatments to protect exposed surfaces

These measures will be continuously monitored and adapted as construction progresses to manage runoff and protect the surrounding receiving environments (NZTA Waka Kotahi, 2026a).

2.3.5 Vegetation clearance

Vegetation clearance is primarily required to support site access and construction (NZTA Waka Kotahi, 2026a). This includes the large-scale clearing of exotic pine forestry in Earthworks Zone 2 (the Brynderwyn Hills) to allow for early site preparation, the formation of haul roads, and geotechnical observations (NZTA Waka Kotahi, 2026a).

Approximately 608.82 ha of vegetation falls within the Project Designation. Of this total, approximately 295 ha is indigenous (Table 2.2).

Table 2.2 Vegetation types recorded within the Proposed Designation during field surveys (Denmead, 2026, p.12)

Classification	Area (ha)
Anthropic tōtara forest	23.8
Broadleaved species scrub forest	29.4
Kahikatea forest	1.6
Kahikatea treeland	2.5

Kahikatea-kauri-totara treeland	1.0
Kahikatea-pukatea forest/native scrub/tradescantia	4.2
Kānuka forest	63.8
Kānuka treeland/native and exotic scrub/ranked grassland	7.3
Kauri-podocarp forest	57.0
Kohekohe-taraire-tawa-podocarp/broadleaf	51.5
Nīkau treeland	0.1
Planted native vegetation	12.7
Pūriri forest/ranked grassland	1.7
Remnant Riparian podocarp-hardwood-kanuka treeland	15.0
Scattered podocarp-broadleaf-kanuka treeland/mixed native and exotic scrub/ranked grassland	4.92
Tōtara forest/native broadleaf scrub	10.0
Tōtara forest/ornamental plantings	4.3
Tōtara-kānuka forest/mixed native and exotic scrub/ranked grassland	3.2
Tōtara-kauri/broadleaf scrub	1.2

Construction may require the removal of any vegetation within the Project Designation. This includes the removal of vegetation within Significant Natural Areas and ngāhere such as Kauri (*Agathis australis*)-podocarp-broadleaf forest, Tōtara (*Podocarpus totara*)-kauri scrub and remnant Kahikatea (*Dacrycarpus dacrydioides*) stands. The area of vegetation to be removed is unknown at the time of writing this assessment.

Figure 2.3 shows the distribution of land cover across the proposed designation and wider area.

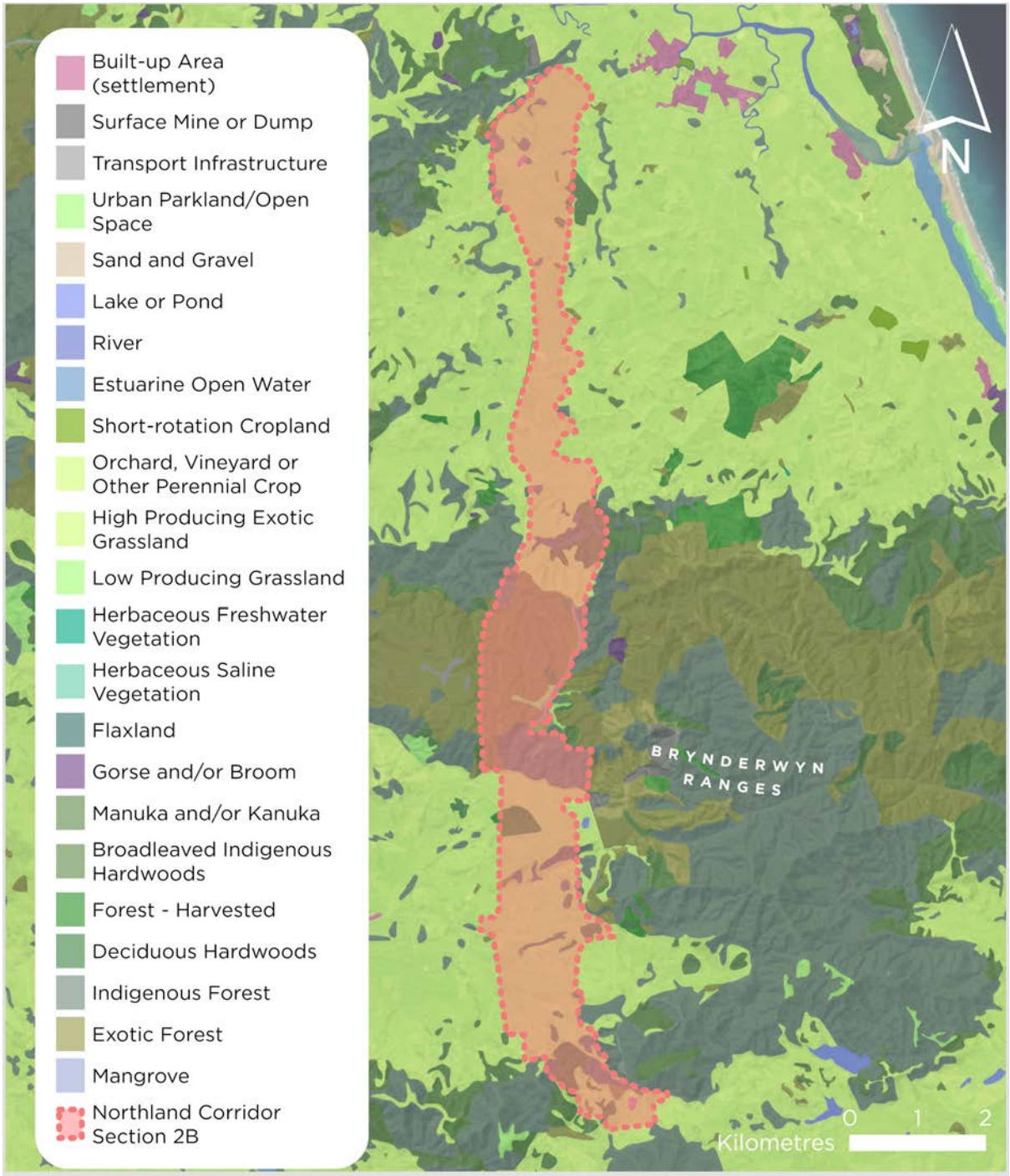

Figure 2.3 Land cover within the proposed designation and surrounding area.

Vegetation removal will be staged, and mulch or other stabilisation methods (to be confirmed through detailed design) will be used to manage exposed surfaces as vegetation is cleared. Specific sensitive areas are proposed to be identified for protection prior to works commencing, and individual tree protection will be implemented when required.

2.3.6 Waterways and wetlands

The project interacts with the Piroa Stream, Pukekaroro Stream, and the Ahuroa, Waipu and Waihoihoi River catchments – predominantly with the tributary network rather than the main river stems. However, major stream diversions are proposed, including a diversion of the Waihoihoi River.

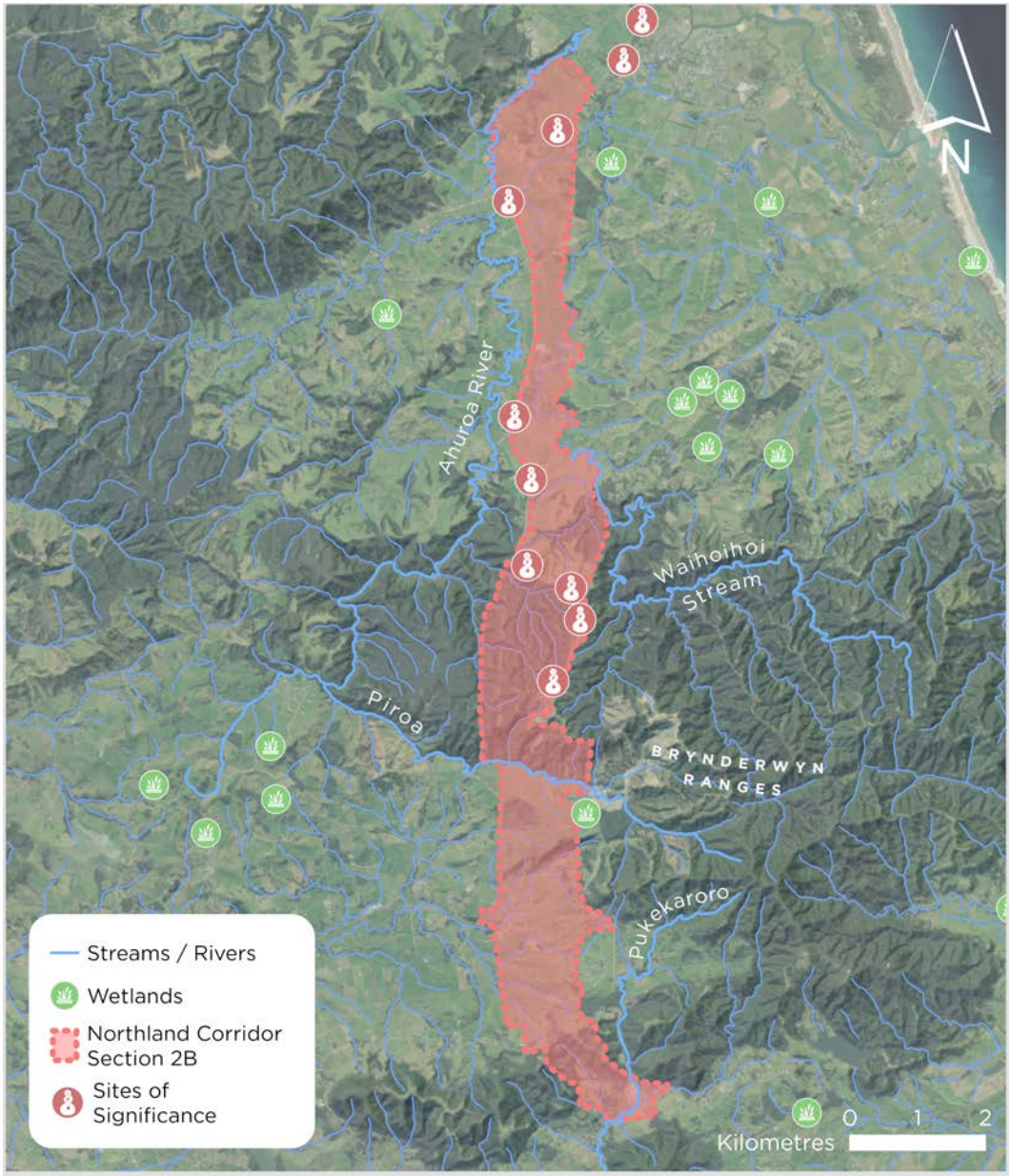

Figure 2.4 Waterways within and near the proposed designation[6]

[6] Wetland delineation is based on publicly available databases. We did not have access to the Project data and mapping.

Approximately 4.7 km of culvert length[7] is expected to be required, based on the indicative culvert schedule (Hasan-Zadeh, 2026). However, this is subject to change during detailed design. Where required, culverts will be installed 'in the dry' by temporarily diverting the watercourse during construction (NZTA Waka Kotahi, 2026a).

Where the highway alignment, spoil disposal sites, or culvert extensions eliminate or interfere with existing channels, the streams will be reclaimed and diverted (NZTA Waka Kotahi, 2026a). This includes a major diversion of a meander in the Waihoihoi River, where a new low-flow channel will be constructed to replicate the length, grade, and sinuosity of the existing river (NZTA Waka Kotahi, 2026a). Other smaller-scale diversions include the rationalisation and deepening of existing farm drains.

Earthworks, spoil disposal, and the placement of road embankments will directly and indirectly impact natural inland wetlands. This includes the physical infilling and reclamation of high-value environments like Wetland 24 (a raupō gully system), as well as various smaller wetlands located in gullies and alluvial plains along the corridor (Bull, 2026; NZTA Waka Kotahi, 2026b) (Table 2.3). The extent of this impact is unknown due to uncertainty about the road alignment.

Table 2.3 Wetland features within the project designation (Keesing, 2026, p. 25)

Wetland number	Wetland type	Condition	Value
Ahuroa Catchment			
1	Creeping butter cup drainage	Poor (exotic)	Negligible
19	Creeping butter cup	Poor (exotic)	Negligible
Waihoihoi Catchment			
2	Exotic dominated: purslane, water pepper & rushes	Poor (exotic)	Low
3	Juncus, creeping bent, buttercup	Poor (exotic)	Negligible

[7] Our understanding is that this length includes culverts within natural waterways and overland flow paths.

4	Juncus, buttercup, creeping bent	Poor (exotic)	Negligible
5	Juncus, creeping butter cup	Poor (exotic)	Negligible
6	Juncus, creeping butter cup	Poor (exotic)	Negligible
7	Juncus, Isolepis, Creeping butter cup	Poor (exotic)	Low
8	Raupo, Isolepsi, water purslane, Juncus	Moderate	High
9	Juncus, Isolepis, Creeping butter cup	Poor (exotic)	Negligible
10	Juncus, Isolepis, Creeping butter cup	Poor (exotic)	Negligible
11	Juncus, creeping buttercup, creeping bent, Glyceria	Poor (exotic)	Negligible
12	Kahikatea with creeping bent, Gylceria, water pepper, creping buttercup	Poor (exotic)	Low
13	Juncus, creeping butter cup, creeping bent	Poor (exotic)	Low
14	Wet pasture with Juncus and creeping bent	Poor (exotic)	Negligible
15	Wet pasture with Juncus and creeping bent	Poor (exotic)	Negligible
16	Lower, juncus, Gylceria, creeping bent, upper wet pasture, mid, raupo, kiekie, sedges	Mostly poor, centrally some moderate condition	Mostly low, but a central 1/3rd is of High value.
17	Headwater small Isolepis and creeping butter cup	Poor (exotic)	Negligible

18	Headwater small Isolepis and creeping butter cup	Poor (exotic)	Negligible
Wairau Catchment			
20	Creeping bent, buttercup,	Poor (exotic)	Negligible
21	Juncus, giant umbrella sedge, Isolepis sedgeland	Mostly poor, some indigenous species present in scattered areas.	Low
22	Creeping buttercup, cabbage tree	Poor (exotic)	Low
23	Juncus, creeping bent and buttercup	Poor (exotic)	Negligible
24	Raupō gully with edge willow	Fair	High

As part of the enabling works and site establishment, vegetation clearance (including the removal of exotic forestry and native scrub/forest) will occur within the margins and setbacks of natural inland wetlands and streams (NZTA Waka Kotahi, 2026b). This will be accompanied by large-scale earthworks, topsoil stripping, and the installation of erosion and sediment controls (such as silt fences and sediment ponds) adjacent to these sensitive aquatic environments (NZTA Waka Kotahi, 2026a).

2.3.7 Groundwater

Extensive excavations (indicated to be up to 75 m deep) are required through the Brynderwyn Hills, which will cut below the natural groundwater table (NZTA Waka Kotahi, 2026b; Soltau, 2026). To keep the road pavement dry, permanent sub-surface drainage systems will be installed to continuously draw down the surrounding water table and capture groundwater seepage (NZTA Waka Kotahi, 2026b; Soltau, 2026). Additionally, temporary dewatering and aquifer depressurisation will occur during the construction phase to enable the installation of culverts, bridge piers, and stormwater pipelines in valley floors and seepage areas

(NZTA Waka Kotahi, 2026b; Soltau, 2026). Around 41.6 km of stream length may be impacted by groundwater draw down[8].

2.3.8 Fauna

Construction activities and habitat loss are expected to impact local wildlife. The project area interacts with threatened and At Risk species, including the following:

Table 2.4 Fauna within the project area

Avifauna	Habitat for North Island brown kiwi, Australasian bittern (*matuku-hūrepo*), and spotless crake (*pūweto*) will be impacted.
Bats	Long-tailed bats (*pekapeka*) are present in the Brynderwyn Hills, and vegetation clearance poses a risk to their roosting and foraging habitats.
Herpetofauna	The area contains habitat for Hochstetter's frogs (*pepeketua*) and skinks/geckos (*mokomoko*), particularly in the gullies of the Brynderwyns.
Aquatic fauna	The affected waterways support a diverse range of indigenous species, including longfin eel (tuna - classified as At Risk), shortfin eel, banded kōkopu, and redfin bully. Invertebrate populations include freshwater crayfish (kewai) and freshwater mussels (torowai). The waterways are also noted as providing habitat for īnanga, a keystone species for whitebait spawning.

[8] The impacted 41.6 km of stream length includes loss in flow from less than 5% to greater than 80% as indicated in Table 4-2 of the Assessment of Effects on Groundwater (Soltau, 2026).

2.4 Assumptions, exclusions and limitations

This CIA is based on the information available at the time of drafting. We outline the parameters we have worked within for this assessment below. Explaining the assumptions, exclusions and limitations that underpin our CIA ensures a transparent evaluation of the project's impact on Patuharakeke taonga, values and interests.

2.4.1 Technical assumptions and data integrity

It is assumed that all project descriptions, engineering plans, drawings, and baseline data provided in the draft technical reports are accurate and factually correct.

This assessment was developed without access to a complete suite of technical assessments and technical drawings, a complete Assessment of Environmental Effects (AEE) or a completed draft suite of consent conditions. Consequently, the CIA relies on a patchwork of information, and we have had to make judgments based on the indicative alignment and preliminary designation boundary provided to date. Where we feel we do not have adequate information, we acknowledge this in our assessment of effects.

Our assessment adopts a precautionary approach due to the uncertainties around the scope of the works, particularly the effects on different realms of te taiao, the final project footprint, and construction methodologies. Key limitations include the incomplete terrestrial and aquatic ecology assessments and the lack of spatial data regarding how the proposed highway will interact with significant habitats and taonga fauna. As our identity and values are intrinsically linked to the natural environment, our assessment and recommendations reflect this information gap.

We assume that although the physical works will be confined to the designation, the spatial relationship between the highway and significant cultural and environmental features will shift. This means our assessment of cultural effects, by necessity, has focused on managing the worst-case-scenario effects. Once the appropriate technical information is shared with us, we will update our recommendations to address the specific effects of the project.

It is also assumed that all necessary wildlife permits and Department of Conservation (DOC) applications and Heritage applications are included within the broader project application.

2.4.2 Limitations and timeframes

A significant limitation of this report is the condensed timeframe between the receipt of incomplete information and the required delivery date of the CIA. This restricted window impacts the depth of engagement and the technical review possible.

Patuharakeke reserves the right to update or amend our position when project plans change and new information – such as complete technical assessments of effects, a complete AEE and further iterations of the consent conditions – become available.

2.4.3 Scope and exclusions

Unless otherwise stated, this assessment does not cover:

- Wastewater discharges.
- Site offices or works located outside the designated project boundaries.
- Future enabling works not detailed in the current project description.
- Water takes required for concrete batching and dust management.

2.4.4 Cultural authority and engagement

This document represents Patuharakeke tikanga and lore, giving effect to our rights under Aotearoa New Zealand's planning frameworks. While this reflects the collective position of the hapū, it is acknowledged that the opinions of some individual whānau members may differ.

A fundamental assumption of this CIA is that NZTA Waka Kotahi remains open to meaningfully incorporating iwi views into the final project design and implementation. We expect that the project application will be amended to reflect the outcomes and mitigation recommendations identified in this assessment.

3 About us

3.1 Our whakapapa

Patuharakeke take our origins from the ancient tribes of Ngāti Manaia, Ngāi Tāhuhu, Ngāti Wharepaia, Ngāti Ruangaio and Ngāti Tū. Patuharakeke are a composite hapū of descent from a number of major contemporary iwi groups in the north. These include Ngāti Wai, Ngāpuhi nui tonu, and Ngāti Whātua.

Patuharakeke as ahikā, mana whenua, mana moana of the region located south of the Whangārei Harbour have a long traditional relationship with the area and surrounds encompassed by the project corridor. This status is determined by the tenets of Māori land and sea tikanga, including gifting, long-term occupation and use, whakapapa, and conquest. Patuharakeke traditional takiwa and rohe (abridged map marked accordingly for contemporary management purposes) are shown in Figure 3.1 and Figure 3.2 demonstrating that the site is located within an area of importance to Patuharakeke.

3.2 Takiwā and rohe

The following pepeha is used to describe the traditional and contemporary associations (including customary authority) of Patuharakeke with the area:

> *Ko Manaia Te Maunga* | *Ko Whangārei Terenga Parāoa Te Moana* | *Ko Takahiwai Te Marae* | *Ko Rangiora Te Tupuna Whare* | *Ko Patuharakeke Te Hapū*

Our takiwā is the broad area of whenua and moana that we associate with our tūpuna (Figure 3.1). Ideally, our takiwā reflects Treaty Settlement and Marine and Coastal Area (Takutai Moana) Act 2011 negotiations and reflects overlapping whanaungatanga and shared boundaries. Connections within our takiwā are protected by s6e of the RMA. This protection must be demonstrated in the Fast Track Application, pursuant to Schedule 5(1)(g) of the FTAA. Our rohe represents a more narrowly defined, contemporary area that is used for resource management purposes (Figure 3.2).

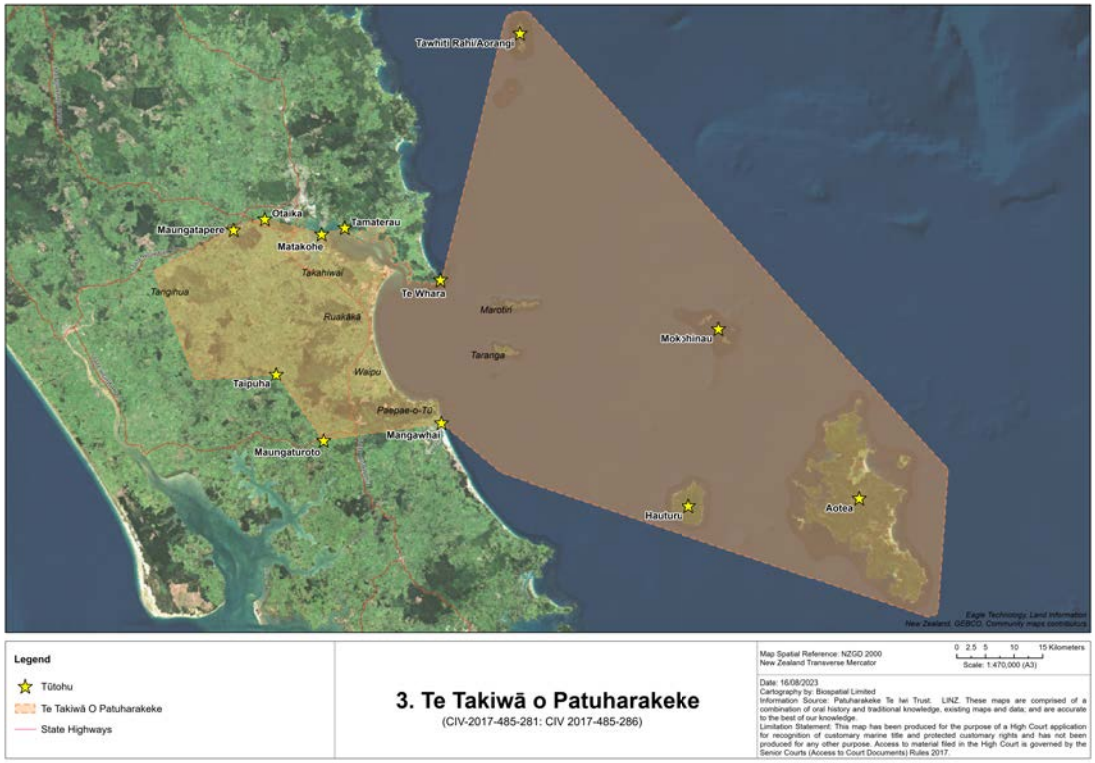

Figure 3.1 Te Takiwā o Patuharakeke

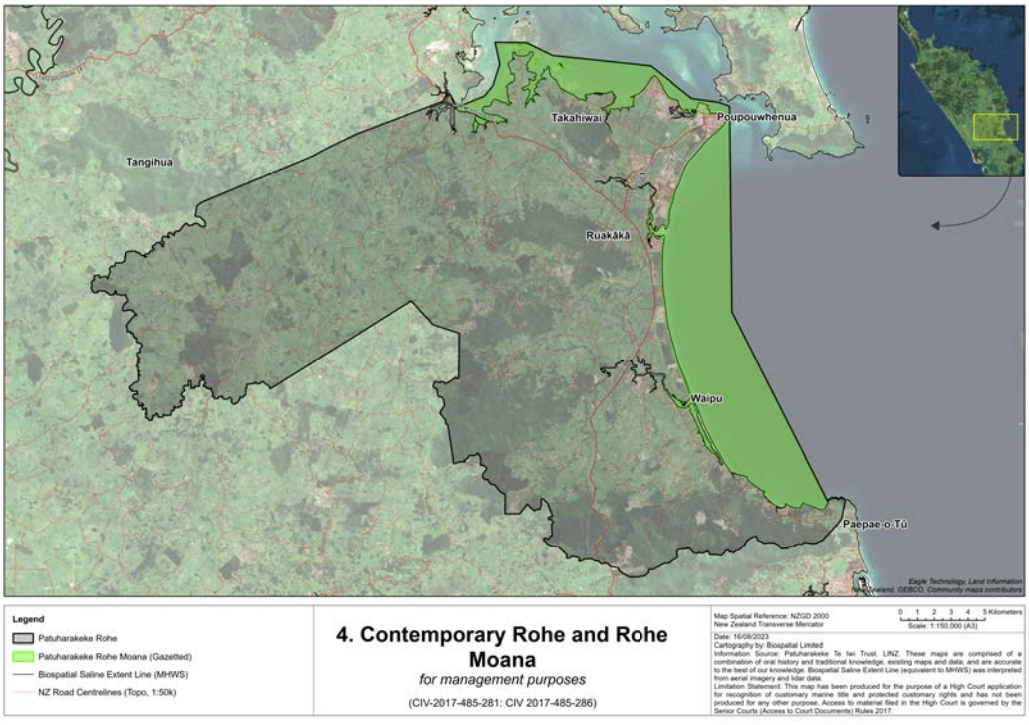

Figure 3.2 Rohe and rohe moana of Patuharakeke

3.3 Patuharakeke Te Iwi Trust

The organisation that represents and protects the interests of Patuharakeke is the Patuharakeke Te Iwi Trust (PTITB). We endorse this CIA as the mandated entity on behalf of the Patuharakeke Hapū. The Trust has existed since its formation in 1990. Our Trust Deed sets out a number of objects and purposes, including matters such as:

- Seeking opportunities for and encouraging training, work experience and creation of employment for Patuharakeke people
- Promoting and making provision for educational and economic advancement, including the promotion and maintenance of the health, education and spiritual wellbeing of Patuharakeke people
- Protecting and utilising land, water and sea-based resources of Patuharakeke.

PTITB's primary intent is to enhance the social development and economic advancement of Patuharakeke Hapū while holding fast to our tikanga and kaitiaki values. Broadly, this entails activities such as seeking opportunities to support the education of our whānau, maintaining kaumātua housing, engaging in resource management and planning, maintaining relationships with the community, and advancing Patuharakeke Waitangi Tribunal claims. Figure 3.3 outlines the governance and organisation structure of the Trust.

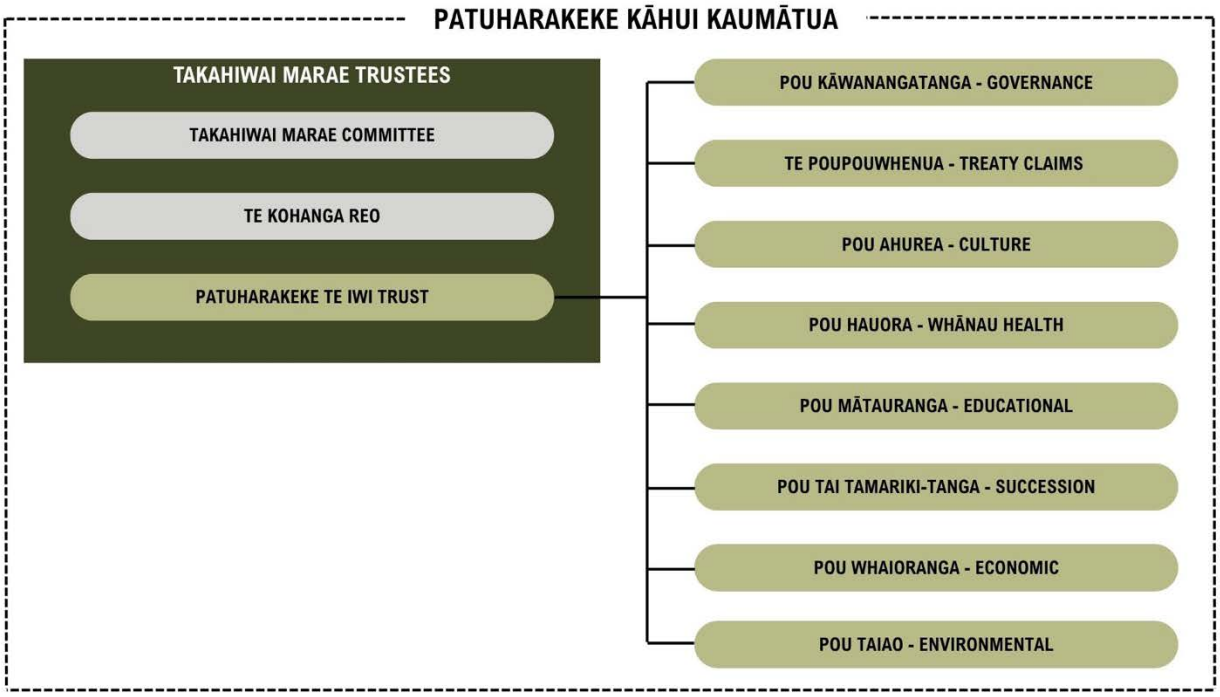

Figure 3.3 Governance and organisational structure of PTITB

PTITB sits alongside the Takahiwai Marae Trustees, the Takahiwai Marae Committee and the Kōhanga Reo. There are eight strategic pou for PTITB (Table 3.1). The Patuharakeke Kāhui Kaumātua is the korowai that envelops all the activities of the various Patuharakeke entities.

PTITB. The Patuharakeke Kāhui Kaumātua is the korowai that envelops all the activities of the various Patuharakeke entities.

Table 3.1 Patuharakeke Te Iwi Trust Board strategic pou

Strategic Pou	Pou description
Pou Kāwanatanga Governance	Make decisions that uphold the values to achieve the vision for Patuharakeke and the community.
Te Poupouwhenua Treaty Claims	Provide support of historical claims of breaches of Te Tiriti o Waitangi.
Pou Ahurea Culture	Develop opportunities to apply mana whenua cultural design and interpretation to support and express the history of the rohe

Pou Hauora Whānau Health	Provide support for initiatives that improve the health and wellbeing of Patuharakeke whānau and the community
Pou Mātauranga Education	Develop and implement an education and employment pathway to support Patuharakeke and the community.
Pou Tai Tamariki-tanga Succession	Support the expression, innovation and delivery of the next generations to apply their approach to the future of the rohe
Pou Whaioranga Economic	Develop opportunities for supporting Patuharakeke economic initiatives.
Pou Taiao Environmental	Identify environmental projects and initiatives to support the restoration and enhancement of the environment that supports Patuharakeke goals.

As Te Pou Taiao, we lead environmental and consenting/approvals matters on behalf of PTITB and we are responsible for representing and advocating for the best interests of Patuharakeke on resource management issues. Our responsibilities include developing CIAs for activities that may affect our taiao and values within our rohe.

3.4 Our strategic pou

Our Strategic Plan 2025-2026 sits above the HEMP and outlines our Strategic Pou (Figure 3.4). These Pou are the pillars of the strategic plan and touch on all wellbeings associated with our hapū. The Strategic Pou guide our aspirations and priority actions.

Figure 3.4 Patuharakeke Strategic Pou

3.5 Our vision and mission for te taiao

The environmental vision and mission statements for the Patuharakeke Te Iwi Trust, as stated in the Hapū Environmental Management Plan 2014 are:

Vision:

> I ngā rā e hī ika, he kupenga tātai āwhai nuku – If you wish to catch fish, first you need to ensure your net is in good order

Mission:

> To revitalise the mauri of our taonga tuku iho

The vision and mission are supported by a set of values that guide our assessment of resource management, consenting, and policy analysis and input into our rohe (Table 5.1).

3.6 Our Resource Management Policy

The Patuharakeke Hapū Environmental Management Plan 2014 (HEMP) predates the Strategic Plan, however any action under the HEMP must align with our Strategic Pou. We developed the HEMP to:

- Ensure the appropriate engagement and participation of Patuharakeke in the planning and decision-making processes of councils, agencies, and developers regarding our rohe.
- Assert our tino rangatiratanga and kaitiakitanga over our natural environment and all ancestral taonga; and
- Achieve the full intent of empowering legislative provisions.
- Clearly identify the environmental management kaupapa of Patuharakeke.

The HEMP is the environmental management plan for Patuharakeke, reflecting the views and perspectives of Patuharakeke on environmental resources and fisheries management. It is a statement of Patuharakeke values and aspirations, which prescribes a series of issues, objectives, and policies related to the environment, and is a living, practical document that helps us proactively and effectively engage in and shape current and future policy, planning processes, and resource management decisions. It states environmental objectives, proposed actions, and outcomes that are priorities for Patuharakeke.

We also developed the 2025 Draft Climate Change Update. This update to the HEMP acknowledges and responds to the ongoing changes in weather patterns and climatic conditions affecting our hapū. The planning framework for the climate change chapter is centred on a Te Ao Māori/whakaaro Māori concept of a waka hourua (double-hulled vessel), a guiding star/whetū, and mātauranga Māori. The issues, objectives and policies outlined in the climate change document focus on five areas that conceptualise components of the waka hourua:

- Hiwi Taha Maui – Mitigation
- Hiwi Taha Matou – Adaptation and Resilience
- Whare – Whanaungatanga
- Hoe Tere – Tino Rangatiratanga
- Rangatiratanga Taiao

Our Draft Climate Change Update also includes the Papa Noho (deck). The Papa Noho holds our Rangatira Sovereignty Framework which consists of:

1. Rangatira Kai (Food Sovereignty)
2. Rangatira Wai Māori (Water Sovereignty)
3. Rangatira Pūngao (Energy Sovereignty)
4. Rangatira Whenua (Land Sovereignty)
5. Rangatira Moana (Ocean Sovereignty)

Enhancing these sovereignties within this project, is critical to helping our people acquire the political mana and resources required to achieve Tino Rangatiratanga, become resilient and live well in a climate crisis future.

3.7 Mana Whakahono ā Rohe

We, the PTITB, hold two Mana Whakahono ā Rohe agreements – one with Northland Regional Council and one with Whangārei District Council. These agreements cover how we will approach future resource management issues within our rohe jointly with each Council.

3.8 Our Tiriti o Waitangi Claim

Patuharakeke have several claims before the Waitangi Tribunal, our key claims are:

- WAI 745 by Paki Pirihi (on behalf of PTITB), and
- WAI 1308 by Ngawaka Pirihi, Paraire Pirirhi, Harry Midwood, Patricia Heperi, Crete Milner and Terrence Pirihi (on behalf of owners of Pukekauri and Takahiwai land-blocks)

Both claims extend from Piroa to north of Otaika, so encompass the Section 2B project area.

We also have an application with the High Court of Aotearoa/New Zealand under the Marine and Coastal Area (Takutai Moana) Act 2011 (MACA Act) for an order to recognise Customary Marine Title and Protected Customary Rights of Patuharakeke in the common marine and coastal area. The application numbers are:

- MAC-01-01-101 or CIV-2017-485-000281 Patuharakeke Te Iwi (Application for Customary Marine Title)
- MAC-01-01-102 or CIV-2017-485-000286 Patuharakeke (Application for Protected Customary Rights)

Both claim areas are within our rohe moana (Figure 3.2). We are seeking to amend the status of Claim MAC-01-01-102 from Protected Customary Rights to Customary Marine Title, but we do not have a decision on that amendment yet.

4 Our method

The methodology for this CIA is underpinned by the strategic pou of Patuharakeke (Figure 3.4).

These strategic pou describe our priority areas for achieving our mission. They guide our decision-making and how we act towards each other, our people, our taiao and the broader community. Our mission from the HEMP and strategic pou have guided the CIA process described below and summarised in Figure 4.1.

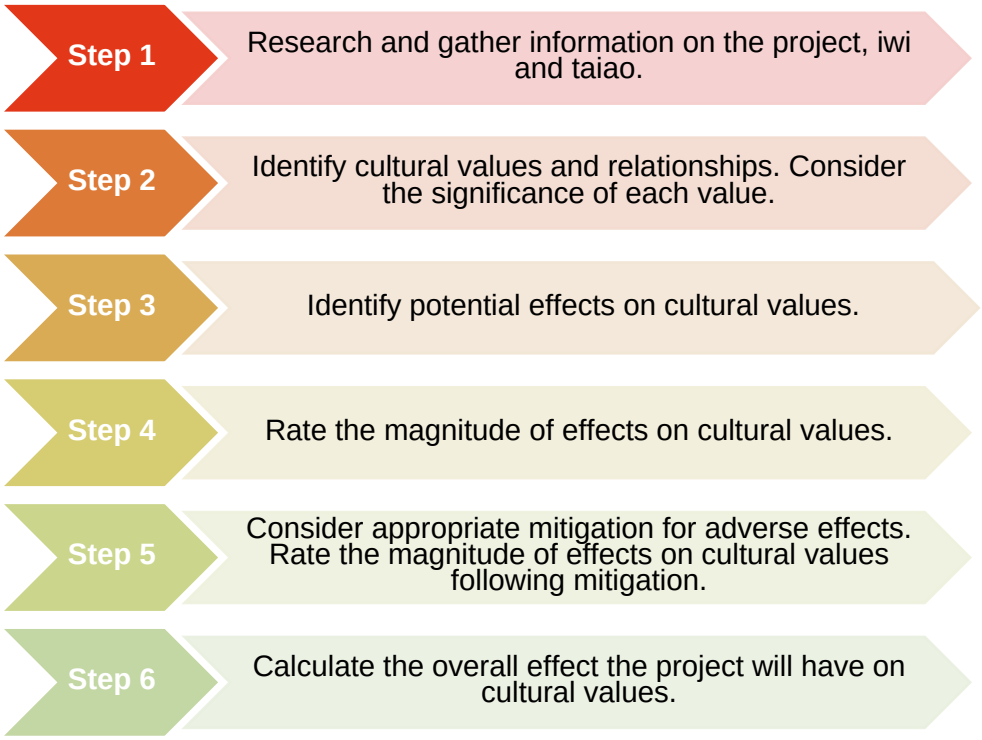

Figure 4.1 CIA process overview

4.1 Research and information gathering

The approach began with consolidating qualitative information on our relationships and connections as affected mana whenua with the project and the surrounding areas. This involved compiling existing documents, such as previous resource consent assessments, CIAs, iwi planning documents, submissions, Waitangi Tribunal reports, and council planning documents.

A series of hui and workshops also took place within Patuharakeke, including with key mātauranga holders. Multiple site visits have been undertaken with the project

team, Patuharakeke and our monitors to gain context and an understanding of the natural environment the project will traverse.

4.2 Identification of values and relationships

Once the research compilation phase was complete, a values framework was developed to contextualise our strategic pou (Figure 3.4) into a set of values specific to the project and project area. Te Pou Taiao compiled the Cultural Values Assessment component of this CIA.

Cultural effects on Māori (and relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga their values, culture and taonga[9]) are not defined in the Resource Management Act 1991 (RMA) nor the FTAA 2024 (FTAA) and have generally been poorly defined in terms of best practice. This lack of definition has often meant that ‘cultural effects’ are narrowly scoped and ‘pigeon-holed’ or reduced as matters relating only to wāhi tapu or heritage seen in a past tense, rather than understanding its continuous nature, incorporating current events or activities as well as past. While these historical matters are critically important, they are only a subset of all the effects that a proposal might have on tangata whenua and their role as kaitiaki.

The RMA provides a holistic framework for collating and considering relevant Māori values for assessment in this context. The relationship of Patuharakeke should be assessed against the framework of sustainable management[10] and the guiding principles outlined in sections 5, 6, and 7 of the RMA 1991 – particularly sections 6(e) and 7(a). This includes recognising the relationship of mana whenua and their culture and traditions with Waipu, ngā awa/ rivers and tributaries, sites, wāhi tapu, and other taonga in the area, as well as their status as kaitiaki and practitioners of kaitiakitanga in relation to these resources.

We used the HEMP values framework to identify what is important to us and how significant these values are in the context of the proposal. Our values guide how we rationalise and perceive the world around us, and relate back to the strategic pou. This approach underpins our cultural impact assessment.

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[9] S6(e), Resource Management Act 1991

[10] Purpose of the Act, s5, Resource Management Act 1991

An essential part of this process was assessing the current state of these values based on the degree to which they are currently provided for. While the values and relationships remain, in some cases historic actions or the state of the environment have significantly diminished the ability for those values to be expressed or experienced. Understanding this baseline provides an important starting point for evaluating the effects of the proposal. Accordingly, this assessment also recognises that there are often opportunities to have a net positive impact on values where restoration or reconnection can be established.

While all values are important, there is generally a different level of significance associated with each value (Table 4.1). Assigning a significance ranking to values helped us to evaluate how critical effects will be on our cultural well-being. To determine our values' significance to this project, we:

- **Considered all relevant information**, including what's proposed, the site characteristics, what's important to us, and the historical circumstances we have experienced relating to the project area.
- **Investigated the unique cultural context** through reviewing project documents and literature, drawing insight from key iwi members via questions over email or phone, attending hui, and conducting interviews to gather knowledge and lived experiences.
- **Applied the scale of Table 4.1** to determine the significance of each value significance.

Table 4.1 Scale to determine significance of Patuharakeke values

Scale	Significance of Ngāti Tamakōpiri value
Very high	The value is integral to our wellbeing and identity. The value is intertwined with who we are and how we connect with our surroundings both physically and spiritually. The value is an essential indicator of how we fit into the world and is pivotal to us thriving.
High	The value is significant to our wellbeing and identity. The value is an important part of our identity and is important to enable our connection within the world. It plays a key role in how we fit into the world and thrive.
Moderate	The value supports our wellbeing and identity. The value substantially contributes to our ability to connect with and thrive within our environment. The value helps us achieve our aspirations.

4.2.1 Value grouping

The values held by Patuharakeke have been grouped based on four themes – Mana Motuhake, Mauri, Whakapapa, and Climate Resilience – to provide a structured framework for evaluating the project's complex impacts (Table 5.1). This approach directly aligns with our Strategic Pou and Climate Waka frameworks, ensuring our assessment reflects the core pillars of our hapū.

These groups allow us to systematically analyse specific technical effects, however we recognise that these values are inherently interlinked and overlapping in Te Ao Māori. By grouping our values, we ensure that every dimension of our relationship with the taiao and our aspirations for the future is considered sufficiently in a complex project.

4.3 Identification of potential effects

Once the information on the site, the proposal, and our relationships and values with the project area were defined, we used our understanding of tikanga to assess the impact of the proposed highway on our relationships and values, and determined the extent (magnitude) of those impacts.

At its essence, tikanga is about the standard or appropriate behaviour. It is based in ancient practice that has been developed and adapted over time by our tūpuna through to our current generations. It involves a series of interconnected ideas and beliefs that accumulate as knowledge through experiences spanning generations, past, present and future. Tikanga is more than Māori customary values and practices; it is about putting into practice what is tika (right) and pono (genuine) under Māori law.

Tikanga guided our evaluation of this project and helped us define the degree of consistency between the project, our values and relationships, and our strategic pou. Tikanga guided us as we assigned magnitude ratings to the potential effects the project will have on our values, relationships and aspirations.

4.4 Rating the magnitude of effects

The extent of the project's actual and potential effects on our relationships and values was rated using a six-level magnitude table (Table 4.2). The magnitude rating process occurs twice in the evaluation. The first magnitude rating is based on the proposal submitted by the applicant. Where magnitude ratings are unacceptable, mitigations are identified that could reduce the level of impact. A second magnitude assessment then occurred assuming that the Patuharakeke-recommended mitigations have been applied.

This second rating exercise tested whether the proposed mitigations will reduce the cultural effects to an acceptable level, allowing tikanga to be satisfied.

The following are considered when rating the magnitude of effects:

Level of confidence. Evaluates the degree of certainty that a specific project activity will result in the predicted cultural or environmental impact.

Spatial scale and extent. Measures the physical reach of an effect, ranging from localised impacts at a specific site to broad changes felt across the wider landscape.

Duration of effect. Assesses the timeframe of an impact to determine if it is a short-term, temporary disruption or a permanent, long-term change.

Reversibility. Gauges whether the impacted cultural value or environment can be restored to its original state or if the damage is irreversible.

Cumulative effects. Evaluates if the project's impacts will combine with past, present, or future activities to produce a larger total effect on our taiao or cultural values.

Table 4.2 Magnitude rating levels and definitions

Magnitude Rating Definitions	
RATING	**DEFINITION**
VERY HIGH	Total loss of, or very major alteration to, key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be fundamentally changed and may be lost from the site altogether; **AND/OR** Loss of a very high proportion of the known value or range of the element/feature.
HIGH	Major loss or major alteration to key elements/features of the existing baseline conditions such that the post-development character, composition and/or attributes will be fundamentally changed; **AND/OR** Loss of a high proportion of the known values or range of the element/feature.
MODERATE	Loss or alteration to one or more key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be partially changed; **AND/OR** Loss of a moderate proportion of the known values or range of the element/feature.
LOW	Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition and/or attributes of the existing baseline condition will be similar to pre-development circumstances or patterns; **AND/OR** Having a minor effect on the known value or range of the element/feature.
NEGLIGIBLE	Very slight change from the existing baseline condition. Change barely distinguishable, approximating to the 'no change' situation; **AND/OR** Having negligible effect on the known value or range of the element/feature.
POSITIVE	Enhancement above baseline condition. Change is beneficial to values and attributes **AND/OR** promotes the value or range of the element/feature.

4.5 Mitigating effects

Once a potential or actual inconsistency with our tikanga was identified (a cultural effect), we explored solutions to bring the project in line with our values and aspirations. The extent or magnitude of the effect and the selected response(s) combine to contribute to a state of balance that, if the project proceeds, would protect and enhance our values and relationships and help achieve our aspirations.

All recommendations made to mitigate cultural effects give effect to the strategic pou of Patuharakeke.

Significant information gaps about the scope and scale of project activities directly affected our magnitude scoring. When we faced incomplete data – especially within the Mauri value group – we adopted a cautious approach. This led to higher magnitude ratings to reflect the ‘worst-case-scenario’ impact on our values. These increased scores show our low confidence that the current project proposal can protect our values.

Within the Mauri value group, we must acknowledge significant uncertainty about whether our proposed recommendations will be sufficient to fully address the project’s impacts. To be clear, this is not a reflection of a lack of confidence in our recommendations; rather, it is a direct consequence of the information deficit we currently face. Because we lack comprehensive oversight of the true extent, scale, and specific locations of project activities within the construction envelope, we cannot yet confirm whether our management measures will cover the full scope of the resulting harm.

Those effects that remain significant after our proposed mitigation measures are applied represent an unmanaged adverse impact that we cannot reconcile with our values at present. Such effects require further discussion with NZTA Waka Kotahi, access to complete technical information, and a substantial strengthening of the conditions framework to ensure our taiao is not left with a permanent deficit.

4.6 Calculating the results

A matrix was used to determine the project’s effects on hapū values (Table 4.3) and to ensure tikanga is being followed – in line with our HEMP and Strategic Pou. The matrix allowed the magnitude of effects to be considered in the context of the significance of the affected value. The result guides the assessment of whether a net

gain, very low, low, moderate, high, or very high level of impact may occur on Patuharakeke.

Table 4.3 Resulting level of effects matrix

		CULTURAL VALUE				
		VERY HIGH	HIGH	MODERATE	LOW	NEGLIGIBLE
MAGNITUDE	VERY HIGH	VERY HIGH	VERY HIGH	HIGH	MODERATE	LOW
	HIGH	VERY HIGH	VERY HIGH	MODERATE	LOW	VERY LOW
	MODERATE	HIGH	HIGH	MODERATE	LOW	VERY LOW
	LOW	MODERATE	LOW	LOW	VERY LOW	VERY LOW
	NEGLIGIBLE	LOW	VERY LOW	VERY LOW	VERY LOW	VERY LOW
	POSITIVE	NET GAIN	NET GAIN	NET GAIN	NET GAIN	NET GAIN

5 Values framework

In Section 3.4, we introduced our strategic pou framework, and in Section 4.2 we explained how these pou have informed the values framework for this CIA.

The framework for this CIA comprises three value groups with interlinked values and associated statements (Table 5.1). The groups include core Patuharakeke values that share themes and have been formed for this CIA. There is overlap between the values associated with each value group due to the interconnectedness of all elements of te ao Māori.

Table 5.1 Summary of value groups that were formed for this CIA.

Mana motuhake	Our position as mana whenua in our rohe.
OUR VALUES	WHAT THEY MEAN
Whanaungatanga	We continue to build positive relationships through design, construction and ongoing operations that provide for our ways of working and our tikanga.
Manaakitanga	Our mana motuhake and right to exercise authority over our lands, waters and taonga as mana whenua.
Mana whenua	We can access traditional places and resources, which enables knowledge retention, revival and transfer, including our customs and practices, knowledge of tohu and the maramataka.
Tikanga	

Mauri

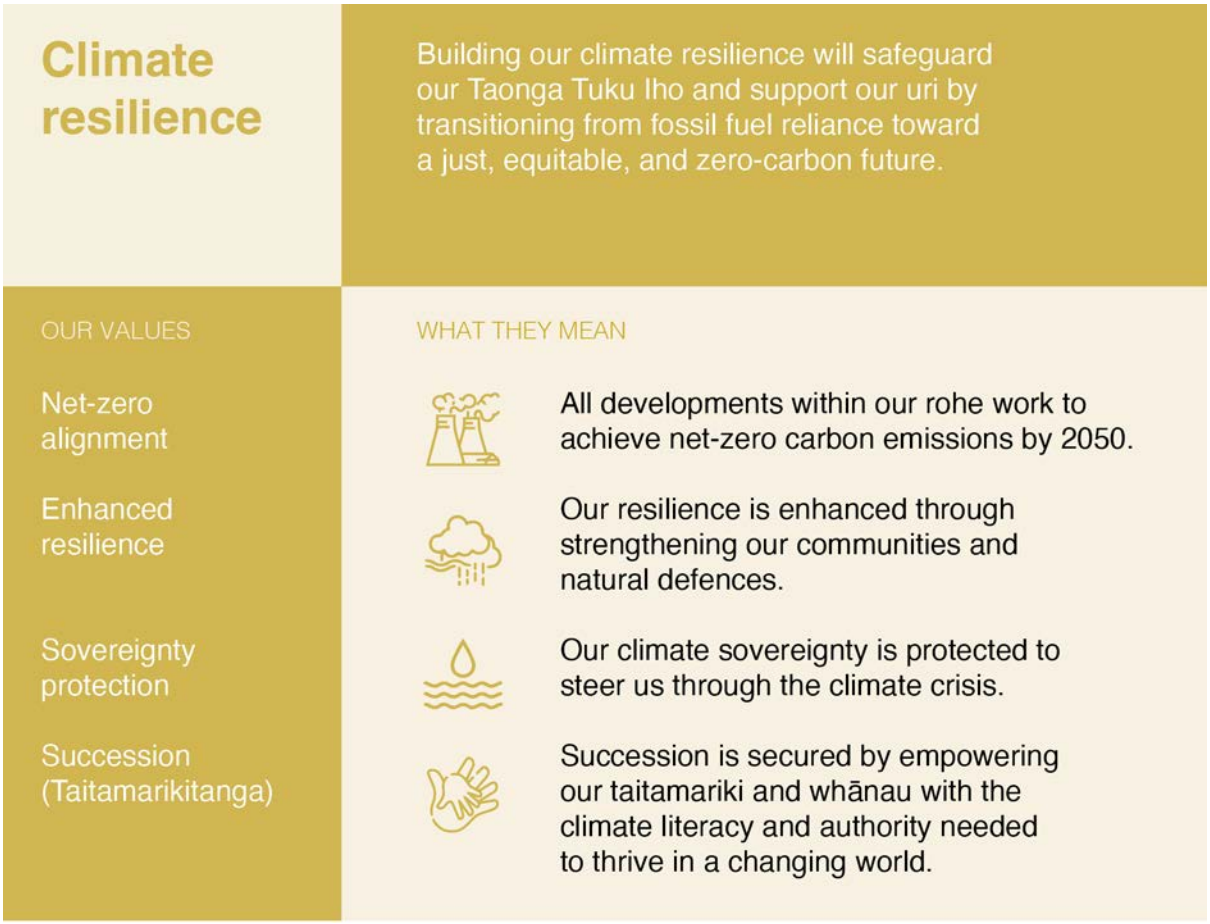
The natural world represents our atua. When the environment is healthy, we are healthy, and our connection to our ancestors is strong. We have the knowledge and the duty to minimise the damage humans cause to nature.

OUR VALUES	WHAT THEY MEAN
Kaitiakitanga	Our awa flow with mauri ora.
Mātauranga	Our repo are functioning, protected and enhanced.
Mauri	Our ngahere is healthy and supports our rongoa and taonga species.
Wairuatanga	Our manu are protected and their habitats are restored.
	Our mokomoko are abundant.
	Our pepeketua are abundant.
	Safe roosting and foraging places are available throughout the landscape for our pekapeka.
	Our ika can access their traditional habitats that are protected and enhanced.
	The importance of our ngārara and tuaiwi-kore is recognised.

Our whakapapa

We have a relationship with all living things. The presence and health of our taonga species connects us to our tūpuna through whakapapa.

OUR VALUES	WHAT THEY MEAN
Kaitiakitanga	The footprints of our tūpuna are recognised, protected and enhanced.
Mātauranga	The recovery of our Waipu Mataitai is supported and there is no further degradation.
	Effects on Te Paritu Pā are avoided.
Tikanga	Piroa is protected and enhanced and the significance of this area as the gateway to Te Tai Tokerau is elevated.
	Our urupā are respected.
	The rākau rangatira within our ngāhere is maintained.
	The provenance of gravel within our rohe is maintained.



5.1 Mana motuhake

Giving effect to whanaungatanga, manaakitanga, mana whenua, tikanga and mātauranga.

This value group reflects our position as mana whenua in our rohe and our right to exercise authority over our lands, waters, and taonga. It encompasses our strategic goal to support economic initiatives (Pou Whaioranga) and uphold our vision for our people and environment through governance (Pou Kāwanatanga).

Mana motuhake links to Hoe Tere (the steering paddle) of our Climate Waka, which represents our rangatiratanga. A genuine partnership in the highway project is essential to support us to ‘steer’ an independent path through the climate crisis.

5.1.1 Whanaungatanga and manaakitanga

We continue to build positive relationships through design, construction and ongoing operation that provide for our ways of working and our tikanga.

Whanaungatanga is the practice of building connections and positive relationships through working together. This value is relevant to the highway project because the alignment passes through an area with deep historical and contemporary community connections to Patuharakeke. Successful project delivery requires a partnership that goes beyond 'consultation', ensuring that the project team builds a meaningful relationship with Patuharakeke that respects our status as Te Tiriti o Waitangi partners and allows for our active participation in decision-making at all levels.

Patuharakeke has maintained strong ties with the Waipu community, dating back to the time of Hinemoana (Hame), sister of Wiki Te Pirihi, who was a frequent visitor to Waipu and married a McKenzie. These relationships were further cemented through shared schooling at Waipu District High School[11], and involvement in local sports and highland dancing. In a contemporary context, we maintain these ties through representation on local boards and by assisting Waipu Primary School with the ongoing incorporation of te ao Māori into its curriculum. We have also formalised long-standing relationships with local councils through Mana Whakahono ā Rohe agreements and are committed to partnerships with the Department of Conservation.

Manaakitanga defines our ability to care for and sustain our whānau and manuhiri (guests). Rangiora Marae at Takahiwai is renowned for this hospitality, a tradition dating back to Chief Wiki Te Pirihi and Chieftainess Tauhou Aoripō. Our tribal histories record that Patuharakeke assisted early Nova Scotian settlers by sharing techniques to protect potato crops from pests using tree-fern fronds, and by sending drays of food to Waipu during times of deprivation. This capacity to host and care for others is directly linked to the abundance of our resources and health of our taiao.

The highway project impacts the resources (mahinga kai) that allow Patuharakeke to exercise manaakitanga. If the project degrades the environment or mahinga kai, our ability to provide for manuhiri and whānau is diminished, thereby eroding our cultural authority and wellbeing. The project must be designed and operated in a way that

[11] Whānau of Patuharakeke generally attended Takahiwai Native School but many went to Waipu District High School.

protects and enhances the resources required to maintain these customary obligations.

5.1.2 Mana whenua

Our mana motuhake and right to exercise authority over our lands, waters and taonga as mana whenua.

Mana whenua is our right to exercise authority over our rohe and its resources. Patuharakeke hold mana whenua at Waipu through senior lines of descent from Te Uri o Te Tangata (Ngāti Tū ki Waipu) and specific tūpuna such as Te Pirihi, Eru Toenga, and Te Whā. This authority is evidenced by our long history of occupation, defence of the land during the wars of the mid-18th century, and the burial of our placenta and bones in the whenua over generations. We continue to assert this right through resource management processes, such as this CIA and our involvement in the project.

The highway project represents a significant intervention in our rohe. Recognising our mana whenua means acknowledging our authority to speak for this land and ensuring we have a partnership role in planning, building, monitoring and maintaining the project. It requires the project to recognise our rangatiratanga and to provide opportunities for us to exercise our kaitiaki responsibilities over the project area.

5.1.3 Tikanga and mātauranga

We can access traditional places and resources, which enables knowledge retention, revival and transfer, including our customs and practices, knowledge of tohu and the maramataka.

Patuharakeke have exercised tikanga in the Waipu area since time immemorial, including the use of rāhui (temporary ritual prohibition) to manage resources or respect tapu areas following death or tragedy. For example, following the massacre of our people by Ngāti Whātua, the Waipu Coast was placed under rāhui to allow the land to recover. We continue to exercise mana rāhui today, such as closures for drownings or whale strandings.

Tikanga, as relevant to project planning, involves following the correct procedures to address adverse effects, such as promoting connections to our traditional places and resources through design. The construction and operation of the highway must also respect Patuharakeke tikanga. This includes adhering to protocols for accidental

discoveries of kōiwi (and subsequent reinterment) and taonga and respecting rāhui. The project offers an opportunity to support the revival of these practices if managed in a culturally appropriate way.

Our mātauranga is our knowledge base that we draw upon to manage resources and includes the retention, revival, and transfer of knowledge, customs, and practices related to our environment. This includes specific knowledge of tohu (environmental indicators), the maramataka (lunar calendar), the whakapapa of our taonga species, and physical knowledge of how the landscape functions, handed down through generations through pūrākau and waiata. We hold specific knowledge, such as the tuatara narratives and their connection to our islands, and the significance of kuaka (godwits) as heralds of the seasons.

The highway project traverses the landscape where our mātauranga is generated and practised. The project is relevant to our mātauranga because any loss of biodiversity or value associated with our traditional places will diminish the value of our mātauranga. Conversely, the project offers an opportunity to utilise Patuharakeke mātauranga in environmental management (e.g., cultural indicators for monitoring) to ensure better outcomes.

5.1.4 Summary of the significance of values within the mana motuhake group

Table 5.2 sets out the current state of values associated with our mana motuhake and the risk the project poses to the value group.

Table 5.2 Significance of values associated with mana motuhake

Mana motuhake			
Value	**State**	**Value significance**	**Strategic pou that provide for this value**
We continue to build positive relationships through design, construction and ongoing operation that provide for our ways of working and our tikanga	We have strong relationships with the Waipu community which were strengthened through marriage, education and shared cultural experiences. These relationships are the result of the manaakitanga of our tūpuna – a value we uphold today. Contemporary relationships have been formalised through mana whakahono ā rohe agreements with local and regional councils and partnerships with the Department of Conservation. We currently have a good working relationship with the NZTA Waka Kotahi operations team. We are concerned that the intent and expectations we hold for the project are being diluted as more consultants and subcontractors are engaged by the project. In addition, our capacity is strained due to the significant amount of information that is being communicated to us and the rate at which that information must be digested. There are unrealistic expectations set for decision making timeframes relative to when we receive project information. These issues lead to us not having sufficient	HIGH	Pou Kāwanatanga (Governance) Pou Tai Tamariki-tanga (Succession) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

	oversight over how mātauranga and expectations for mana whenua engagement and outcomes are communicated to the consultant teams and integrated into the project.		
Our mana motuhake and right to exercise authority over our lands, waters and taonga as mana whenua	Our mana motuhake is the critical foundation of our identity and represents our inherent right to exercise authority, self-determination, and guardianship over our ancestral land, water, and taonga. Our mana motuhake over our land, water and taonga has been systemically diminished through colonisation. We are rebuilding our influence to exercise our authority as mana whenua through mechanisms such as mana rāhui and mana whakahono ā rohe and other mechanisms. There is still work to do to fully realise our mana motuhake as mana whenua.	VERY HIGH	Pou Kāwanatanga (Governance) Te Poupouwhenua (Treaty Claims) Pou Whaioranga (Economic)
We can access traditional places and resources, which enables knowledge retention, revival and transfer including our customs and practices, knowledge of tohu and the maramataka	Mātauranga and tikanga are intertwined and make up a system of how we know, and interact with, the world around us. To retain and rebuild our mātauranga and tikanga, we must have access to our environment, taonga species and significant sites. This access has been limited over centuries of colonisation and development. In addition, the active discouragement of our traditional knowledge and practices through colonial constructs (such as Takahiwai Native School) resulted in the Nova Scotian history of Waipu taking precedence over our history. To rectify this, we continue to advocate and develop initiatives for recognition as ahikā and mana whenua.	HIGH	Pou Ahurea (Culture) Pou Mātauranga (Educational)

5.1.5 Risk of impact to mana motuhake

The highway project poses risks to our mana motuhake if it proceeds without genuine partnership or impedes our ability to exercise authority and practice our customary ways. Key risks include the erosion of decision-making power, loss of access to sites required for knowledge transfer (mātauranga), and environmental degradation that undermines our capacity for manaakitanga. There is also a risk that the project planning and implementation will not give adequate consideration to our tikanga. This could result in maladaptive solutions that do not give effect to, or continue to degrade, Patuharakeke values.

5.2 Mauri

Giving effect to kaitiakitanga, mātauranga, mauri and wairuatanga.

Mauri concerns the 'life force' and health of the natural environment. This values group focuses on our responsibility to minimise environmental impacts and find ways to enhance the health of te taiao.

Mauri links to Hiwi Taha Mauī (the port hull) Hiwi Taha Matau (the starboard hull) on our Climate Waka – representing mitigation and adaptation. Our climate strategy focuses on ecosystem-based adaptation, which has informed our recommendations in this CIA. Biodiversity preservation is one outcome of protecting our environment. Enhancing our taiao also recognises its role as critical infrastructure for climate resilience, such as flood risk reduction and local surface cooling.

The Catchment Context, Challenges and Values (CCCV) storymap refers to a number of marine, freshwater and terrestrial species of significance to Patuharakeke found in the southern Waipu rohe (Te Pou Taiao o Patuharakeke, 2025). These are considered taonga tuku iho and share our whakapapa going back to the atua including Ranginui and Papatūānuku.

It should be noted that there are many other species not specifically mentioned below that are still considered taonga tuku iho and do occur within the proposed corridor.[12] That should not be interpreted to mean they are not also valued and important for Patuharakeke protection and restoration aims. The truncated timeline of this project has not allowed us to fully explore and describe our connections to these taonga.

5.2.1 Our role as kaitiaki

Kaitiakitanga is our duty of care and responsibility toward our taonga tuku iho. Patuharakeke has a long history of engagement in environmental protection, managed today by the Patuharakeke Te Iwi Trust Board's Taiao Unit. Our kaitiaki actively monitor the ecological health of the Waipu Estuary, advocate for the rehabilitation of mahinga kai, and undertake restoration actions for taonga species. This role is vital to our future aspirations as the traditional owners of these resources.

[12] Refer to Patuharakeke CCCV storymap for more information: https://storymaps.arcgis.com/stories/4285bfee052a4db582234cd9264410e5

The highway traverses areas under our kaitiakitanga. The project is relevant to this value because it requires our active involvement in monitoring construction impacts, planning and managing biodiversity offsets, and ensuring that the mauri of the environment is sustained. Participation in the project is a contemporary expression of our kaitiaki obligations.

5.2.2 Awa and repo

Our awa flow with mauri ora.

Our repo are functioning, protected and enhanced.

The Waipu area's network of tributaries, awa, and estuary is of high significance, forming a central part of our cultural landscape. Waterways such as Te Waihoihoi Stream, Ahuroa, and Waipu Rivers support spiritual practices (like baptisms) and provide sustenance (such as tuna, īnanga, watercress). Our tupuna used the awa network for transport and communications, and they are an important way of understanding how our tupuna lived. Our repo (wetlands) were important sources of rongoā (medicines) and weaving materials like kuta and harakeke. They cleanse the waters and protect our communities from severe flooding.

Waterfalls are an important part of our awa system and contain intrinsic mauri and character. Although they are not captured as values in Western ecological assessments, they are of high cultural value to Patuharakeke, being characteristic of the Brynderwyn Hills and Piroa.

Construction activities such as dewatering, excavation, culvert placement, diversions, and sediment discharges threaten the mauri of natural waterways, including waterfalls.

5.2.3 Ngahere

Our ngahere is healthy and supports our rongoa and taonga species.

Our ngahere historically contained abundant rākau rangatira such as kauri, tōtara, and kahikatea, which provided materials for waka, carving, and rongoā. Special fragments of these forests remain on Maunga Piroa, in some lowland areas and along riparian margins, serving as essential habitats and reminders of the past. These last remaining Rangatira must be protected.

The removal of vegetation for the highway impacts the health of the ngahere value and the availability of rongoā and habitat for taonga species. The project is relevant to this value, and it requires clarity on areas of clearance and robust management plans to avoid and minimise loss, treat edge effects that degrade remaining bush fragments and restore other areas to ensure we nurture our ngahere.

5.2.4 Manu

Our manu are protected and their habitats are restored.

Patuharakeke value a variety of taonga manu (bird) species found in the Piroa-Brynderwyn area, including kiwi, kākā, kotare and kūkupa. Coastal species such as the critically endangered tara iti (fairy tern) and kuaka (godwits) are of special significance. Kuaka are viewed as a fortuitous tohu (sign) of spring and environmental health, and were traditionally an important food source.

The Avifauna Assessment identifies the proposed highway will have high levels of effects for the following birds with high to very-high ecological value (Bull, 2026):

- Matuku-hūrepo (Australasian bittern) – Threatened – Nationally,
- Kotoreke (marsh crake) – At risk – Declining,
- Mātātā (North Island fernbird) – At risk – Declining,
- Pīhoihoi (New Zealand pipit) – At risk – Declining, and
- Pūweto (spotless crake) – At risk – Declining.

The key effects on these birds will arise from habitat loss, direct injury or mortality from machinery and vehicle strike, disturbance or displacement and artificial lighting effects.

The highway risks disturbing nesting sites, fragmenting ecological corridors used by manu, and removing ‘stepping stones’ of habitat.

5.2.5 Mokomoko and pepeketua/pangokereia

Our mokomoko are abundant; Our pepeketua are abundant.

Patuharakeke hold specific mātauranga relating to reptiles. Sightings of mokomoko (skinks/geckos) were traditionally considered tohu, and today their presence indicates good mauri in the taiao. We are involved in monitoring programmes for

these species. Similarly, the presence of Hochstetter's frog (pepeketua) in the Piroa Brynderwyn Ranges is viewed as an indicator of mauri ora (vitality).

The alignment may intersect with habitats for these species, posing risks of population mortality and habitat fragmentation. We must co-design necessary relocation plans and population enhancement plans, including predator control, to ensure the abundance of these taonga into the future.

5.2.6 Pekapeka

Safe roosting and foraging places are available throughout the landscape for our pekapeka.

Pekapeka (bats) are associated with the concept of spiritual guardians for Patuharakeke. Recent surveys by our Te Pou Taiao unit confirmed the presence of long-tailed bats (pekapeka tou-roa) roosting in the Pukekauri forest and using the wider landscape as stepping stones in a fragmented habitat matrix.

Highways can disrupt bat movements through habitat removal and lighting (glare). The project is relevant to this value because the Piroa Brynderwyns area is a critical habitat. The project must ensure that roosting and foraging areas are available and connected, predator control is undertaken, minimising the impact of road lighting and traffic on these nocturnal taonga.

5.2.7 Ika, kaimoana, mahinga kai

Our ika can access their traditional habitats that are protected and enhanced.

Mahinga kai and freshwater fisheries (tuna, īnanga, kewai) have traditionally supplemented the larders of our whānau, supporting hui and tangihanga and generally feeding our whānau. We operate under a ‘ki uta ki tai’ (mountains to sea) philosophy, caring for the entire catchment. Patuharakeke are involved in projects to protect īnanga spawning habitats and restore fish passage, recognising them as a keystone species.

The highway crosses waterways that are habitats for these species. Relevance lies in ensuring fish passage is maintained through culverts and that construction does not cause sedimentation that degrades downstream spawning habitats or shellfish beds in the estuary. The goal is to ensure ika can access protected and enhanced habitats.

5.2.8 Invertebrates/ ngārara/ tuaiwi-kore

The importance of our ngārara and tuaiwi-kore is recognised.

Mātauranga Māori recognises the role of ngārara (invertebrates) in breaking down life to create new life. Species like wētā, pupurangi (kauri snail), and pepetuna (puriri moth) are present in the project footprint. The pūrākau (story) of Rata's waka illustrates the significance of these species as ecosystem builders and guardians of the forest.

These species are often overlooked but are indicators of ecological health. The highway project is relevant to this value as vegetation clearance directly impacts their habitat. Management plans must account for the protection of these 'little' taonga to respect the tikanga of the ngahere.

5.2.9 Summary of significance of values within the mauri group

Table 5.3 sets out the current state of values associated with mauri and the risk the project poses to the value group.

Table 5.3 Significance of values associated with mauri

Mauri			
Value	**State**	**Value significance**	**Strategic pou that provide for this value**
Our awa flow with mauri ora	The tributaries within the Piroa/Brynderwyn ranges are generally of high to very high value, characterised by steep gradients, native bush cover, and high water quality (MCI scores >120) (Hickey-Elliott et al., 2024, pp. 50, 53). However, lowland rivers such as the Ruakākā, Hakaru, and Ahuroa show signs of degradation, including sedimentation, nutrient enrichment, and modification by agriculture, resulting in 'poor' to 'fair' habitat quality (Keesing, 2025). Lowland rivers still however have high species diversity being so close to the coast. Waterways such as the Waipu, Ahuroa, Ruakākā, and Waihoihoi are taonga (treasures) essential for spiritual practices (e.g., baptisms) and sustenance (Patuharakeke, 2026). Patuharakeke describe these resources as having been 'ravaged' by deforestation and poor land management, with mahinga kai resources like tuna and watercress now scarce or unsafe to eat due to pollution (Patuharakeke Te Iwi Trust Board, 2014). The mauri of these waters is considered to be in serious decline	VERY HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

	(Patuharakeke Te Iwi Trust Board, 2014) and there is risk this large construction project destroy what's left of the mauri.		
Our repo are functioning, protected and enhanced	Most original wetlands in the ecological district have been drained or lost (Keesing, 2025). Remaining wetlands are often exotic-dominated or degraded (NZTA Waka Kotahi, 2025). Despite their degraded condition, these wetlands remain valuable as they provide opportunities for restoration and serve as a link to the landscapes that existed before wetlands were converted to farmland or affected by cattle. Historically, repo were extensive and vital for gathering rongoā. Weaving materials (kuta, harakeke), and kai (Patuharakeke Te Iwi Trust Board, 2014). They are repositories for cultural artefacts. Their widespread drainage is viewed as a significant loss of both biodiversity and cultural resources (Patuharakeke Te Iwi Trust Board, 2014).	VERY HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)
Our ngahere is healthy and supports our rongoa and taonga species	While settlement and land development cleared much of our ngahere, the proposed route for Section 2B intersects a relatively intact area of bush, including large, high-value contiguous tracts remain around the Piroa/Brynderwyn ranges (e.g., Kauri-podocarp-broadleaf forest), supporting threatened species (Hickey-Elliott et al., 2024; Keesing, 2025). Lowland remnants (e.g., alluvial forests in Waipu) are rare, often narrow, grazed, and infested with weeds however offer a glimpse into last remaining parts of ngahere from the past (Keesing, 2025). Significant fragments of the forests of our tūpuna remain on Maunga Piroa and along riparian margins and in the lowlands. These serve as essential habitats for taonga species and as reminders of the past landscape.	HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

	Forests are the domain of Tāne Mahuta and historically contained rākau rangatira used for waka and carving (Patuharakeke Te Iwi Trust Board, 2014). Places like Pukekauri (hill ensconced in kauri) are central to tribal identity and pepeha (Patuharakeke Te Iwi Trust Board, 2014). The health of the ngahere is intrinsically linked to the availability of rongoā and the survival of taonga species.		
Our manu are protected and their habitats are restored	The area supports high avian diversity (75+ species recorded), including Threatened species like the Australasian bittern and long-tailed cuckoo, and At-Risk species like the New Zealand pipit (Bull, 2025; Hickey-Elliott et al., 2024). The Piroa range supports North Island brown kiwi (Whitfield, 2024). Coastal areas are critical for fairy tern (tara iti) and godwits (kuaka). Birds are taonga species. The kuaka is a culturally significant herald of spring. Birds are indicators of environmental health; their decline impacts mātauranga regarding their traditional uses and management. Information on our manu that was used to inform the Avifauna Assessment is based on old survey data and 12 survey sites within the designation using 5-minute bird counts (Bell, 2026). The magnitude of effects assessment minimises the assigned magnitude if manu are not detected within the designation using the 12 surveys (but is recorded as being within 5 km using other data). Survey data collected is not robust enough to discount manu being within the designation.	HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

Our mokomoko are abundant	Five mokomoko species were confirmed through surveys in the project area: Copper skink, Ornate skink, Forest gecko, Elegant gecko, and Pacific gecko (Denmead, 2026, p. 16) Traditionally viewed as tohu or guardians, today, the presence of mokomoko is interpreted by Patuharakeke as a positive sign indicating good mauri of the environment (Patuharakeke, 2026).	HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)
Our pepeketua are abundant	The alignment follows a gully of high-quality pepeketua habitat and surveys confirmed 318 frogs found. Densities in the Brynderwyn ONL (Zone 2) are extremely high (416.3 frogs/100m adjusted density) (Denmead, 2026, p. 21). These frogs are classified as ‘At Risk – Declining’ (Hickey-Elliott et al., 2024). Like mokomoko, pepeketua are viewed as indicators of mauri ora within the Piroa ranges. Their abundance is a measure of the health of the taiao (Patuharakeke, 2026).	HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)
Safe roosting and foraging places are available throughout the landscape for our pekapeka	Long-tailed bats (Nationally Critical) have been confirmed within the project area, particularly in the Brynderwyn Hills, which provide high-quality roosting and foraging habitat ((Drury & Roets, 2025; NZTA Waka Kotahi, 2025). Pekapeka are considered to be kaitiaki. Cultural sites in Tai Tokerau such as Ruapekapeka are named after them, highlighting their significance (Patuharakeke, 2026). They are seen as a taonga requiring protection from habitat loss and artificial lighting.	VERY HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

Our ika can access their traditional habitats that are protected and enhanced	Waterways support longfin eel (At Risk), shortfin eel, banded kōkopu, Torrentfish, whitebait (īnanga) common smelt, snapper, common bully and redfin bully (Hickey-Elliott et al., 2024; Keesing, 2025). Freshwater crayfish (kewai), NZ endemic freshwater shrimp (koeke) and freshwater mussels (torowai) are also present (Hickey-Elliott et al., 2024). These are mahinga kai, and are essential for maintaining manaakitanga (Patuharakeke Te Iwi Trust Board, 2014). Stocks of tuna, īnanga, and kewai have declined severely, making it difficult for hapū to feed whānau and guests (Patuharakeke Te Iwi Trust Board, 2014). The management philosophy is 'ki uta ki tai' (mountains to sea), recognising the connection between upstream habitats and downstream fisheries	VERY HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)
The importance of our ngārara and tuaiwi-kore is recognised	Notable species include the Kauri snail (Paryphanta busbyi) and Rhytid snail, both 'At Risk – Declining' and present in the Brynderwyns (Hickey-Elliott et al., 2024). Peripatus (velvet worm) has also been detected (NZTA Waka Kotahi, 2025). Invertebrates are recognised in mātauranga Māori as ecosystem builders that break down life to create new life. They are featured in traditions such as the story of Rata's waka and are indicators of ecological health (Patuharakeke, 2026).	HIGH	Pou Taiao (Environmental) Pou Mātauranga (Educational) Pou Hauora (Whānau Health) Pou Ahurea (Culture)

5.2.10 Risk of impact to mauri

The project poses significant risks to mauri through habitat loss and fragmentation, mortality of taonga species, and degradation of water quality (sedimentation, drying and habitat loss). Specific risks include the loss of wetlands, disruption of fish passage, and the potential decline of threatened manu, mokomoko, pepeketua, pekapeka, ika and tuaiwi-kore populations due to construction and operational effects.

5.3 Whakapapa

Giving effect to kaitiakitanga, mātauranga and tikanga.

Whakapapa ties to our Rā Kei (Mizzen Sail of our Waka Hourua), which represents Taitamarikitanga (succession). The protection and preservation of our significant sites is essential for the resilience of future generations. Our tamariki and mokopuna will face a vastly different world from that of our tūpuna, so it is crucial they are able to maintain connections to their hapū and identity through the footsteps of our ancestors.

The proposal is located within a rich cultural landscape we refer to as the ‘footprints of our tūpuna’ (Figure 5.1). This landscape spans from the northern slopes of Piroa (Brynderwyn) to the great expanse of Waipu flatlands, streams and rivers, and estuaries out to our Pariwaka, Waipu, Uretiti takutai coastline, which is bounded on the west and north by the Tangihua, Kukunui and Mareretū Ranges. It contains numerous wāhi tapu, wāhi taonga, and archaeological sites, such as pā, puna (springs), gardens, middens, and storage pits ki uta ki tai that provide physical evidence of our long occupation. Other important tūtohu whenua or cultural markers include our motu – Taranga and Marotiri (also known as the Hen and Chicken offshore Islands) – seaward to the east and Te Paepae o Tū (Bream Tail).

Figure 5.1 Patuharakeke sites of significance[13]

[13] see also CCCV maps https://arcg.is/0LX1zf2

The rich natural landscapes of Waipu have provided for our tūpuna for many generations. The following awa hold significance for our hapū:

- Waipu,
- Waionehu,
- Ahuroa,
- Pohuenui, and
- Waihoihoi.

Other key sites and areas of significance include:

- Waipu Mātaitai Coastal Environment,
- Te Ana-a-Matā/Waipu Caves,
- Te Paritū Pā,
- Uretiti,
- Piroa/Brynderwyns Maunga/Ranges,
- Pariwaka and Wakatarariki/Waipu Cove, and
- Wairahi/Langs Beach.

These places and practices associated with them are imbued with Patuharakeke values such as whakapapa, kaitiakitanga, mātauranga, mana whenua, mauri, tikanga.

The following subsections provide further detail on those sites, areas and features that will interact with the Project.

5.3.1 Waipu Mātaitai Coastal Environment

The Waipu Mātaitai area has deep spiritual connections, including to Te Kahuitara, the goddess of seabirds, after whom a significant ancestress was named. Historically, this area was crucial for customary harvesting of kuaka and seafood (pipi, kūtai, pātiki). Spots outside the wahapū of the awa and along the beach remain favoured for tuatua, pāpaka, tāmure, kahawai, tarakihi and haku. Further upstream of the estuary, the awa and repo (including the lagoon area from the Waipu River mouth back to Pariwaka/Wakatarariki/Waipu Cove) served as important sources of rongoā and mahinga kai, including tuna, kōkopu, kēwai, pārera and other manu, and also harakeke and, kuta for weaving, and other medicinal plants.

Waipu Mātaitai also contains wāhi tapu such as the headland pā site adjacent to Te wahapū o Waipu. Historical records indicate that the ancient Waipu Māori (Ngāi Tahuhu) were driven down the sand spit by Ngāpuhi to a pā site immediately to the north of the Waipu River mouth, where they made their last stand.

On the southern side of the river mouth at Flagstaff Terrace is another complex of multiple archaeological sites, including pā, puna and middens, that later became a key area of trade and development for the Nova Scotian settlers.

While the highway may be inland of these sites, downstream effects on water quality can impact the health of the Mātaitai and its resources. The project must ensure that runoff or sedimentation does not degrade this significant food basket and spiritual area, preserving the integrity of these coastal footprints.

5.3.2 Te Paritū Pā

Te Paritū Pā (‘The Cliff of Battle’) is a significant wāhi tapu located near the Millbrook Road area (Figure 5.2). It was the site of a massacre where many of our tūpuna perished, some jumping to their deaths to avoid capture by Ngāti Whātua and Ngāti Maru. Historical land claims by Chief Te Pirihi acknowledged this loss.

In 1963 an archaeological survey was conducted on a site at Waipu described as a ‘square hilltop pā’ (Patuharakeke, 2026). In the site description, it outlines that bones, some so ancient that they have calcified in clay, lie in a limestone cleft 100 feet below the pā. It also states that there are “many more pā sites along these ridges.”

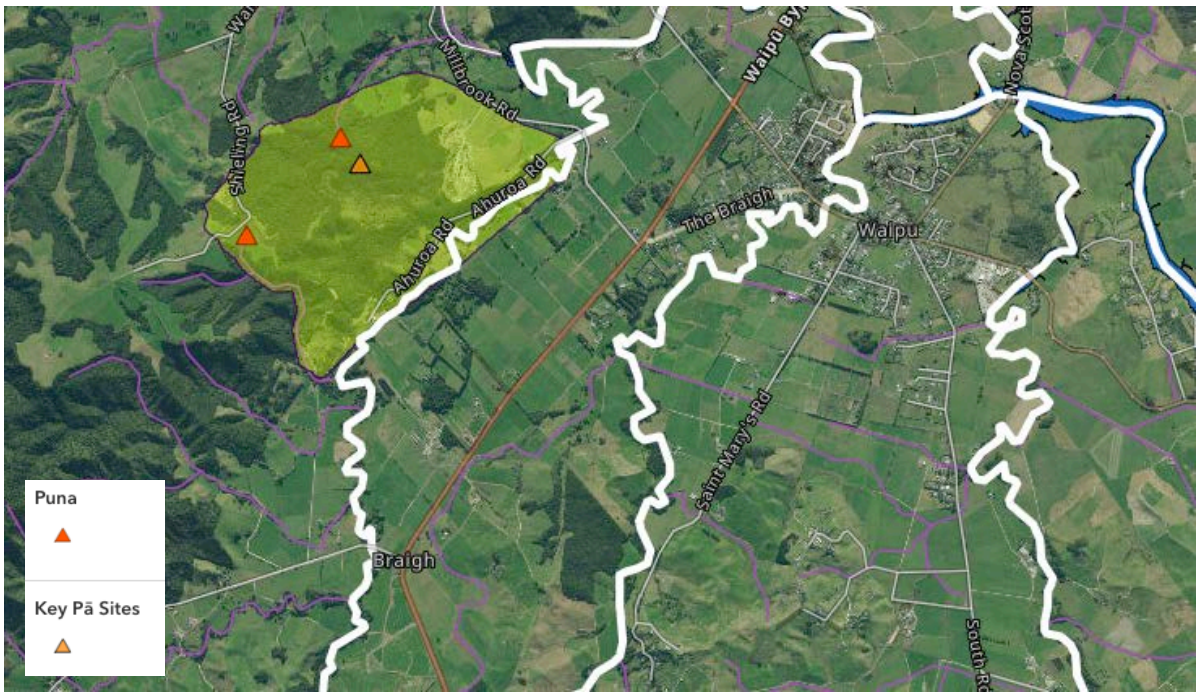


Figure 5.2 Location of Te Paritū Pā relative to the northern extent of Section 2B[14]

Unfortunately, the process of colonisation and land alienation has resulted in the loss of knowledge and kōrero about many other pā sites in the Waipu area. Patuharakeke are actively researching our historical and traditional accounts to regain as much of this knowledge as possible.

This site is in the vicinity of the project area (Section 2B). It is imperative that the project avoid any disturbance to this wāhi tapu and other Pā sites uncovered by the project. The relevance to the highway lies in the strict requirement for protection and the recognition of the deep spiritual hurt associated with this place.

5.3.3 Piroa Maunga – Brynderwyn Ranges

Piroa (the Brynderwyn Ranges) forms the southern boundary of our rohe and acts as a ‘gunwale’ under our Waka Hourua, or buffer between tribes. It is a place where our tūpuna gathered rongoā, such as moss sponges, and lived seasonally. The name Piroa is ancient, applied to both the maunga and the stream.

[14] CCCV maps https://arcg.is/0LX1zf2

Kaumātua have described seasonal travels to Piroa and traversing trails along the ranges where they and their siblings and cousins would climb the trees to gather moss-like sponges.

> ‘We would go there either walking or on the sledge and sometimes would live up there for weeks on end while we were collecting this Rongoa. We would all fill their baskets with the sponges, which were much sought after to assist with women’s ailments (e.g. birth, bleeding, etc.)’.[15]

This range also exemplifies our close whakapapa and whanaungatanga connections with Te Uri o Hau, our neighbours on the southern side of Piroa. The Piroa Ranges are culturally significant to a number of hapū and iwi and different names for them are recorded depending on the particular group. Because this rohe is located between Ngāti Whātua and Ngāpuhi confederations, and serves as a gateway for taua/war parties heading north and south respectively, inter-tribal skirmishes were common. One interpretation of a Patuharakeke whakatauākī about the Ngātiti Pā at Takahiwai is still utilised today in terms of the issues we face and reflects the challenges for mana whenua in this dynamic ‘border zone’.

Tau ana te riri i Ngātiti – toa ana te marino o te raki.

This loosely translates to ‘when there is battle at Ngātiti – the rest of the north is at peace’. It is also associated with a houhorongo – the marriage between Te Raki of Ngāti Tu and Ngāti Ruangaio, and Weku of Ngāti Wharepaia of Ngāi Tāhuhu as the primary basis for peace in the rohe of Patuharakeke.

As the highway crosses these ranges, it physically cuts through a significant cultural marker and boundary. Relevance to this value requires that the earthworks and design respect the mana of the maunga and awa, minimise visual scarring, and protect the remnants of the ancient trails, taonga and rongoā gathering areas.

5.3.4 Urupā

There are numerous urupā (burial grounds) and wāhi tapu throughout the Waipu and Piroa areas that are confidential to our iwi, located in caves or limestone clefts. Some sites, such as those below Te Paritū Pā, contain calcified remains. Te Ana a Matā (Waipu Caves), Waionehu, Ahuroa, Te Paritū are a few wāhi tapu that tūpuna

[15] Personal communication with Patuharakeke kuia Katherine Rean (Juliane Chetham, 2023).

of our hapū repose in within the Waipu area. In some of these mentioned the bones have been stolen by fossickers or relocated to other places of safety by our elders before us.

Some hapū korerō suggest that the Waionehu Stream in the Waionehu valley area of Waipu got its name because it was a location where ancestors' remains were interred. The literal translation ‘the waters of Nehu’ may relate to the ancestress Nehu Naku (also known as Nehe) of Patuharakeke, whose descendants are known to have lived at Waipu. Of importance to Patuharakeke is that there are a number of areas of Piroa and Waipu, which are or have previously been burial grounds, all of which predate Pākehā occupation of the area. Many of these are caves or limestone clefts.

Although much of the knowledge about these areas (and the access to them) has been lost, some has been retained. Kōrero passed down tells of one such waterlocked cave, accessible only by diving, and of a taniwha kaitiaki, a very old and large white eel, once guarding it and its contents. Unfortunately, the eel no longer guards the entrance to the cave and the contents, which once included human remains and artefacts such as stone patu and heirlooms, have been plundered. Some of the artefacts can now be viewed at the Waipu Museum, where they have been deposited by the descendants of those who discovered them in our sites.

The potential for accidental discovery of koiwi (human remains) during highway construction is a critical concern. The project must do further work to avoid our wāhi tapu in the proposed designation /and operate under strict accidental discovery protocols (ADP) and work with Patuharakeke to ensure any found remains are treated with the utmost tikanga and respect, ensuring our tūpuna are not disturbed further.

5.3.5 Rākau rangatira

All indigenous flora is of importance to Patuharakeke whether it be due to traditional and contemporary use for toi whakairo, waka and other construction materials, rongoa or raranga purposes; or as habitat for taonga species. However, certain rākau (trees) carry spiritual significance as Rangatira of the ngahere. This section focuses on those rākau, rather than the general value of the ngahere as discussed in Section 5.2.3.

Key rākau species within the project footprint include; kauri, kawaka and kahikatea, tōtara, rimu, pūriri, taraire, tawa, rewarewa, rata, mānatu, ramarama, nīkau, and kohekohe.

Many of these trees are now declining or at risk. Remnant groves – such as kahikatea along the Waipu flatlands and bordering our tūpuna awa – remain cherished elements of our cultural landscape and hold deep significance for the wider Waipu community. Kauri, regarded as a Rangatira (chiefly) tree, are a cornerstone of the indigenous forests of the Pukekauri/Takahiwai and Piroa/Brynderwyn ranges. Pukekauri, which literally means ‘kauri hill’, forms the backdrop to our Marae and kainga in Takahiwai. Many Patuharakeke whānau reference Pukekauri in their pepeha, highlighting their connection with Parāoa (Sperm Whales) and the use of Parāoa resources to assist in healing kauri affected by the *Phytophthora agathidicida* (PA) pathogen, or Kauri Dieback. This underscores the profound significance of both this place and these species to our identity.

Important fragments of these forest species cloak the Maunga Piroa, gullies and riparian margins of our awa, amplifying the beauty and ecological quality of the southern tūtohu whenua of our rohe. An 1864 map (Figure 5.3) and an overlay of the Waipu Block (Figure 5.4) identify kahikatea groves, some of which remain today. The fragments of this kahikatea grove comprise three stands of mature kahikatea trees near the Braigh Road that are a key part of the rākau Rangatira.

These taonga serve as a reminder of what our rohe looked like in the past and provide a vision for what restoration could achieve.

Figure 5.3 Map from 1864 showing historical vegetated areas

Figure 5.4 The 1864 map overlaid with the Waipu Block showing 'Grove of Kahikatea'

The highway alignment may require vegetation removal. The value of Rākau Rangatira dictates that these chiefly trees should be avoided at all costs. If removal is necessary, the wood should be returned to the hapū for cultural use (e.g., carving), and replanting should focus on restoring these taonga species to the landscape.

5.3.6 Gravel supply

Earth resources, including soil and minerals (such as gravel), are finite and possess their own mauri. Inappropriate extraction or land use can destroy this mauri, leading to erosion and sedimentation. Patuharakeke consider the earthworks associated with development as an intervention that must be managed carefully to avoid damaging the mauri of the land.

Highway construction involves significant earthworks and the movement of gravel/soil. Relevance to this value implies that cut-and-fill material should remain within the rohe to maintain its provenance connection to the area. Furthermore, erosion and sediment control must be robust to prevent the ‘bleeding’ of Papatūānuku into our waterways.

5.3.7 Summary of the significance of values within the whakapapa group

Table 5.4 sets out the current state of values associated with our whakapapa and the risk the project poses to the value group.

Table 5.4 Significance of values associated with whakapapa

Whakapapa			
Value	**State**	**Value significance**	**Strategic pou that provide for this value**
Our sites of significance are recognised, protected and enhanced.	The landscape contains the footprints of our tūpuna, including pā, puna, gardens, storage pits and middens. Our knowledge of many sites has been lost due to land alienation and development. Others have been damaged by fossickers and development due to a lack of statutory protection. All sites, or remnants of sites, remain spiritually significant and require protection from disturbance (Patuharakeke, 2026).	VERY HIGH	Pou Ahurea (Culture) Te Poupouwhenua (Treaty Claims) Pou Taiao (Environmental)
The recovery of our Waipu Mataitai Coastal area is supported and there is no further degradation.	Waipu mātaitai is a customary seafood gathering area with deep spiritual connections to Te Kahuitara. It was historically crucial for harvesting kuaka, pipi, kūtai (mussels), and pātiki (flounder) (Patuharakeke, 2026). This estuarine environment is currently degraded by sedimentation and poor water quality from upstream catchments (De Luca, 2025). It remains a critical habitat for shorebirds and shellfish but is under pressure (Patuharakeke Te Iwi Trust Board, 2014). The poor quality affects our connection to our taiao and tūpuna.	VERY HIGH	Pou Ahurea (Culture) Te Poupouwhenua (Treaty Claims) Pou Taiao (Environmental)

Effects on Te Paritū Pā are avoided.	Te Paritū Pā is currently in private ownership, which limits our ability to care for, connect with and learn about this significant site. We know Te Paritū was the scene of burials and massacres so the presence of kōiwi and historic taonga and artifacts is likely. Millbrook Quarry sits within the defined cultural 'area' of Te Paritū, and there have been cases of fossicking around the pā site. Both these activities impact the mana and wairua of Te Paritū and it is likely some key archaeological features have been disturbed and lost over the years.	HIGH	Pou Ahurea (Culture)
Piroa is protected and enhanced and the significance of this area as the gateway to Te Tai Tokerau is elevated.	Piroa is the southern boundary marker of the Patuharakeke rohe ('gunwale' of the Waka Haurua canoe) and a place of seasonal living and rongoā gathering. It is a visual and cultural anchor for our hapū (Patuharakeke, 2026). The Piroa area is the gateway to Te Tai Tokerau, however this status has not been sufficiently recognised to date. Portions of Piroa are classified as an Outstanding Natural Landscape (ONL) (Lister & Jones, 2025). It is a biodiversity stronghold containing high-quality forest and streams that support threatened frogs, bats, and birds (NZTA Waka Kotahi, 2025).	HIGH	Pou Ahurea (Culture) Pou Taiao (Environmental)
Our urupā are respected.	Burial grounds are numerous in the area, often located in caves or limestone clefts (e.g., Waipu Caves, Te Paritū) (Patuharakeke, 2026). Some have been desecrated by fossickers in the past, making their protection paramount. These sites are often associated with specific geological features like karst systems or coastal dunes (Patuharakeke, 2026). There is a risk that urupā could be disturbed in the Brynderwyn Hills where extensive excavations will be taking place.	VERY HIGH	Pou Ahurea (Culture)

The rākau rangatira within our ngahere is maintained.	Chiefly trees such as kauri, tōtara, and kahikatea are central to identity and traditional practices (carving, waka construction) (Patuharakeke, 2026). Old growth specimens within the designation are at risk. A stand of mature Kauri (likely hundreds of years old) was identified in a northern gully of the Brynderwyns and Kahikatea in the northern flatlands. Kauri dieback is a confirmed threat in the ranges, which means these trees need specific treatment to ensure their protection (Whitfield, 2024).	VERY HIGH	Pou Ahurea (Culture) Pou Taiao (Environmental)
The provenance of gravel within our rohe is maintained.	Earth resources, including gravel, possess provenance and mauri. They are finite resources, and their extraction is viewed as an intervention that must be managed carefully to avoid destroying the mauri of the land. There are several quarry in the vicinity of the Project Designation, with Atlas Quarry (south east) and Millbrook Quarry (north west) being the most prominent. Material from these quarries is currently transported to sites that are not within the same catchment, geological area or rohe as the source. This relocation of material severs provenance ties and is already impacting on Papatūānuku and our spiritual and cultural values.	HIGH	Pou Ahurea (Culture) Pou Taiao (Environmental) Pou Whaioranga (Economic)

5.3.8 Risk of impact to whakapapa

The risk to whakapapa values involves the physical destruction of wāhi tapu (known or unknown), the severance of cultural landscapes by the road corridor, and the loss of taonga like Rākau Rangatira. There is also a risk that the project will be viewed in isolation rather than as an intrusion into a connected, living cultural landscape.

5.4 Climate resilience

The deepening climate crisis represents the single greatest threat to our Taonga Tuku Iho today. As the highway traverses the southern boundary of our rohe, it must be evaluated through the lens of our Climate Waka to ensure it contributes to a just and equitable transition to a zero-carbon and climate-resilient future. While the project approach is focused on cost-effectiveness, it also must consider ways to avoid embedding a long-term reliance on fossil fuels.

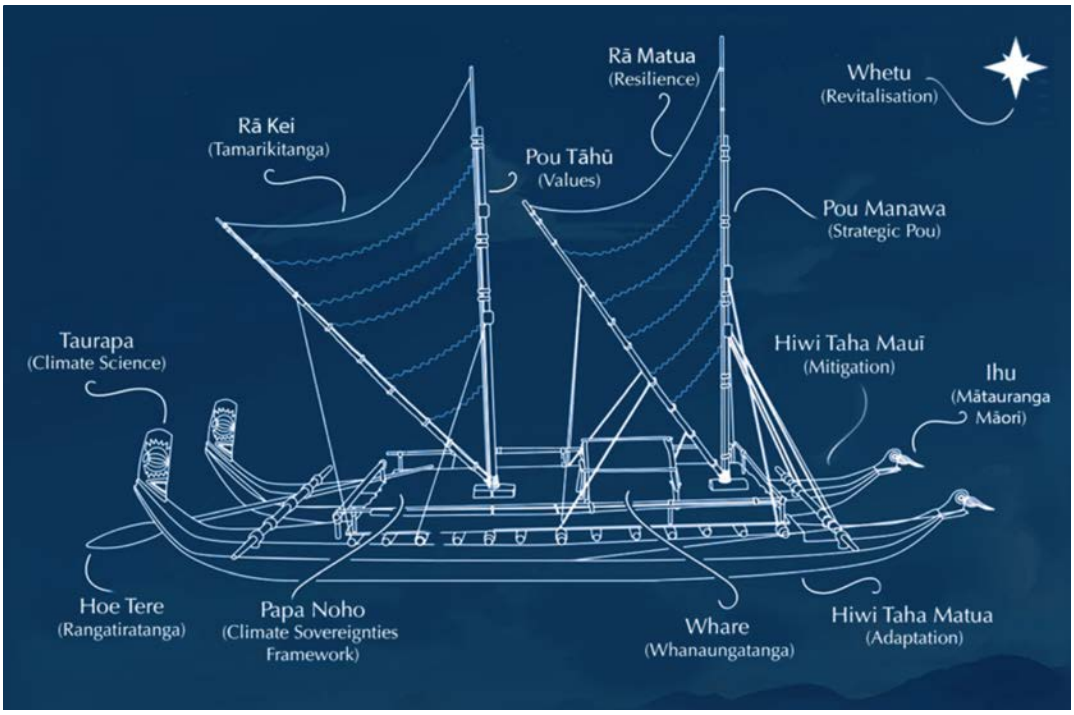


Figure 5.5 Patuharakeke Climate Waka

We have built our metaphorical Waka Hourua (double-hulled waka) to support our uri through unprecedented storms, setbacks and challenges that we will face in the deepening climate crisis (Patuharakeke Te Iwi Trust Board, 2025). The Climate Waka framework also prioritises revitalising the mauri of our taonga tuku iho.

- Whetu (Guiding Star) – Revitalisation: Our principal mission is to ensure ecosystems and people thrive despite a rapidly warming world.
- Ihu (Bowsprit) – Mātauranga Māori: A holistic lens that considers the interconnectedness of all living things through whakapapa to lead our climate response.
- Taurapa (Stern Post) – Climate Science: Provides accurate data and modelling to inform planning decisions.

- Hiwi Taha Mauī (Port Hull) – Mitigation: The urgent action required to stop greenhouse gas pollution and reach net-zero by 2050.
- Hiwi Taha Matau (Starboard Hull) – Adaptation: Practical measures to prepare for inevitable impacts, such as sea-level rise and extreme weather.
- Hoe Tere (Steering Paddle) – Tino Rangatiratanga: Our political self-determination allows us to lead our own independent path toward a better future.

The existing State Highway 1 is highly vulnerable, having closed for 73 days in 2023 due to Cyclone Gabrielle and other extreme weather events. While Section 2B is intended to enhance regional resilience, the Patuharakeke Climate Waka demands that this infrastructure does not come at the cost of our local climate defences. The removal of indigenous vegetation, waterways and wetlands directly depletes our flood capacity and natural carbon sinks.

5.4.1 Climate sovereignty framework

Connecting both hulls, the ‘Patuharakeke Climate Rangatiratanga Framework’ is at the heart of our climate mahi and provides vigorous biophysical foundations to support our people as the climate crisis unfolds. To fully express our tino rangatiratanga and mana motuhake, we broke the framework into the following five dimensions:

1. Rangatiratanga Kai (Food Sovereignty)
2. Rangatiratanga Wai māori (Water Sovereignty)
3. Rangatiratanga Pūngao (Energy Sovereignty)
4. Rangatiratanga Whenua (Land Sovereignty)
5. Rangatiratanga Moana (Ocean Sovereignty)

Enhancing these dimensions is critical to helping our people acquire the political mana and resources required to achieve Tino Rangatiratanga, become resilient, and live well in a climate-crisis future. Each dimension will be developed and implemented through an individual workstream.

The outcomes of the climate sovereignty framework will have physical, mental, social and spiritual benefits for our hapū and whānau. We aim for a rohe that provides nourishment, security and mauri-enhancing activities for our people.

5.4.2 Key climate outcomes

For this project to receive our support, it must achieve the following climate-specific outcomes:

Table 5.5 Climate change outcomes for the project

Outcome	Description
Net-zero alignment	All developments within our rohe work to achieve net-zero carbon emissions by 2050.
Enhanced resilience	Our resilience is enhanced through strengthening our communities and natural defences.
Sovereignty protection	Our climate sovereignty is protected to steer us through the climate crisis.
Succession (taitamarikitanga)	Succession is secured by empowering our taitamariki with the climate literacy and authority needed to thrive in a changing world.

5.4.3 Summary of the significance of values within the climate resilience group

Table 5.6 sets out the current state of values associated with our climate resilience and the risk the project poses to the value group.

Table 5.6 Significance of values associated with our climate resilience

Climate resilience			
Value	**State**	**Value significance**	**Strategic pou that provide for this value**
All developments within our rohe work to achieve net-zero carbon emissions by 2050.	Our aspiration for our rohe is net-zero carbon emissions by 2050. This means every new development in our rohe must contribute towards this target. Unfortunately, movements by Waka Kotahi have disincentivised projects from building highly efficient and sustainable roads: - In 2023, Waka Kotahi removed the requirement to quantify emissions from road building, indicating transports priorities would shift away from reducing emissions. - In the 2024-2027 National Land Trasport Program, Waka Kotahi reduced funding for walking and cycling activities by around 40% compared to the 2021-2024 period. - In 2023, Waka Kotahi also placed the 'Transport Choices' program (a $305 million program aimed at cycling, walking and public transport infrastructure) on hold, in line with the reprioritisation of funds for road building. These actions signal a change in priority for Waka Kotahi away from climate sensitive infrastructure, which is reinforced by the 'no-frills' approach to the	HIGH	Pou Kāwanatanga (Governance) Pou Taiao (Environmental) Pou Hauora (Whānau Health)

	current project. Unfortunately, ‘no frills’ seems to exclude basic net-zero actions such as active transport networks and seeking opportunities to reduce project emissions.		
Our resilience is enhanced through strengthening our communities and natural defences.	The existing State Highway 1 corridor is highly prone to atmospheric rivers and floods, demonstrated by its 73-day closure in 2023 following Cyclone Gabrielle. Our rohe is experiencing significant stressors including increasing temperatures, sea-level rise, coastal erosion, drought, and higher risk of wildfires. Past land management practices have already weakened natural systems, leaving the mauri of local waters and wetlands in serious decline and reducing their ability to act as natural climate defences. There is a historic lack of information and rohe-specific planning from decision-makers, which impacts our ability to build our resilience. We are in the process of reclaiming mātauranga and Western scientific data within our rohe to ensure we are equipped to make good decisions as the climate changes. The ability of the hapū to practice manaakitanga for hāpori (caring for the wider community) is under pressure as climate change puts pressure on the societal and ecological conditions required for local resilience.	VERY HIGH	Pou Kāwanatanga (Governance) Pou Whaioranga (Economic) Pou Ahurea (Culture) Pou Taiao (Environmental) Pou Hauora (Whānau Health)
Our climate sovereignty is protected to steer us through the climate crisis.	The current state of our climate sovereignty is characterised by a high degree of vulnerability and a legacy of systemic erosion. While we are actively working to rebuild our influence in environmental decision-making, several critical factors limit our full expression of Tino Rangatiratanga: - Colonialisation created a baseline where we are not yet able to exercise complete rangatiratanga over its core dimensions of sovereignty: kai, whenua, wai māori, moana, and pūngao.	HIGH	Pou Kāwanatanga (Governance) Pou Whaioranga (Economic) Pou Ahurea (Culture) Pou Taiao (Environmental)

	- Historical industrial development and land use have left a legacy of emissions and contamination within the rohe. - Our sites of significance, including our tūpuna awa and rākau rangatira, are increasingly vulnerable to sea-level rise, inundation, and flooding. As they stand, the decision-making regimes and conditions proposed for this project will further diminish our climate sovereignty. We are identified as mana whenua, however partnership in high-level decision-making remains restricted.		Pou Hauora (Whānau Health)
Succession (taitamarikitanga) is secured by empowering our taitamariki with the climate literacy and authority needed to thrive in a changing world.	Taitamarikitanga is marked by an an intergenerational equity issue where our taitamariki and uri are set to inherit a hotter and vastly different world. Several factors influence how our taitamariki are currently poised to cope with the changing climate, including: - Varying levels of climate literacy. - A range of abilities to undertake positive climate action. - A lack of opportunity to have a meaningful voice in large-scale infrastructure projects. As a hapū trying to ensure successive generations are equipped to adapt into the future, we are currently limited by a lack of data on regional development programmes and emissions accounting. This lack of information affects our ability to make informed decisions on whether regional infrastructure funding is being used for the highest-priority resilience needs of the iwi. Information gaps also affect our ability to improve the climate literacy of our taitamariki. Existing development pressures and climatic shifts are also already limiting the options available for future generations regarding safe places to live, healthy ecosystems to absorb climate effects, and maintained connections to wāhi tapu.	VERY HIGH	Pou Ahurea (Culture) Pou Taiao (Environmental) Pou Hauora (Whānau Health) Pou Mātauranga (Educational)

5.4.4 Risk of impact to our climate resilience

The risk to climate resilience values involves the further weakening of natural systems that serve as critical defences against the impacts of a changing climate. There is also a risk that the project's ‘no-frills’ approach will prioritise road building over climate-sensitive infrastructure, effectively excluding essential net-zero actions and active transport networks. This approach risks embedding a long-term reliance on fossil fuels and shifting transport priorities away from reducing emissions, which undermines our aspiration for a net-zero rohe by 2050.

6 Assessment of cultural effects

This section describes, for each of the value groups of Patuharakeke, an assessment of the potential and actual adverse effects of the proposed development on our values. This assessment has been completed following the process detailed in Section 0 above.

Each table below provides a summary of the potential effects of the project with and without effects management actions. The magnitude of the potential effects of the project with only Waka Kotahi proposed management actions applied is recorded, with reasons for that magnitude score. The tables then show the additional measures, if required, that we (Patuharakeke) recommended to avoid, remedy, and mitigate the adverse effects, followed by an adjusted magnitude score that reflects the magnitude of effects once Patuharakeke mitigations have been applied. The magnitude of the identified effects is categorised based on the framework in Section 0 above.

Through the research phase, including kōrero with iwi members, it was concluded that the identified values fall within four broad value groups. Those value groups have been used as the framework of the cultural impact analysis. The identified value groups are

- Mana Motuhake
- Mauri
- Whakapapa
- Climate Resilience

6.1 Magnitude of effects on our mana motuhake

The following table (Table 6.1) records the potential and actual effects, and their magnitudes, on our Mana Motuhake values group. Our Mana Motuhake and connected concepts are described in Section 5.1.

Table 6.1 Effects assessment and recommended mitigation for the mana motuhake value group

Magnitude of project effects on our mana motuhake				
Effect	**Magnitude WITHOUT management**	**Reasoning**	**Proposed effects management**	**Magnitude WITH management**
We continue to build positive relationships through design, construction and ongoing operation that provide for our ways of working and our tikanga. Confidence: High Scale: Project wide, with a focus on Brynderwyn Hills and the northern section. Duration: Project construction and operation Reversible: Yes, but difficult post consenting Timing: Current				
Our mana is directly linked to the mana of our taiao and our ability to manage it according to our tikanga. The highway construction and operation will leave a scar on Papatūānuku, destroy the mauri of the whenua and our connections with it. In this context, our mana – and our ability to determine what happens on our tūpuna whenua – will be adversely impacted in two ways: - **The lack of authority we hold over what happens on our tūpuna whenua will erode our mana.**	HIGH	Our role as mana whenua is a foundational part of our identity that has been restricted and diminished through colonisation. Any further restrictions on our ability to self-determine are untenable, especially in a project of this size. The project will involve a massive influx of external contractors and consultants	Recognise us as **partners and decision-makers** in project environmental governance (e.g. Patuharakeke representation on the Project Alliance Board/s, procurement decision making, any project steering groups, hold weekly environmental management hui with planning teams and environmental managers including resourcing).	LOW

- **Further degradation of the natural environment and Papatūānuku** The erosion of our mana **ultimately diminishes our cultural identity as mana whenua**.		over roughly a 5 year period. Without cultural inductions, partnership and engagement protocols, there is a high risk that the nuances of Patuharakeke tikanga and our specific history with our significant sites will be misunderstood and/or undervalued by visitors to our rohe. There are no mana whenua conditions or protocols set out at the current time.	**Establish and resource a forum** to provide guidance and advice on: - Development of tikanga guidelines and implementation. - Protocols for communicating, collaborating and engaging with hapū partners. - Coordinating hapū partner engagement activities. - Implementation of conditions recommended by this CIA. Invite us and resource us to develop and deliver **cultural inductions** for all site workers. Invite us to undertake **karakia/opening** of the project and prior to the road becoming operational. **Resource a Hapū Liaison role** within the project team to manage day-to-day communications and ensure no surprises.	

Our mana motuhake and right to exercise authority over our lands, waters and taonga as mana whenua. Confidence: High Scale: Project wide, with a focus on Brynderwyn Hills and the northern section. Duration: Project construction and operation Reversible: Yes, but difficult post consenting Timing: Current				
The proposal represents a **significant intervention in our rohe** – affecting our whenua, wai, taonga and our connections. Future decisions made post consenting during detailed design regarding aspects such as material supply, the disposal of spoil, what habitat to avoid and the treatment of water risk **directly affecting our ability to exercise our mana motuhake.** If NZTA Waka Kotahi relies on the minimum statutory requirements for mana whenua engagement and environmental mitigation, our authority as **mana whenua will be diminished** as the project progresses.	HIGH	The project will have significant, permanent effects on our lands, waters and taonga. We have already been excluded from developing the scopes of technical assessments, participating in environmental data collection, and collaboratively designing mitigations and management recommendations, which has resulted in significant gaps in the draft assessments. Without a framework for participation in decision making going forward, our role as mana whenua will be significantly diminished.	Involve us in the **detailed design and governance** via forums set out above. Invite us to comment on and **review all management plans**, prior to certification with Councils post consent phase. **Provide appropriate resourcing** for implementing management plan objectives and outcomes. Invite us to **regular site visits** during construction so we have oversight of construction activities and project progress. We may also request a site visit where we have a concern. Support the development and implementation of a **kaitiaki monitoring** programme. **Embed** full-time, resourced Kaitiaki monitors for all earthworks, vegetation	NEGLIGIBLE

			clearance and in-stream works to ensure mana motuhake is exercised on the ground. Resource the implementation of a **Patuharakeke Values Management Plan** alongside the suite of other project management plans. A draft plan is set out in Appendix B.	
We can access traditional places and resources, which enables knowledge retention, revival and transfer including our customs and practices, knowledge of tohu and the maramataka. Confidence: High Scale: Project wide, with a focus on Brynderwyn Hills and the northern section. Duration: Project construction and operation Reversible: Yes, but difficult post consenting Timing: Detailed design				
The physical footprint may **sever access to culturally important** sites – especially where awa are proposed to be culverted or diverted, ngahere will be removed and where wetlands are proposed to be filled or drained. **Noise and vibration** from the highway operation will affect the quiet required for wānanga and observation of tohu within our taiao.	MODERATE	We are in the process of re-connecting with mātauranga where it was lost through the process of colonisation. This re-connection process requires physical access to be protected and recreated with our taiao, for future generations.	**Return** excess land to hapū at the conclusion of the project. This could be achieved through transferring ownership of sanctuary land to Patuharakeke or creation of ngā whenua rāhui covenants. **Establish** legal covenants or access agreements to ensure continued access to landlocked sites of significance, Piroa, ngahere, repo and riparian margins.	POSITIVE

The project will create **positive opportunities to access parts of our rohe** we have been disconnected from for the past century due to being in private ownership. There is a risk of an adverse impact on our values if those opportunities are not taken.		Currently, land ownership (particularly in the Piroa area) restricts access to some of our most abundant whenua and taonga species. We see a core opportunity for this project to support the enhancement of our values through access to our ngahere, awa and repo and the fauna they sustain.	**Establish a protocol** for sharing information with us to support our understanding of the state of our tūpuna whenua. **Facilitate opportunities for taitamariki** to engage with the project through initiatives such as seed collection, species translocation and archaeological monitoring to promote inter-generational knowledge transfer. **Integrate our sites of significance and cultural values** into the project design. This may be achieved through mahi toi and the use of traditional names. Invite us to contribute to a **Cultural and Environmental Design Framework** which brings together areas of natural character restoration, ecological offsetting, Mahi Toi and access to te taiao. **Include** specific provisions to restore access for whānau to key sites and install acknowledgements of key pā sites and wāhi tupuna on the alignment in the Construction Traffic Management Plan.	

6.2 Magnitude of effects on the mauri of te taiao

The following table (Table 6.2) records the potential and actual effects, and their magnitudes, on the mauri of te taiao. The importance of mauri is described in section 5.2. Where project effects require further mitigation than currently proposed, management measures are specified. Further magnitude evaluation is then undertaken, assuming the effects management measures are in place, to assess the final magnitude if Patuharakeke recommendations are adopted.

Table 6.2 Effects assessment and recommended mitigation for the mauri value group

Magnitude of project effects on the mauri of te taiao				
Activity / Effect	**Magnitude WITHOUT management**	**Reasoning**	**Proposed effects management**	**Magnitude WITH management**
Our awa flow with mauri ora. Confidence: Low due to construction envelope approach and lack of project information available at the current time, no conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Reach- Catchment Duration: During construction (sediment release, habitat destruction and hydrological disruption) and during operation (stormwater release and hydrological disruption). Reversible: No Timing: During construction and operation				

The proposed works to construct the new highway will have an impact on our awa in both a **physical and spiritual** sense. Including disruption of our role as kaitiaki. Key effects will arise from: - **Earthworks and sediment release to our waterways.** Large infrastructure projects release sediment to waterways even when best practice sediment erosion control measures take place. Large scale earthworks (approximately 13 million m3 of cut and 7.4 million m3 of fill, material supply and spoil site creation) and associated sediment release will negatively affect the mauri of our wai (NZTA Waka Kotahi, 2026a). - **Physical habitat destruction.** It is suggested around 4.7 km of culverts and an unknown length of stream diversions will be required on the project ranging from 10 m in length to 400+ m in length (Hasan-Zadeh, 2026). We are unclear what extent of these culverts and stream diversions are within waterways versus overland flow paths because we do not have the freshwater technical assessment at the time of writing this CIA. Installation of culverts and diversion of streams within natural waterways	VERY HIGH	Our awa are woven into our whakapapa. Their health and wellbeing are directly linked to the health and wellbeing of our people and the surrounding ecosystems. Our awa provide habitat for several taonga species, which connect us with our tūpuna. Due to the construction envelope approach, lack of availability of freshwater technical assessment and conditions of consent, we do not think freshwater effects are being appropriately managed and thus the final magnitude score for us remains very high. There are no instream sediment and community health monitoring protocols proposed to monitor the effect of sedimentation on our waterways. We do not agree with the approach to stormwater management, bundling water	**Co-design and confirm** the design and construction of **stream diversions and culverts** with the Hapu Steering Group. **Engage** us on identifying areas for stream retirement, fencing and riparian planting, including exploring opportunities for us to undertake the restoration work. Require **instream monitoring of sedimentation and macroinvertebrates** to adequately manage the effect of sediment discharges. Include **trigger levels** that require adaptive construction management. Use the **Stream Ecological Valuation** model to calculate offset requirements for physical loss of habitat and hydrological disruption including the requirement to update these calculations during detailed design, construction and 2 years post operation to ensure all effects are accounted for. Include **standards in conditions that set out the maximum amount of stream loss.** **Engage further with Patuharakeke about the total amount of stream loss**	VERY HIGH

will destroy and diminish freshwater taonga species habitat. - **Hydrological disruption.** The Assessment of Effects on Groundwater indicates up to 17km of stream reach will be subject to moderate-very high levels of hydrological change primarily due to groundwater depletion/drawdown during dewatering. This will result in reduction and complete loss of baseflow from awa. (Soltau, 2026). - **Stormwater discharges.** This proposed Road of National Significance will include heavy and sustained traffic volumes. Large volumes of stormwater will be generated containing rubbish and plastics, heavy metals, sediments and hydrocarbons.		quantity and quality management into one basin risks remobilising and discharging stormwater contaminants. There are no stormwater discharge standards or stormwater monitoring protocols proposed.	**allowed and where avoidance of key habitat for taonga species should take place.** **Ensure restoration offset sites are protected in perpetuity.** **Temporary augmentation** is supported but should not be relied on or 'counted' within freshwater modelling to reduce effects. Augmentation will support awa following rain events, not at the times of drought where awa will be most in need. The stormwater design should align with the **Wai Māori objectives** in our HEMP (Patuharakeke Te Iwi Trust Board, 2014, p. 55). A treatment train should be used wherever practicable such as in the lowlands where space is not constrained, prioritising the use of open planted swales, wetland treatment and the use of detention basins separate from the treatment function.	

Our repo are functioning, protected and enhanced. Confidence: Low, due to construction envelope approach and lack of project information available at the current time. No conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Wetland system and downstream of interconnected wetlands Duration: Permanent Reversible: No Timing: Construction and operation				
The proposed works to construct the new highway will have an impact on our repo in both a **physical and spiritual** sense. Including disruption of our role as kaitiaki. **Physical habitat destruction**. The proposed highway designation area contains 23 natural inland wetlands of wetland habitat of varying typologies (Keesing, 2026). There will be direct wetland loss via draining, filling or reclamation of unknown quantity to accommodate the new alignment, cut and fill batters, and associated infrastructure. **Incidental effects.** Wetlands located outside the direct physical footprint may still be drained or dry out due to groundwater drawdown during	VERY HIGH	Wetlands within and adjacent to the project alignment hold high ecological and cultural value. They are the last tiny fragments of our historical waterscape. The construction envelope approach does not includes measures requiring avoidance. At the time of writing this CIA we do not have access to the freshwater technical assessment. Conditions of consent requiring loose ratio offsets	**Engage** us on identifying areas for repo retirement and recreation, fencing and planting, including exploring opportunities for us to undertake the restoration work. All offset areas should be **legally protected** to ensure permanence and intergenerational protection. Restoration planting should use **eco-sourced seeds** from our rohe and we should be invited to undertake this mahi. **Wetland offset ratios are proposed are far too low.** They will not achieve a net gain in values as per the National Policy	VERY HIGH

earthworks. Deep cuts – particularly in the Brynderwyn Hills – will extend below the water table (Soltau, 2026). Permanent drainage systems will be installed to lower the groundwater level and keep the pavement dry. This will lower the water table and reduce, or stop, natural groundwater seepage that feeds wetlands during dry periods. Wetlands located at elevations higher than the road cuts (hanging wetlands) are at high risk. **Water quality effects.** Wetland species are also often sensitive to changes in water quality. The proposed works could introduce sediment into wetland features and drain some repo to a level that promotes eutrophication. Changes in water quality and/or hydrology will have an impact on wetland flora and fauna species. The works could also result in a loss of habitat for taonga species.		including 1-2:1 offset measures which will not achieve a net gain in wetland values, therefore we do not think freshwater effects are being appropriately managed and thus the final magnitude score for us remains very high. Although the majority of wetlands that will be affected are not considered 'significant' by Western standards, that is not the view of Patuharakeke. **All our wetlands are treasured as taonga.** Many wetlands in the construction envelope have been discounted due to the pasture exclusion rule, meaning Māori freshwater values (such as ki uta ki tai) associated with wetlands have not been accounted for.	Statement for Freshwater Management. They do not account for all wetlands on the project that could be destroyed or impacted, discounting Patuharakeke freshwater values. The condition (RC59) is unnecessarily cumbersome when considering implementation. **A maximum limit of wetland removal per habitat should be set**. Currently all wetlands in the alignment are available for removal, negating the need to follow the effects management hierarchy, avoiding and minimising effects. We do not agree with the advice note in the conditions that states: > "Temporary loss of a Natural Wetland that is remediated is not considered a loss of Natural Wetland for the purpose of this condition." **Temporary loss risks losing values permanently** such as species diversity, threatened species, and use of wetlands by fauna. We also **have concerns about how measures of success**, such as the definition of 'established' in conditions	

			RC63 will be monitored and implemented. And how measures recreated (RC61) for cryptic Marsh Bird Species will be defined as the same or better than what has been lost. **The BOAM model should be used during detailed design in replace of crude ratio offsets and vague, open to interpretation, wetland recreation outcomes.** The current approach inappropriately requires reinterpretation of appropriate effects management post consent (RC60 and RC62) **We recommend further engagement with Patuharakeke to account for all adverse effects on repo**.	
Our ngahere is healthy and supports our rongoa and taonga species. Confidence: Low, due to construction envelope approach, no conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Project corridor Duration: Construction Reversible: Yes, difficult after consenting Timing: Early in construction programme				
The proposed works to construct the new highway will have an impact on our ngahere in both a	VERY HIGH	Our ngahere holds high cultural value as a habitat for	Our **kaitiaki are invited** to be involved in the removal of vegetation to ensure any	VERY HIGH

physical and spiritual sense. Including disruption of our role as kaitiaki. **Cumulative effects of vegetation removal**- The project designation contains 608.82ha of vegetation including 295.22ha of indigenous vegetation (almost 48.5% of the total vegetation in the designation). This vegetation removal will degrade habitat connectivity and foraging grounds for various manu, mokomoko, pepeketua, pekapeka and other terrestrial fauna. Vegetation removal will impact the balance between Tāne Māhuta and Ranginui, releasing carbon into the atmosphere and diminishing carbon sequestering. **Taonga species destruction**- The Kauri forest, tōtara forest and Kahikatea forest, including kaumātaua (old growth) rākau could be lost. Our kauri taonga are threatened with extinction. **Introduction of edge effects, weeds, diseases and pests**- Extensive clearance within existing ngahere opens that ngahere to edge effects, weeds, pests and potential pathogens such as kauri dieback.		taonga species, a source of rongoā and a place of connection to our tūpuna and atua. Due to the lack of availability of project documentation (such as terrestrial technical assessments and conditions addressing terrestrial effects) at the time of writing this CIA, we are required to conclude at the current time that the project is not adequately managing terrestrial effects. The project seems to be enabling a large amount of vegetation clearance, while no effects management measures have been put in place that we are aware of for avoidance and minimisation of effects.	taonga species are appropriately handled and vegetation resources are salvaged. Culturally significant ngahere, including 9.3ha of remnant kahikatea stands, tōtara forest 42.5ha and all 57ha of kauri forest, especially large kauri individuals, are **avoided by the project alignment**. All remaining indigenous vegetation that is required to be cleared should be **offset for cultural values** and **maximum removal standards per habitat set out in conditioned**. **The BOAM model should be used during detailed design in replace of crude ratio offsets and vague, open to interpretation, outcomes that need to be replaced.** We are invited to **co-design offsetting frameworks** to ensure they reflect the full cultural significance of the loss, including lag times for older remnants. Strict **hygiene protocols** are implemented for all staff and machinery to avoid the spread of pests (e.g. Kauri dieback).	

			Edge effects on all remnants that require vegetation removal should be remedied by replanting a new 10m buffer strip. **We recommend further engagement with Patuharakeke to account for all adverse effects on ngahere.**	
Our manu are protected and their habitats are restored. Confidence: Low, due to construction envelope approach, no conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Ecological district Duration: Permanent Reversible: Yes Timing: Operation				
Habitat fragmentation and reduction of stepping stones. The clearance of vegetation and wetlands and operation of the new highway will fragment habitat and reduce stepping stones using by manu to move about the landscape. **Noise, car lights and the risk of bird strike.** Operation of the highway could reduce the quality of the ngahere and repo habitats, resulting in nest abandonment and mortality during breeding season. Bird strike will occur during operation of the highway.	VERY HIGH	There is diverse indigenous birdlife within, and adjoining, the project area. The construction and operation of SH1 is a significant change in this ecological district. The survey data used in the Avifauna Assessment is not robust enough to appropriately discount the	**Adopt** a more conservative approach to the avifauna magnitude assessment given the weaknesses in the database. **This should be undertaken as soon as possible** to ensure habitat offsetting is designed appropriately. **Use of the BOAM model** to generate offset requirements. **Condition the maximum amount** of each type of manu habitat that can be lost. Set out what	HIGH

The Avifauna Assessment identifies ‘High’ impacts on Australasian bittern, Marsh crake, Fernbird, and Pipit due to habitat loss and disturbance (Bull, 2026).		presence of manu within the construction envelope area. The proposed 1-2:1 offset ratio will not achieve a net gain for manu habitat and disincentives designing the project to follow the effects management hierarchy (avoid, remedy, mitigate). No avifauna habitats are conditioned to be avoided or minimised. Conditions currently enable all existing avifauna habitat to be lost. This does not give effect to the effects management hierarchy where efforts need to be made to first avoid effects.	manu habitats must be maintained/avoided. A comprehensive **pest control programme** (e.g. mustelids, possums and rats) is designed and implemented across the remaining Piroa ranges to enhance the health of the remaining ngahere, manu habitat, and for a number of other values discussed below in subsequent tables. **Operational lighting** must be shielded with landscape planting and low-Kelvin to prevent disrupting the flight patterns of nocturnal birds. **We recommend further engagement with Patuharakeke to account for all adverse effects on our manu taonga.**	

Our pepeketua are abundant Confidence: Low- due to construction envelope approach, no information or conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Brynderwyn and Piroa Hills Duration: Permanent Reversible: No Timing: construction				
Risk of mortality. The construction of the highway will result in the mortality of Hochstetter's Frog individuals. Pepeketua are challenging to locate and thus it is unlikely all individuals will able to be salvaged. **Destruction of habitat.** Vegetation clearance, earthworks, wetland and stream drainage, dewatering and stream works will all have a significant impact on the Hochstetter's frog habitat. **Habitat fragmentation.** Where habitat is retained, habitat will be fragmented risking collapse of local populations into the future. **Vibration, light and noise.** Operation of the highway will potentially impact the pepeketua through vibration, light and noise-related disturbance.	VERY HIGH	Pepeketua are taonga species and are highly concentrated in discrete parts of the project area. As a species they have poor dispersal traits meaning that any impact on their habitat will be significant. Pepeketua are endangered with extinction. The designation is significantly constrained through the Brynderwyn and Piroa hills where pepeketua are concentrated, indicating to us that avoidance is not possible. Currently there is no information on how our	As above, comprehensive **predator control** is established in the remaining Piroa ngahere **in perpetuity.** Conditions need to set out the area, **minimum predator control standards, monitoring protocols, expected outcomes for pepeketua, and what will be done if expected outcomes for our taonga species are not achieved.** A **Frog Management Plan** is codesigned with Patuharakeke and includes the identification of appropriate **relocation methods and zones**. **Condition the maximum of amount of habitat that can be adversely affected and where this can occur.** We want to consider if this is reasonable and weigh up the effect on the local population.	VERY HIGH

		taonga will be protected, translocated, and enhanced .	Patuharakeke Kaitiaki are involved in management activities. it is important that translocation efforts are **tikanga-led** and intensive due to the high density of frogs. Opportunities for **habitat restoration and enhancement** are designed alongside Patuharakeke and established prior to disturbance so it can receive translocated frogs. The pepeketua population is **monitored** on an on-going basis to ensure the population is protected and improved. **Specific targets need to be set out in conditions.** **We recommend further engagement with Patuharakeke to account for all adverse effects on our pepeketua taonga.**	

Our mokomoko are abundant. Confidence: Low- due to construction envelope approach, no information or conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Unknown – no information available Duration: Permanent Reversible: No Timing: Construction and operation				
Risk of mortality. The construction of the highway could result in the mortality of mokomoko individuals. Mokomoko are challenging to locate and thus it is unlikely all individuals will able to be salvaged. **Destruction of habitat.** The key impact on mokomoko anticipated by the project is the disturbance or destruction of habitat. This will occur when vegetation and grassland areas are cleared and when rocky habitats are disturbed. **Habitat fragmentation.** Where habitat is retained, habitat will be fragmented risking collapse of local populations into the future. **Vibration, light and noise.** Operation of the highway will potentially impact the mokomoko through vibration, light and noise-related disturbance.	VERY HIGH	Mokomoko are spiritually significant and linked to atua narratives. They can live in areas that would otherwise be considered low ecological values (e.g. rocky areas and rank grass). We do not have any information indicating where these species have been found, what mokomoko habitat areas will be protected and what will be impacted.	As above, comprehensive **predator control** is established in the remaining Piroa ngahere **in perpetuity.** Conditions need to set out the area, **minimum predator control standards, monitoring protocols, expected outcomes for mokomoko, and what will be done if expected outcomes for our taonga species are not achieved.** A **mokomoko Management Plan** is codesigned with Patuharakeke and includes the identification of appropriate **relocation methods and zones**. **Condition the maximum of amount of habitat that can be adversely affected and where this can occur.** We want to consider if this is reasonable and weigh up the effect on populations.	VERY HIGH

Patuharakeke Kaitiaki are involved in management activities. it is important that translocation efforts are **tikanga-led**.

Opportunities for **habitat restoration and enhancement** are designed alongside Patuharakeke and established prior to disturbance so it can receive translocated mokomoko.

The mokomoko population is **monitored** on an on-going basis to ensure the population is protected and improved. **Specific targets need to be set out in conditions.**

We recommend further engagement with Patuharakeke to account for all adverse effects on our mokomoko taonga

Safe roosting and foraging places are available throughout the landscape for our pekapeka. Confidence: Low, due to construction envelope approach, no information or conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Designation wide Duration: Permanent Reversible: No Timing: Construction and Operation				
Risk of mortality. The construction of the highway could result in the mortality of pekapeka individuals within roosting trees. **Destruction of habitat.** The key impact on pekapeka anticipated by the project is the disturbance or destruction of habitat. This will occur when pekapeka habitat and roosting trees are cleared. **Habitat fragmentation.** Where habitat is retained, habitat will be fragmented or key roost trees will be destroyed, risking collapse of local populations. Stepping stones could be removed making access to other habitats challenging. **Vibration, light and noise.** Operation of the highway will potentially impact the pekapeka behaviour, foraging and roosting behaviour	VERY HIGH	Long-tailed bats are a nationally threatened taonga species. The lack of data on the bat population in, and around, the project area means the effects of the proposal are unacceptably uncertain. We do not have any information indicating where pekapeka have been found, what pekapeka habitat areas will be protected and what will be impacted.	As above, comprehensive **predator control** is established in the remaining Piroa ngahere **in perpetuity.** Conditions need to set out the area, **minimum predator control standards, monitoring protocols, expected outcomes for pekapeka, and what will be done if expected outcomes for our taonga species are not achieved.** A **Pekapeka Management Plan** is codesigned with Patuharakeke and includes the identification of pre-clearance monitoring, clearing vegetation outside of breeding seasons and other management measures. **Condition the maximum of amount of habitat that can be adversely affected and where this can occur.** We want to	VERY HIGH

through vibration, light and noise-related disturbance.				consider if this is reasonable and weigh up the effect on populations. Patuharakeke Kaitiaki are involved in management activities. it is important that translocation efforts are **tikanga-led**. Opportunities for **habitat restoration and enhancement** are designed alongside Patuharakeke and established prior to disturbance. The pekapeka population is **monitored** on an on-going basis to ensure the population is protected and improved. **Specific targets need to be set out in conditions.** **We recommend further engagement with Patuharakeke to account for all adverse effects on our pekapeka taonga**		

Our ika can access their traditional habitats that are protected and enhanced. Confidence: Low Scale: Catchment and reach Duration: Permanent Reversible: No Timing: Construction and operation				
Loss of fish passage. As above, it is suggested around 6.7 km of culverts will be required on the project ranging from 10 m in length to 400+ m in length (Hasan-Zadeh, 2026). We are unclear what extent of these culverts are within waterways facilitating natural fish passage vs overland flow paths because we do not yet have the freshwater technical assessment at the time of writing this CIA. Culverts, especially long culverts over 20m in length, risk preventing fish from being able to access upstream habitat. **Risk of mortality.** The construction could result in the mortality of ika and tuna individuals within waterways during stream works. Note that effects on fish habitats within waterways are addressed above under awa.	VERY HIGH	Our ika populations have already declined in the project area due to land development and awa modification. There is a risk the project causes this to continue – especially in the relatively pristine waters of the Piroa hills. The project states that it will give effect to the New Zealand Fish Passage guidelines, however does not offer any detail on how these will be applied to the broad range of water environments in the project designation including rivers, wetlands, streams, ephemeral waterways, all on various slopes with varying	All culverts (temporary and permanent) and fish ramps are designed to **enable fish passage**. A **culvert and fish ramp design, monitoring and maintenance plan** should be developed that includes - The design approach to be used on each fish passage culvert and fish ramp - Measures of success to ensure fish passage has been achieved - Monitoring of the measures of success - Maintenance approaches to ensure fish passage is maintained over the life of consent - Process for remediation is surface flow and fish passage is lost The **Patuharakeke-designed Taura**, made of muka and other native plant	VERY HIGH

		substrates, including various different types of species. The guidelines are guidelines, it is the responsibilities of projects to interpret what this means for local conditions and without any current work on this interpretation, we cannot see how effects on fish passage will be adequately managed. Currently, this approach suggests effects management will occur and be interpreted during detailed design which we are uncomfortable with.	species, should be used for fish passage where appropriate. A **Fish Management Plan** is codesigned with Patuharakeke and includes de-fishing protocols Consent conditions that species **where fish passage is to be provided** **Consent conditions that require the maintenance of fish passage during construction** **We recommend further engagement with Patuharakeke to account for all adverse effects on our freshwater taonga**	

The importance of our ngārara and tuaiwi-kore is recognised. Confidence: Low, due to construction envelope approach, no information or conditions setting out habitats to be avoided or maximum amount of habitat that can be lost. Scale: Unknown Duration: Permanent Reversible: No Timing: Construction and operation				
Mortality risk. The main risk to Kauri snail and other taonga invertebrate species is crushing during earthworks and vegetation clearance. **Loss of habitat.** The proposed highway will also result in a significant loss of habitat. **Habitat fragmentation.** Where habitat is retained, habitat will be fragmented risking collapse of local populations. **Vibration, light and noise.** Operation of the highway will potentially impact behaviour through vibration, light and noise-related disturbance.	VERY HIGH	We do not have any information indicating where these species have been found, what habitat areas will be protected and what will be impacted.	As above, comprehensive **predator control** is established in the remaining Piroa ngahere **in perpetuity.** Conditions need to set out the area, **minimum predator control standards, monitoring protocols, expected outcomes for pekapeka, and what will be done if expected outcomes for our taonga species are not achieved.** A **Pekapeka Management Plan** is codesigned with Patuharakeke and includes the identification of pre-clearance monitoring, clearing vegetation outside of breeding seasons and other management measures. **Condition the maximum of amount of habitat that can be adversely affected and where this can occur.** We want to	VERY HIGH

			consider if this is reasonable and weigh up the effect on populations. Patuharakeke Kaitiaki are involved in management activities. it is important that translocation efforts are **tikanga-led**. Opportunities for **habitat restoration and enhancement** are designed alongside Patuharakeke and established prior to disturbance. The pekapeka population is **monitored** on an on-going basis to ensure the population is protected and improved. **Specific targets need to be set out in conditions.** **We recommend further engagement with Patuharakeke to account for all adverse effects on our pekapeka taonga**	

6.3 Magnitude of effects on our whakapapa

The following table (Table 6.3) records the potential and actual effects and the magnitude of the effects on our whakapapa values. The importance of our whakapapa is described in Section 5.3. Where project effects require further mitigation than currently proposed, management measures are specified. Further magnitude evaluation is then undertaken, assuming the effects management measures are in place, to assess the final magnitude if Patuharakeke recommendations are adopted.

Table 6.3 Effects assessment and recommended mitigation for the whakakpapa value group

Magnitude of project effects on our whakapapa				
Activity / Effect	**Magnitude WITHOUT management**	**Reasoning**	**Proposed effects management**	**Magnitude WITH management**
The footprints of our tūpuna are recognised, protected and enhanced. Confidence: Moderate Scale: Landscape wide Duration: Permanent Reversible: No Timing: During construction				
Disturbing our known archaeological sites. The Archaeology Assessment identifies five pā, and numerous middens and pits within the designation. There is the potential decisions will be	HIGH	The archaeology assessment recommends pā sites to be avoided by the project however we do not	We support the recommendation of the Archaeology Assessment that the final alignment **avoids all pā sites**. These sites should be protected via designation	LOW

made about these archaeological features during detailed design without us. **Accidental discoveries of our tūpuna and taonga tūturu.** Due to the settlement and movement patterns of our tūpuna, there could be undiscovered wāhi tapu in the project area. This is confirmed in the Archaeology Assessment, which states there is a growing collection of sites (toki, storage pits, midden, etc.) that demonstrates our ancestors extensive occupation of the northern project area		understand the mechanisms to ensure these sites are protected. The distribution of other archaeological sites shows our ancestors frequently used this landscape, so there remains a risk of accidental discovery. However, the analysis only draws on scientific sources, not Māori Land Court minutes. The destruction of any footprints of our tūpuna would represent a significant loss of whakapapa connection.	boundary changes, conditions that require avoidance and a buffer area. A clear **accidental discovery protocol and management plan** for archaeology is developed with input from Pou Ahurea Roopu and Patuharakeke. We must be anabled to make decisions about archaeology of our whakapapa and lead tikanga. Pou Ahurea Roopu are invited to undertake **sod turning and karakia** when earth is broken. This may be required multiple times throughout the construction period depending on construction methodology. **Cultural markers/pou** and story boards should be installed along the route to tell the story of identified sites and out tūpuna.	

The recovery of our Waipu Mātaitai is supported and there is no further degradation. Confidence: Moderate, the project is upstream of the Waipu Mātaitai Scale: North of Brynderwyn Hills Duration: Short-Medium term during construction, long term regarding stormwater Reversible: No Timing: During construction and operation				
Sediment discharges contribute to cumulative effects on our taonga estuary. The Waipu Mātaitai is downstream of the earthworks. Any sediment failure during the 5-year construction period will settle in the estuary, smothering pipi and cockle beds and degrading the food basket of the hapū, adding to cumulative effects. **Stormwater discharges contribute to cumulative effects on our taonga estuary**. The Waipu Mātaitai is downstream of the new stormwater discharges. Any heavy metals being introduced to the system will eventually move down into the estuary, contaminating pipi and cockle beds and degrading the food basket of the hapū, adding to cumulative effects.	MODERATE	Currently only discharge standards from sediment retention ponds are required. We would like to see in stream monitoring to monitor the actual effects of sediment discharges on our waterways. Giving us the most confidence sediment will be minimised within the project. Construction projects discharge sediment to the environment. This adverse effects is minimised through good practice management mechanisms for sediment and erosion control, however the effects still remains on the environment that needs to be accounted for in our view.	As above, require **instream monitoring of sedimentation and macroinvertebrates** to adequately manage the effect of sediment discharges. Include **trigger levels** that require adaptive construction management. If immediate awa environments are adequately managed we have further confidence that our mātaitai will be protected. **Undertake additional stream fencing** in the northern catchment to contribute to minimising sediment inputs into the mātaitai, **offsetting sediment discharges that are inevitable from the project.** The stormwater design should align with the **Wai Māori objectives** in our HEMP (Patuharakeke Te Iwi Trust Board, 2014,	NEGLIGIBLE

		Offsetting for sediment effects is required. Best practice stormwater management includes a treatment train.	p. 55). **A treatment train should be used in the northern lowlands** where space is not constrained, prioritising the use of open planted swales, wetland treatment and the use of detention basins separate from the treatment function. Stormwater management must be best practice in our mātaitai catchment.	
Effects on Te Paritu Pā are avoided. Confidence: High Scale: Project study area Duration: Permanent Reversible: No Timing: During construction				
Impacts on Te Paritu pā. Te Paritu is a wāhi tapu of immense spiritual significance. It was a key pā for our tūpuna and the site of a massacre, which means there are likely significant artefacts in a wide area surrounding the site. Encroachment by the designation on the pā, or construction vibration/dust effects, would be a severe breach of tapu and cause grievance.	HIGH	Te Paritu Pā is on private land so our access to this significant site is restricted. Parts of the wider pā area have been modified, destroyed and fossicked, so the remaining portions holds very high value for us. Mountfield quarry is adjacent to this pā site, there is a chance	Paritū pā location must not be considered for quarrying by the project.	NIL

		the project could enable quarry expansion into this area.		
Piroa is protected and enhanced and the significance of this area as the gateway to Te Tai Tokerau is elevated. Confidence: High Scale: Project study area Duration: Permanent Reversible: No Timing: During construction				
Spiritual and cultural effects on piroa. Piroa is a physical and spiritual gateway to Te Tai Tokerau. It is the 'gunwale' of our waka. It also provides a connection between the east and west coasts of Te Tai Tokerau. There is a risk that the significance of Piroa as a pathway of our tūpuna and connector of localities is lost in the highway development. **Impacts on the unique ecologies of Piroa.** Piroa is also an area of immense ecological and spiritual significance. The maunga and awa are home to many taonga species and their mauri must be protected and enhanced. **Visual, amenity and natural character effects on Piroa.** Large cuts and batters will scar the maunga visually and physically, while the	VERY HIGH	Piroa is a significant area to Patuharakeke and is a key connection between us and our tupuna, and our neighbouring iwi. The project is traversing a challenging environment, is proposes extensive cutting, spoil deposition, groundwater dewatering and habitat disconnections.	Involve Patuharakeke in discussions on establishing ngā whenua rāhui covenants to **preserve the Piroa area**. Ensure cut batters and any spoil sites are contoured to **mimic natural landforms**. All earthworks areas **around Piroa are revegetated** to heal visual scars on the maunga. As with above taonga species recommendations, **a large natural area of Piroa requires predator control to protect and restore populations** of pekapeka, mokomoko, pepeketua, and	LOW

removal of vegetation will significantly alter the appearance of this culturally significant landscape.			kauri snail including outcomes for these taonga. Incorporate a significant **cultural gateway feature** (e.g., Pou Whenua or Waharoa) designed by Patuharakeke mahi toi specialists at the entrance to the corridor to mark the boundary of the rohe. Harness the importance of **connection and tribal pathways** to both coasts through a rest area including mahi toi and story boards.	

Our urupā are respected. Confidence: Moderate Scale: Project study area Duration: Permanent Reversible: No Timing: During construction				
Risks of disturbing our ancestors burial sites. There is a risk urupā and kōiwi could be discovered due to the extent of earthworks required for the proposal.	VERY HIGH	The project is of significant size and scale. It will take place within the 'footprints of our tūpuna', our whenua where our people have existing for many hundreds of years. Through colonisation much of our traditional knowledge has been lost, this project offers the opportunity to learn about our ancestors, their ways of life through their burials. The magnitude score without management represents the risks inherent to kōiwi management if undertaken inappropriately.	**If kōiwi are uncovered** it should be firstly explored to see if they can remain in place, the whenua would then need to be designated as an urupā and be managed with specific tikanga going forward. A **kōiwi management strategy** needs to be developed **prior to project** start if reinterment is required. Use GPR (**ground-penetrating radar**) in high-risk areas around pā sites prior to breaking ground to identify potential burial anomalies. Establish clear protocols for **communicating finds with the hapū**, including contact details and clearly defined responsibilities for project staff and hapū.	LOW

The rākau rangatira within our ngahere is maintained. Confidence: High Scale: Project study area Duration: Permanent Reversible: No Timing: During construction				
Disruption of the wairuatanga of our ngahere and have a lasting impact on the realm of Tāne Mahuta.	HIGH	The project intersects areas with potential for mature, cultural significant trees. The loss of these chiefly trees is the loss of tuakana. There is a defined spiritual hierarchy of trees within our ngahere. This could be permanently affected if individual trees are removed that hold a key role in the rākau rangatira. In particular the loss of the three mature kahikatea, tōtara and kauri stands would have a high impact on our tūpuna whenua.	Culturally significant ngahere, including 9.3ha of remnant kahikatea stands, tōtara forest 42.5ha and all 57ha of kauri forest, especially large kauri individuals, are **avoided by the project alignment**. All remaining indigenous vegetation that is required to be cleared should be **offset for cultural values** and **maximum removal standards per habitat set out in conditioned**. The BOAM model should be used to characterise special ngahere characteristics that need to be offset. If a rākau Rangatira in other remnants are removed, **the wood must be returned to the hapū.**	LOW

The provenance of gravel within our rohe is maintained. Confidence: Moderate, due to unknown location of material supply Scale: Material supply sites and road corridor Duration: Permanent Reversible: No Timing: During construction				
Impacts on the provenance of gravel. Impacts on the provenance of gravel that is used during construction needs to be considered and acknowledged. When gravel is taken from one location and shipped to a site that is not within the same catchment, geological area or rohe, provenance ties can be lost, which has an impact on Papatūānuku, and our spiritual and cultural values.	MODERATE	Moving earth disrupts the mauri. Importing material from outside the rohe or exporting our whenua to landfills breaks the provenance connection of the soil. The location of gravel supply for the project is of critical importance to Patuharakeke. Currently the project does not have a viable material supply strategy.	Maximise the **reuse of material** within the project corridor to keep the whenua within the rohe. If aggregate must be imported, **prioritise sources from local quarries** within the rohe to maintain geological and provenance consistency. Engage with Patuharakeke during detailed design and consenting. **Integrate gravel whakapapa information into our Toi strategy** so the provenance of gravel can be traced across the project.	LOW

6.4 Magnitude of effects on the Patuharakeke Climate Waka

The following table records the magnitude of the effects identified above in the group of values. Where effects require mitigation, management measures are specified. Further evaluation is then undertaken, assuming the effects management measures are in place, to assess the resulting magnitude of effects.

Table 6.4 Effects assessment and recommended mitigation for the climate resilience value group

Magnitude of project effects on our climate resilience				
Activity / Effect	**Magnitude WITHOUT management**	**Reasoning**	**Proposed effects management**	**Magnitude WITH management**
All developments within our rohe work to achieve net-zero carbon emissions by 2050. Confidence: Low Scale: Project-wide Duration: Permanent Reversible: No Timing: During construction and operation				
The proposal will incur embodied emissions (emissions from construction and maintenance) and transport emissions (emissions from the vehicles use of the highway). Without aligned strategies to minimise embodied emissions through construction methodologies and transport	HIGH	The policy and strategy decisions of Waka Kotahi between 2023 and 2026 signal a shift away from prioritising emissions	Invite Patuharakeke to **co-design an Embodied Emissions Strategy** in the detailed design phase.	LOW

emissions via active and public transport initiatives, the project emissions will be significant and uncontrolled. The current lack of active transport infrastructure misses opportunities to: - encourage road users to switch to low-no emission modes of transport. - contribute to the net zero target. - enhance access to significant cultural sites. - connect to existing trails, such as the highly popular Te Araroa Trail. - Enhance resilience by providing further access options between Tamaki Makaurau and Tai Tokerau.		reductions on roading projects. This means the project does not take simple opportunities to work towards reducing embodied and operational emissions.	Demonstrate how **construction materials are being selected** to reduce the carbon footprint of the road. **Source materials locally** wherever possible to reduce transportation emissions and preserve the whakapapa of supply materials. **Maximise the use of green infrastructure** for project components such as stormwater treatment and conveyance to reduce the carbon footprint of construction materials and support the net zero target. **Integrate active modes of transport** (i.e. walking and cycling) across the whole alignment.	

Our resilience is enhanced through strengthening our communities and natural defences. Confidence: Moderate Scale: Communities Duration: Permanent Reversible: No Timing: During construction and operation				
There are two groups of effects for climate resilience: physical effects and human effects. **Physical effects** The capacity of our communities to withstand and recover from climate change is diminishing with increased occurrence of climate related disasters. It is critical our infrastructure decision making avoids increasing risk, such as flood risk, and plans for future climate change. Installation of infrastructure within waterways such as culverts and bridges can cause flooding upstream and downstream (flood levels and velocity). Construction of road embankments can prevent overland flow pathways from functioning while displacing floodwaters with concrete surfaces.	HIGH	A key purpose of the project is to increase resilience of the State Highway network from closures during extreme weather. However there is a risk the creation of new infrastructure could increase risks in other localities including: The Flooding Assessment has focused on flood **water levels** during a 1 in 10 year event (10 % AEP) and a 1 in 100 year event (1% AEP), including climate change, but does not take into account velocity effects from changes in flood levels (Valizadeh et al., 2026). Velocity measures the speed of floodwater	Undertake an **assessment of effects on velocity changes** in the project in flood assessment. I**nclude appropriate mitigations** for any adverse velocity changes in the conditions of consent. **Include maximum flood levels** for downstream properties, communities and other human infrastructure in the conditions of consent. **Update the Flooding Assessment to include effects on te taiao** and suggest ways to mitigate those effects (e.g. rip rap arrangements and downstream stabilisation planting). **Co-design an information sharing protocol** with Patuharakeke to ensure everyone on the project has access to	LOW

Human effects To enhance the resilience of our hapū, we must have access to up to date information about our environment and any changes that may be induced by the proposal. If there is not an open flow of information, there is the risk that we will not be able to make informed decisions in the best interests of future generations. Knowledge – science and mātauranga – is at the forefront of our climate waka and reinforces our ability to make decisions in the face of change. Another key element of resilience that may be impacted by the identified physical effects is our ability to practice manaakitanga for hāpori. We hold good relationships with the various communities in our rohe hand have a sense of responsibility to ensure they are cared for as we navigate the climate crisis.		change as a result of the project, with risks around potential erosion upstream and downstream. The Waipu area in the northern part of the project is within a key floodplain, there are risks of floodwater displacement and disruption of flow pathways risking local infrastructure such as private residences, farmland, the local township and local roads.	the best information available and to support good decision-making.	

Our climate sovereignty is protected to steer us through the climate crisis. Confidence: High Scale: Project-wide Duration: Permanent Reversible: No Timing: During construction and operation				
Clearance of ngahere, repo and awa directly **depletes the natural infrastructure** needed for climate sovereignty. This diminishes our capacity for Rangatira Wai (water) and Rangatira Kai (food) sovereignty, such as flood regulation, soil health, and mahinga kai habitat. **The proposed offsetting regimes do not could have adverse effects on climate sovereignty by:** - Allowing highly specific habitat values to be replaced with different, lower-value, or easier-to-create habitats. This means the unique habitats will not truly be replaced, but simply swapped for something else, resulting in a net loss of biodiversity. - Not accounting for the time-scales of ecological restoration. A 1-2:1 ratio does not account for the immediate loss of biodiversity and the	VERY HIGH	The decision-making regimes and proposed conditions for the project do not enhance our climate sovereignty and are not based on robust ecological science. The proposed offset ratios (1-2:1) are arbitrary and low. They fail to account for the immediate loss of biodiversity or the significant time-lags required for ecological restoration to provide equivalent function. Existing regimes do not sufficiently incentivise the avoidance of high-value, irreplaceable ecosystems, making it cheaper for the	Prioritise **nature-based adaptation** (e.g., wetland restoration) over hard engineering to support Rangatiratanga Wai Māori. All **remediation planting must be eco-sourced** from local nurseries to ensure resilience to local climatic shifts. Offsetting programs should prioritise **expanding carbon sinks and revitalising the mauri** of the landscape rather than 1:1 replacement. Ensure the alignment **does not compromise identified sites for managed retreat** or future food forest locations. This includes downstream effects of the highway where areas that may have been safe will now be subjected to flooding.	VERY HIGH

temporal lag before the offset provides equivalent ecological function. - Ratios for the project have been set based on negotiation and economic convenience for the project rather than robust ecological science. These ratios are too low to guarantee no net loss, especially when accounting for the potential of offset failure. - The offsetting ratios do not incentivise avoiding high-value, irreplaceable ecosystems. - The proposed offset formulas and low ratios reduces the pressure to follow the mitigation hierarchy (avoid, minimise, remediate) in the first instance. The project also represents a significant intervention in the rohe that could **limit managed retreat pathways** by occupying higher ground and creating a physical barrier to inland areas. In addition, the highway will reduce the capacity of our rohe to hold floodwaters, and will displace those floodwaters in an unknown distribution, which will also affect managed retreat pathways.			project to offset damage than to make engineering modifications (e.g. alignment changes). Provisions for out-of-kind trading currently allow highly specific habitat values to be replaced by lower-value or easier-to-create habitats, leading to a net loss of biodiversity. The proposed offsetting and decision-making regimes on the project generally will not result in a net gain in habitat values or climate resilience, which undermines our sovereignty.		

Succession is secured by empowering our taitamariki with the climate literacy and authority needed to thrive in a changing world. Confidence: High Scale: Hapū Duration: Permanent Reversible: No Timing: During construction and operation				
The project could affect our rangatiratanga by limiting the options future generations have in terms of safe places to live, healthy ecosystems that absorb climate chance effects and connections to their wāhi tapu. Making the best decisions for our people that enables them flexibility in the future is critical. We have not had access to the Cost Benefit Analysis for the project and more generally the Roads of National Significance Te Hana to Whangārei program. We want to understand if this is the best use of our limited infrastructure funding for our region. Our tamariki and mokopuna will inherit the effects of decisions we make today. It is critical they have a voice in large infrastructure projects that will last well into their life-times.	MODERATE	We acknowledge the threat of road closure and damage during weather events risks the safety and resilience of our whānau and connectivity of our rohe. However we want to understand if there are other options that achieve resilience. We have other priorities that impact our resilience as a region that are urgent and are not being prioritised.	Grant us access to the project business case, including the cost-benefit analysis, so we can **understand the rationale** behind the preferred solution. Recognise us as **partners and decision-makers** in project environmental governance, as recommended in the Mana Motuhake value group (Section 6.1). Our recommended project governance structure is an opportunity to recognise our rangatiratanga. **Invite Patuharakeke taitamariki to be involved in the project** at varying levels to build relationships and learn skills that will contribute to the resilience of the hapū. **Invite Patuharakeke taitamariki to be involved in the project climate change**	NEGLIGIBLE

		mapping to build their climate literacy that will be needed to manage significant sites and our communities into the future.	

6.5 Summary level of effects

The overall effects identified in this assessment have been evaluated using the Resulting Level of Effects Matrix described in Section 0. This process allows Patuharakeke to determine the overall impact on our values by weighing the significance of the value (Section 5) against the magnitude of the anticipated effect, and separately, with our recommended management (Section 6).

For the Mana Motuhake value group, our levels of certainty about the scale, likelihood and scope of anticipated effects are reasonably high. We generally feel confident in these assessments and the anticipated reduction in effect levels, provided our recommendations are implemented.

We are also certain about aspects of our Whakapapa and Climate Change Resilience value groups; however, some aspects of these groups exhibit moderate residual effects. These include archaeology and changes in flood level and velocity. The moderate scores for archaeology reflect the project's size and scale. While the moderate scores within the Climate Change value group reflect our desire to obtain further information about potential increases in flood levels around Waipu and within natural waterways, and to better understand how the project can manage velocity effects in natural waterways.

Even with our proposed mitigation, the effects of highway construction and operation on several values remain high or very high due to factors such as permanence, uncertainty, vulnerability, and the importance of the affected values. Where uncertainty of effects scale, likelihood and scope, and their associated management measures is greater (including within the mauri value group and taiao aspects of Climate Change Resilience), the results fall in the High – Very High rating band. The reasons for these higher results are explained below.

6.5.1 Precautionary approach due to uncertainty

There is significant uncertainty about the Mauri value group. This uncertainty results from the importance of the values within this group, the ‘construction envelope’ approach to managing effects, unclear application of the effects management hierarchy, and the significant technical information gaps. We have adopted a precautionary approach to gauging the magnitude and overall level of effects to compensate for these extensive limitations and concerns.

Given the current state of ecology technical assessments that inform our values associated with mauri, we anticipate significant adverse effects. Specifically, we have not been provided with sufficient detail regarding:

- The location of taonga species relative to the proposed designation. There is no information on where mokomoko, pekapeka, or kauri snails have been found within the designation.
- No assessment of effects has been provided to us for any critical taiao aspects, including repo, awa, ngahere, mokomoko, pepeketua, pekapeka, and kauri snail.
- It has been indicated to us that crude (and poor) ratio metrics will be used for offsetting taiao effects, rather than best practice and more advanced modelling, such as the Stream Ecological Valuation method or the Biodiversity Offsetting Accounting Model.
- The draft conditions framework lacks standard protections, such as maximum limits for habitat removal and the use of modelling and reporting to reevaluate offset calculations as the project progresses through detailed design.

We are particularly concerned about the potential for extreme effects on our tūpuna awa and pepeketua (Hochstetter's frog) because the alignment is confined within the Brynderwyn hills where extensive cuttings and groundwater drawdown will occur. There is no detail on where offsetting will take place to assess whether offsetting such an extreme amount of habitat and stream loss is possible.

These information gaps have severely limited our assessment of effects on cultural values and have necessitated a precautionary approach to our proposed magnitude scoring.

Our recommendations are not final in relation to the mauri value group, rather they indicate what information we expect to be provided, what we expect to see within conditions and next steps for engagement with us.

6.5.2 Limitations with the construction envelope approach

While the Section 2B methodology is described as 'outcomes-based', we maintain that it is, in practice, a construction envelope that prioritises engineering flexibility over certain cultural and environmental limits.

A true 'outcomes-based' approach would define the maximum permissible level of harm to our taonga, which would be reflected in the conditions of consent. However,

the current construction envelope merely defines a spatial boundary within which the draft conditions permit the removal of all habitats within the designation boundary. This includes up to 300ha of indigenous vegetation, tens of kilometres of stream loss, and associated habitat values for taonga species. The construction envelope approach is inappropriate.

Focusing on a physical envelope for construction rather than a strict envelope for effects means the project undermines the effects management hierarchy, which requires effects to be avoided, then remedied, then mitigated in the first instance.

Key failings of the construction envelope approach include:

- The final alignment could fall anywhere within the proposed designation. This means there is no commitment to exclusion zones for our taonga (e.g. pepeketua and rākau rangatira) at the consenting stage.
- Defining a boundary of effects is not the same as defining a cultural or ecological outcome. Without clear maximum limits on habitat loss, the ‘outcomes’ are currently at the complete discretion of the construction team.
- Without identified potential locations for offsetting, it is unclear if the anticipated loss of culturally significant ngahere, awa and repo can be appropriately addressed.
- Relying on arbitrary 1-2:1 ratio offsets within a flexible construction zone treats our irreplaceable ecosystems as tradable commodities rather than living components of our whakapapa.

To follow a true outcome-based, effects envelope approach, the conditions of consent must follow the effects management hierarchy, including:

- Setting out what habitats will be avoided (avoidance),
- Including clear maximum effects limits (to facilitate effects minimisation),
- Indicating where effects can be remedied (such as edge effects and removal of stepping stones),
- Using robust accounting modelling to offset residual effects, and
- Ensuring clarity about what effects cannot be adequately offset (such as streams and pepeketua), which would trigger discussions with Patuharakeke about compensation.

Table 6.5 Summary of Effects

Summary of Effects				
Value	**Activity / Effect**	**Value significance**	**Magnitude WITH management**	**Overall effect**
Mana motuhake				
Building positive relationships through design, construction and ongoing operation that provide for our tikanga.	- Lack of authority over what happens on our tūpuna whenua will erode our mana. - Further degradation of the natural environment and Papatūānuku.	HIGH	LOW	LOW
Our mana motuhake and right to exercise authority over our lands, waters and taonga as mana whenua.	- Limits on our ability to exercise our mana motuhake. - Minimum statutory requirements for engagement will diminish our mana whenua.	VERY HIGH	NEGLIGIBLE	LOW
Access to traditional places and resources, which enables knowledge retention, revival and transfer.	- Restrictions on access to important sites. - Noise and vibration effects on wānanga and observing tohu. - Potential for improved access to parts of our rohe we cannot currently access.	HIGH	POSITIVE	NET GAIN
Mauri				
Our awa flow with mauri ora.	- Physical and spiritual impacts. - Disruption of our role as kaitiaki. - Sediment release. - Physical habitat destruction. - Hydrological disruption. - Stormwater and other contaminant discharges.	VERY HIGH	VERY HIGH	VERY HIGH

Our repo are functioning, protected and enhanced.	- Physical and spiritual impacts. - Disruption of our role as kaitiaki. - Physical habitat disruption – wetland filling, draining and reclamation. - Incidental effects on wetlands outside of the designation due to groundwater drawdown during earthworks. - Water quality effects – stormwater runoff, eutrophication due to water level changes. - Water quantity changes. - Subsequent effects on sensitive wetland species.	VERY HIGH	VERY HIGH	VERY HIGH
Our ngahere is healthy and supports our rongoa and taonga species.	- Physical and spiritual impacts - Disruption of our role as kaitiaki. - Cumulative effects of vegetation removal. - Taonga species destruction. - Introduction of edge effects, weeds, diseases and pests.	HIGH	VERY HIGH	VERY HIGH
Our manu are protected and their habitats are restored.	- Habitat fragmentation and reduction of ecological stepping stones. - Increased risk of bird strike due to noise and car lights.	HIGH	HIGH	VERY HIGH
Our pepeketua are abundant.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - New vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH
Our mokomoko are abundant.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - New vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH

Safe roosting and foraging places are available throughout the landscape for our pekapeka.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - New vibration, light and noise disturbances.	VERY HIGH	VERY HIGH	VERY HIGH
Our ika can access their traditional habitats that are protected and enhanced.	- Loss of fish passage. - Risk of mortality. - Habitat effects listed in the awa section above.	VERY HIGH	VERY HIGH	VERY HIGH
The importance of our ngārara and tuaiwi-kore is recognised.	- Increased risk of mortality. - Destruction of habitat. - Habitat fragmentation. - New vibration, light and noise disturbances.	HIGH	VERY HIGH	VERY HIGH
Whakapapa				
The footprints of our tūpuna are recognised, protected and enhanced.	- Our known archaeological sites could be disturbed. - Accidental discoveries of our tūpuna and taonga tūturu.	VERY HIGH	LOW	MODERATE
The recovery of our Waipu Mataitai Coastal area is supported and there is no further degradation.	- Sediment discharges will contribute to cumulative effects on our taonga estuary. - Stormwater discharges will contribute to cumulative effects on our taonga estuary.	VERY HIGH	NEGLIGIBLE	LOW
Effects on Te Paritū Pā are avoided.	- Disturbance of archaeological artefacts associated with Te Paritū Pa.	HIGH	NIL	VERY LOW
Piroa is protected and enhanced and the significance of this area as the gateway to Te Tai Tokerau is elevated.	- Spiritual and cultural effects on Piroa. - Impacts on the unique ecologies of Piroa. - Visual, amenity and natural character effects on Piroa.	HIGH	LOW	LOW
Our urupā are respected.	- Disturbance of ancestral burial sites.	VERY HIGH	LOW	MODERATE

The rākau rangatira within our ngahere is maintained.	-	Disruption of the wairuatanga of our ngahere and a lasting impact on the realm of Tāne Mahuta.	VERY HIGH	LOW	MODERATE
The provenance of gravel within our rohe is maintained.	-	Impacts on the provenance of gravel if material is taken from one location and shipped to a site that is not within the same catchment, geological area or rohe.	HIGH	LOW	LOW
Climate resilience					
All developments within our rohe work to achieve net-zero carbon emissions by 2050.	- - -	Embodied emissions. Operational emissions. No provisions for active transport infrastructure.	HIGH	LOW	LOW
Our resilience is enhanced through strengthening our communities and natural defences.	- - -	Physical effects on maximum flood levels and velocities downstream of the project. Risk of limited information sharing between the project and our hapū. Impacts on our ability to practice manaakitanga for hāpori.	VERY HIGH	LOW	MODERATE
Our climate sovereignty is protected to steer us through the climate crisis.	- - -	Depletion of natural infrastructure. Poor offsetting regime will undermine the values we hold for the natural environment. Potential restrictions of managed retreat pathways.	HIGH	VERY HIGH	VERY HIGH
Succession is secured by empowering our taitamariki with the climate literacy and authority needed to thrive in a changing world.	- - -	Potential restrictions on future settlement patterns and healthy ecosystems. Lack of information to date affects our ability to make good, future-focused decisions. Lack of taitamariki voice in infrastructure decision-making.	VERY HIGH	NEGLIGIBLE	LOW

7 Conclusions

The current absence of comprehensive ecological impact assessments prevents a full and robust evaluation of effects on Patuharakeke taonga, cultural values and Strategic Pou. Based on the documentation provided to date, significant undefined and unmanaged effects remain that cannot be reconciled after applying the information to the cultural values assessment matrix.

Patuharakeke recognise the significance of constructing an Alternative for the Brynderwyns. However, after consulting with wider hapū members, we have concluded that there are too many uncertainties and large scale effects, and Fast Track Application deadlines has not enabled comprehensive solution focused discussions.

It would be irresponsible as ahikā, and for our duty to uphold our kaitiaki responsibilities on behalf of our atua, tūpuna and taonga, so, we are unable to support the project in its current form.

As we have demonstrated in our Mana Motuhake and Whakapapa value groups of our magnitude of effects matrix, with the appropriate information, good outcomes can be achieved. Therefore, we remain committed to working alongside Waka Kotahi to address these information gaps and refine project conditions to ensure all effects are managed to an appropriate and mutually agreed level. This will take a combination of strong consent conditions, innovative mitigation and offsetting measures, a bespoke governance and partnership structure enabling enduring strong relationships, leadership and governance.

7.1 Recommendations and conditions framework

Throughout our assessment of the cultural impacts, we make a series of recommendations to address the identified effects. We have developed these recommendations into a framework for conditions of consent.

Our conditions framework provides a specific cultural lens to be integrated into the project and is a critical part of the package of responses needed to mitigate impacts on Patuharakeke values. These are not intended to be a final suite of conditions; they identify principal outcomes we expect to engage with NZTA Waka Kotahi on through the development and refinement of the project’s conditions of consent.

The recommendations below are additional to the draft conditions of consent we were provided with on March 16 2026. Our framework should not replace any of the proposed conditions, but should sit within the wider suite of consent/designation conditions. Our conditions framework provides the minimum content requirements to address the identified impacts on our values and relationships. Because the current information provided is insufficient to define final mitigation, we reserve the right to further refine these standards and specific site requirements as appropriate technical detail becomes available.

Some recommendations will need to be implemented immediately (e.g. taitamariki training, career pathways and seed collection). These recommendations should be discussed between Patuharakeke and NZTA Waka Kotahi and agreed upon as soon as possible.

7.1.1 Patuharakeke Values Management Plan

We have prepared a draft Patuharakeke Values Management Plan (PVMP) (see the draft in Appendix B) and expect a condition requiring this draft to be refined and finalised. The project must be undertaken in accordance with the most recent version of the PVMP. The PVMP will sit in the same tier as the Construction Environmental Management Plan.

The PVMP condition should specify the following (at a minimum):

1. Prior to the commencement of construction activities, the requiring authority must arrange, in accordance with Condition [3], for finalisation of the draft Patuharakeke Values Management Plan. The PVMP must achieve the following purpose: To mitigate the adverse effects of the project's construction and operation on the values of Patuharakeke.
2. The person or persons identified to prepare the Patuharakeke Values Management Plan must be endorsed by Patuharakeke Te Iwi Trust Board.
3. The consent holder shall resource the development and implementation of the Patuharakeke Values Management Plan.
4. The Patuharakeke Values Management Plan must include the following, at a minimum (but is not limited to):
    a. A description of Patuharakeke values related to the project area;
    b. The involvement of Patuharakeke representatives within the project, including the roles and responsibilities of personnel implementing this plan, including governance, procurement and operational (as outlined in the draft management plan)

c. The roles and functions of Patuharakeke within the Hapū Steering Group Terms of Reference set out below.
d. Confirmation of how Patuharakeke will engage in the project during detailed design, management plan certification, submission of outline plans, construction, and operation;
e. Communication and information sharing protocols to support Patuharakeke in understanding the state of the taiao and that provide for Patuharakeke to identify and raise issues, concerns and/or opportunities;
f. Site access protocols to ensure Patuharakeke access to the project during construction and operation;
g. Training and career pathway opportunities that will be provided for Patuharakeke taitamariki and uri;
h. Identification of mechanisms to ensure long-term access to sites of significance, including but not limited to:
    i. Piroa;
    ii. Waihoihoi awa;
    iii. Kauri forest;
    iv. Confluence of the Ahuroa, Waihoihoi and Waipu awa;
    v. Pepeketua; and
    vi. Connections and tribal pathways maunga to moana;
i. Details of a Kaitiakitanga Monitoring Programme, including activities, opportunities, locations and protocols;
j. Protocols for maintenance that will be carried out at the fenced pā sites, including a minimum of quarterly mowing
k. Patuharakeke provenance seed collection activities and supply for the project, with the aim to supplying an agreed quantity of at least 35% of the plants for the project.
l. Process to return taonga resources, such as rākau wood, and other resources impacted by the project to Patuharakeke; and
m. Details and frequency of Patuharakeke cultural inductions for construction and related teams, and cultural interpretation and mahi toi.

5. The conditions must include a clear process for refining, finalising, reviewing and approving the PVMP.

7.1.2 A Hapū Steering Group

It is important that there is a designated group of hapū/iwi representatives that can be the first point of contact for all project matters. We expect a condition that mandates the creation of a Hapū Steering Group and outlines their responsibilities, including (at a minimum):

1. Within 30 working days of appointing the construction team or the team responsible for progressing the project's design and construction, the requiring authority must invite hapū partners to establish a hapū steering group.
2. The purpose of the hapū steering group includes, but is not limited to, providing direction, guidance, and advice in respect of:
    a. Tikanga;
    b. Coordinating hapū partner engagement activities;
    c. Co-design, review and endorsement of the Habitat Management Plan;
    d. Implementation of relevant project consent conditions; and
    e. Undertaking karakia/opening of the project prior to construction, the road becoming operational and other times as necessary.
3. A Terms of Reference shall be developed between the consent holder and the Hapū Steering Group that includes the following:
    a. The organisational structure of the project and where the Hapū Steering group sits within that structure;
    b. Co-design protocols;
    c. A process for identifying habitats for modification or removal;
    d. A process for identifying values that sit within the Biodiversity Accounting Model to be used for habitat management
    e. A process for identifying offset and remediation locations;
    f. A process for developing and implementing the Cultural Environmental Design Framework;
    g. A schedule of meetings (monthly) between the Hapū Steering Group, NZTA Waka Kotahi and the design/construction team.
    h. Key points of engagement through the lifecycle of the Project.

7.1.3 Integration of cultural values

To address the current lack of necessary safeguards for sites of cultural and ecological significance, we require a conditions framework centred on a co-designed Cultural Environmental Design Framework (CEDF). This framework is essential to ensure that project design and construction are directly informed by, and responsive to, Patuharakeke values.

At a minimum, the CEDF must establish the following mandatory standards and processes:

1. A Cultural Environmental Design Framework must be co-designed with Patuharakeke to identify sites of significance adversely affected by the project, including, but not limited to, those outlined in Table 7.1.
2. The CEDF must describe the approach and program for integrating cultural mitigations into project design and construction, which is:
    a. Undertaken within the vicinity of the associated site of significance;
    b. Informed by, and responds to, the physical construction, operation and maintenance requirements of the project; and
    c. Includes cultural recognition, information and markers, informed by Patuharakeke kōrero.
3. Outline Plans must give effect to the Cultural Environmental Design Framework.

Table 7.1 Sites of significance and mitigations to respond to the adverse effects

Site of significance	Mitigations to be embedded during design of the project
Piroa	A stop over area that includes a cultural gateway feature (e.g., Pou Whenua or Waharoa) and information about the significance of Piroa. Cut batters and spoil sites are contoured and revegetated to mimic natural landforms and heal visual scars on the maunga. Key areas for planting a significant Kauri Grove. A large predator control area. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and

	storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Waihoihoi awa	Avoid diversion. Investigate the creation of a Waihoihoi recreational rest area/swimming hole type reserve at the proposed diversion if possible that can also be suitable for a consent condition monitoring point. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Kauri forest	Kauri Ora assessment and protection mechanisms including Kauri Ora Hygiene stations and boardwalks (if appropriate). Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Confluence of the Ahuroa, Waihoihoi and Waipu awa	A continuation of the Waipu River walkway trail and wayfinder interpretation as per the cover photo. Safe fishing jetty. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Pepeketua	Develop an education program with local schools.

	Patuharakeke are resourced to become a trained handler for a Wildlife Act Authority. Undertake a research project to understand the populations of Pepeketua in this location. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Connection and tribal pathways maunga to moana	Design planting to (natural character, ecology and landscape) connect awa corridors, repo and bush remnants ki uta ki tai. Integrate gravel geological provenance information into our Toi strategy so gravel locations can be traced across the project. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.

4. Design Review Audits must be completed to confirm that the Project is consistent with the Core Principles and the Design Principles. The process for Design Review Audits must be set out in the Cultural Environmental Design Framework.
5. Design Review audits must be undertaken:
    a. at least three (3) months prior to the outline plan being submitted to Council; and
    b. every three (3) months until the Project is open for public use.
6. Design Review Audits must be completed:
    c. in collaboration with the Hapu Steering Group terms of reference;
    d. and with the support and guidance of suitably qualified and experienced persons; and
7. Prior to the initial Design Review Audit, the consent holder must invite the Hapū Steering Group to complete a chapter that addresses the Mana Whenua/Cultural Landscape and associated mitigations of the ‘Cultural Environmental Design Framework’.

7.1.4 Management Plan Framework and Performance Standards

To ensure adverse effects are managed to an acceptable level, we require a comprehensive management plan framework underpinned by specific performance standards and mandatory minimum content.

As the technical information provided to date remains incomplete, we reserve the right to further comment on the refinement of the required content and objectives of these plans once full project details are received. In addition to the incomplete draft condition suite provided by the applicant, the following suite of management plans must be developed to address the specific effects identified in this CIA:

- Ecology Management Plan
- Bat Management Plan
- Lizard Management Plan (including a Lizard Relocation Area Management Plan)
- Frog Management Plan (including a Frog Relocation Area Management Plan)
- Invertebrates Management Plan (including an Invertebrate Relocation Area Management Plan)
- Freshwater Ecology Management Plan, to include:
    - De-fishing and Dewatering Management Plan
    - Stream works Procedure
- Habitat Management Plan
- Noise and Vibration Management Plan
- Archaeology Management Plan
- Communications Plan

7.1.5 Habitat retention and removal

To ensure that acceptable levels of effect are not exceeded, we require a prescriptive habitat management framework that establishes clear limits on disturbance and mandatory requirements for retention.

The following tables define our views on some of the minimum retention standards and maximum removal thresholds required to maintain ecological and cultural integrity. As the applicant has not yet provided a detailed aquatic stream assessment or granular spatial data, we reserve the right to further refine these limits and the specific co-design role of the Hapū Steering Group once comprehensive technical information is received.

We expect to see all habitats listed in Table 7.2 to be retained.

Table 7.2 Retained habitats

Habitat	Area to be retained (geo-reference)
Kahikatea forest	All 9.3 ha
Tōtara forest	All 42.5 ha
Kauri Forest	All 57 ha
Awa habitat	The Waihoihoi Awa will be retained, and no diversions will take place
Repo habitats	To be set out upon receiving further information
Manu habitat	To be set out upon receiving further information
Mokomoko habitats	To be set out upon receiving further information
Pepeketua habitats	To be set out upon receiving further information
Pekapeka habitats	To be set out upon receiving further information
Kauri snail habitats	To be set out upon receiving further information
Other terrestrial habitats that can be avoided	To be set out upon receiving further information

The removal of indigenous vegetation, wetland, and stream habitat must be included and not exceed the maximum areas defined in Table 7.3.

Table 7.3 Maximum area of indigenous vegetation and wetland habitat to be removed.

Habitat type	Maximum habitat removal area (ha)
Indigenous vegetation habitat	
Anthropic tōtara forest	TBC
Broadleaved species scrub forest	TBC
Kahikatea forest	0
Kahikatea treeland	0
Kahikatea-kauri-totara treeland	0
Kahikatea-pukatea forest/native scrub/tradescantia	0
Kānuka forest	TBC

Kānuka treeland/native and exotic scrub/ranked grassland	TBC
Kauri-podocarp forest	0
Kohekohe-taraire-tawa-podocarp/broadleaf	TBC
Nīkau treeland	TBC
Planted native vegetation	TBC
Pūriri forest/rank grassland	TBC
Remnant Riparian podocarp-hardwood-kanuka treeland	TBC
Scattered podocarp-broadleaf -kanuka treeland/mixed native and exotic scrub/ranked grassland	TBC
Tōtara forest/native broadleaf scrub	0
Tōtara forest/ornamental plantings	0
Tōtara-kānuka forest/mixed native and exotic scrub/ranked grassland	0
Tōtara-kauri/broadleaf scrub	0
Natural inland wetland habitat	
Creeping buttercup	TBC
Exotic dominated: purslane, water pepper & rushes	TBC
Juncus, creeping bent, buttercup	TBC
Juncus, creeping butter cup	TBC
Juncus, Isolepis, Creeping butter cup	TBC
Raupo, Isolepsi, water purslane, Juncus	TBC
Juncus, creeping buttercup, creeping bent, Glyceria	TBC
Kahikatea with creeping bent, Gylceria, water pepper, creping buttercup	TBC
Juncus, creeping butter cup, creeping bent	TBC
Wet pasture with Juncus and creeping bent	TBC
Lower, juncus, Gylceria, creeping bent, upper wet pasture, mid, raupo, kiekie, sedges	TBC
Headwater small Isolepis and creeping butter cup	TBC
Juncus, giant umbrella sedge, Isolepis sedgeland	TBC
Creeping buttercup, cabbage tree	TBC
Raupō gully with edge willow	TBC
Stream habitat	
Stream habitat to be confirmed once we receive an aquatic stream assessment of effects.	TBC

Conditions of consent regarding habitat removal must include (at a minimum):

1. The habitats identified in Table 7.2 must be retained in their entirety. Any activity within these areas must be strictly limited to:
    a. The removal of pest plants; or
    b. Essential vegetation management for verified health and safety purposes.
2. Prior to any works, all listed habitats that are scheduled for removal must be physically delineated on-site and verified against digital mapping.
3. Any authorised removal must be offset using Stream Ecological Valuation (SEV) and Biodiversity Offset Accounting Model (BOAM), as required by the Habitat Management Plan (set out below).
4. The finalisation of any habitat removal areas, use of the ecological models and offsetting areas must be co-designed with the Hapū Steering Group.

7.1.6 Ecological offsetting and net gain framework (SEV & BOAM)

To ensure that all residual effects are fully accounted for and mitigated, we require a Habitat Management Plan (HMP). The HMP must make all efforts to incorporate Patuharakeke taiao values and achieve a mandatory Net Gain requirement for all affected habitats.

The final footprint and specific ecological impacts remain unconfirmed, so the HMP must be regularly updated throughout the project lifecycle. We reserve the right to further refine the specific criteria and content of the HMP once the full technical data becomes available.

The HMP must be co-designed with and endorsed by the Hapū Steering Group, and must include the following mandatory standards:

1. The consent holder shall prepare and implement a Habitat Management Plan (HMP). The HMP shall be co-designed with and endorsed by the Hapū Steering Group. The purpose of the HMP is to:
    a. Manage residual construction effects on indigenous habitats;
    b. Quantify the values of existing habitats using the following methodologies:
        i. The Stream Ecological Valuation (SEV)
        ii. The Biodiversity Offsetting Accounting Model (BOAM);
    c. Design an offset (and if required compensation) package to achieve a net gain of ecological values for:

i. ngāhere
ii. repo
iii. awa
iv. manu
v. pekapeka
vi. pepeketua
vii. kauri snail
viii. mokomoko;

d. Implement, monitor and report on measures to confirm a net gain in ecological values for each habitat type has been achieved;
e. Wherever possible, account for Patuharakeke taiao values within the offsetting models, monitoring, reporting and approaches to implementation;
f. Require updating the models during detailed design, construction, and for 3 years post-operation[16] to ensure all residual effects are accounted for; and
g. Confirm that all plant material used or seed sourced for the purpose of offset planting must be sourced from the rohe in which it is to be planted and/or otherwise eco-sourced. Where the plant material used, or seed sourced, for the purpose of offset planting is not able to be sourced from the rohe in which it is to be planted and/or cannot be otherwise eco-sourced, the HMP must set out a process of consultation with the Hapū Partners to confirm an alternative source.

2. The HMP must be completed at least 60 working days prior to construction starting.
3. The HMP shall be fully implemented within 12 months of project completion.

7.1.7 Offset implementation and permanent protection

To secure and maintain offset sites long-term, we require a legally binding protection framework. This framework ensures that any habitat loss is met with an offset that is not only physically implemented but legally protected in perpetuity. We expect to see the following matters covered in the conditions of consent (at a minimum):

[16] Post operation review is required to ensure stream loss associated with groundwater drawdown has not occured over a greater area than expected.

1. Offset and compensation measures must be developed whenever any of the listed habitats are to be damaged or destroyed.
2. No habitat clearance or water body diversion/loss occurs until the legal mechanisms for offset delivery are fully executed and verified.
3. The consent holder must provide Patuharakeke and other relevant parties written confirmation that enduring legal agreements have been finalised prior to any vegetation clearance, water body diversions, or water body loss occurring.

Example mechanisms include land purchase, agreements involving covenanting, whenua rāhui, or similar registered title instruments.

7.1.8 Additions to the Ecology Management Plan

We require a co-designed Ecology Management Plan framework that embeds Patuharakeke tikanga into all operational protocols. This framework must ensure that species translocation and habitat clearance are not merely managed, but are governed by the following mandatory standards and endorsement processes:

1. Tikanga-led translocation protocols for mokomoko, pepeketua, ika, and tuna.
2. Operational controls, including pre-clearance checks for mokomoko and nesting manu, and strict vegetation clearance timing restrictions.
3. Taonga species protection, including de-fishing protocols that require the translocation of all taonga species.
4. All initial plans and subsequent amendments must be developed with, and formally endorsed by, Patuharakeke.

These recommendations are the minimum to address effects on our hapū values and should be incorporated into the existing requirements for the Ecology Management Plan in the draft conditions of consent.

7.1.9 Edge effect buffer planting

Edge effects have the potential to have significant adverse effects on our taonga flora and fauna species. We expect to see a condition that specifically manages these effects, for example:

1. Subject to landowner agreement on private property, indigenous buffer planting must occur on any terrestrial bush and wetlands remnants that are within 200m of the final road alignment. Buffer planting must:

a. Be between the project and the adjacent habitat.
b. Be a minimum of 10 meters deep, except in locations where 10m width is not available within the site due to existing tracks or roads.
c. Consist of species suited to the adjacent habitat.
d. Consist of indigenous plant material sourced from the local rohe or eco-region.
e. Undertake fencing, if required, to exclude stock.

7.1.10 Artificial lighting

Conditions are required to ensure artificial lighting associated with the project does not result in any direct light spill onto streams, wetlands or ngahere. Compliance with such a condition may be achieved through lighting design or buffer planting and subsequent canopy closure, thereby protecting the natural habitat.

7.1.11 Operational stormwater

We require a prescriptive stormwater framework that mandates nature-based treatment and verifiable water quality standards. This framework ensures that treatment is integrated into the landscape as a primary defence, rather than a secondary consideration.

The design, performance, and timing of stormwater infrastructure must be conditioned to meet the following (at a minimum):

1. All operational runoff must be treated through dedicated, indigenous-planted swales or wetlands prior to environmental discharge.
2. To ensure maximum effectiveness, quality treatment devices (wetlands/swales) must be separated from volume management devices (ponds/basins) wherever practical.
3. Systems must be engineered to remove at least 75% of total suspended solids and provide a total barrier to hydrocarbons and litter.
4. All treatment infrastructure must be fully functional and verified prior to the road opening for public use.

7.1.12 Sediment and Erosion Control Standards

To prevent the degradation of downstream aquatic habitats, we require a prescriptive erosion and sediment control framework.

As the construction methodology remains high-level, we reserve the right to refine these performance triggers and escalation protocols once the Site-Specific Erosion and Sediment Control Plans (SSESCPs) are provided for technical review. At a minimum, the following mandatory standards must apply (through conditions):

1. All works must adhere to the most stringent available standards. Where a Site-Specific Plan identifies a higher protection level than regional defaults, the higher standard shall be the mandatory baseline.
2. Works within stream beds must be undertaken when dry wherever practicable.
3. All clean water run-off must be diverted away from exposed earth to prevent erosion at the source.
4. All sediment retention devices must be designed and operated to meet strict water quality performance triggers:
    a. Clarity: 100mm or greater (measured by Secchi disc).
    b. pH Levels: Maintained between 5.5 and 8.5.
5. Any breach of these triggers must initiate an immediate investigation and reporting process. Corrective actions must be implemented within five working days.
6. If triggers are missed in two consecutive rounds or three times within six months, the framework must mandate an escalated response to ensure the 100mm clarity standard is restored immediately.
7. A report summarising the investigation and the response measures required must be provided to Patuharakeke and other relevant parties such as the Regional Council in writing within five working days of the performance trigger not being met.

7.1.13 Freshwater ecology monitoring and response framework

We require a comprehensive freshwater monitoring framework that utilises robust baseline data and specific biological triggers.

As the final locations for these monitoring stations must be informed by the completed aquatic stream assessment, we reserve the right to refine these triggers and frequency requirements once that data is provided. At a minimum, the conditions of consent must include:

1. A mandatory sequence of baseline, routine (monthly/quarterly), event-based (rainfall triggers), and post-construction monitoring at both upstream and downstream locations, wherever practicable.
2. Regular (monthly) assessment of pH, deposited sediment, algal cover, water depths, water velocity, wetted channel width, water clarity and photos of stream bed to track physical habitat changes.
3. Quarterly monitoring of macroinvertebrates and fine sediment must adhere to strict performance benchmarks. A greater than 20% negative shift in median fine sediment, QMCI, or ASPM scores (compared to upstream or previous data) must initiate immediate response actions.
4. Where triggers are exceeded, the conditions must require the implementation of corrective measures to restore ecological values to pre-exceedance levels.
5. Full records of all monitoring data and subsequent response actions must be provided to the Hapū Steering Group and other relevant parties such as the regional council to ensure transparency and cultural oversight of awa health.

7.1.14 Kauri biosecurity and pathogen management framework

The current ‘outcomes-based’ approach does not adequately address the high risk of introducing or spreading kauri dieback (Phytophthora agathidicida) during large-scale earthworks. To protect the integrity of the kauri forest, we require a prescriptive biosecurity framework.

Because the specific location of works relative to individual kauri has not been fully mapped, we reserve the right to refine these exclusion zones and hygiene protocols once the detailed design and soil profiling are provided.

We expect the co-design of a Kauri Dieback Biosecurity Plan (KDBP) to appropriately manage the potential risks of the project in terms of disease transport and spread. The KDBP should be mandated through a condition of consent and include the following standards:

1. The project must satisfy all rules of the Kauri National Pest Management Plan. This includes the installation of permanent hygiene foot stations and dedicated vehicle wash stations at all entry and exit points for identified kauri areas.
2. The framework must mandate the physical marking of Kauri Hygiene Zones (KHZs) on the ground. These zones will govern strict protocols for the collection, treatment, and containment of soil from all personnel and equipment.

3. The KDBP must be submitted to the Hapū Steering Group for endorsement at least 40 working days prior to any works within 30 metres of any kauri. This plan must include comprehensive mapping of ‘Affected’ versus ‘Unaffected’ kauri and detailed soil moisture profiling to determine safe operational conditions.
4. A mandatory training and education programme must be implemented for all contractors to ensure full compliance with KDBP procedures and the specific biosecurity obligations of the rohe. For example: https://www.kauriprotection.co.nz/national-plan
5. The KDBP must be prepared in direct consultation with the Hapū Steering Group and other relevant parties such as the Department of Conservation, to ensure cultural and ecological alignment.

7.1.15 Culvert and fish passage framework

To prevent the fragmentation of aquatic corridors, we require a prescriptive design and monitoring framework for all instream structures. This framework ensures that fish passage is not merely an aspirational goal, but a verifiable and maintained performance standard.

As the specific dimensions and locations of culverts are yet to be finalised, we reserve the right to refine these design criteria and success metrics once the detailed hydrological data is provided. The following standards must be integrated into a condition for a co-designed Culvert and Fish Ramp Design, Monitoring, and Maintenance Plan (CDMMP):

1. All temporary and permanent culverts in natural waterbodies, as well as fish ramps, must be engineered to enable uninterrupted fish passage.
2. The CDMMP must define a site-specific design approach for every structure, underpinned by clear, measurable measures of success to verify that passage has been achieved.
3. A mandatory monitoring programme must be established to track both hydrological and structural integrity, alongside biological surveys to confirm the presence and movement of target species through the culverts and fish ramps.
4. The framework must outline a proactive maintenance schedule for the life of the consent. Crucially, it must include a pre-defined remediation process to be triggered immediately if surface flow is lost or if design benchmarks are not met.

5. A formal process must be established to review and update the CDMMP in direct partnership with Patuharakeke, ensuring the framework remains fit for purpose as the project progresses.

7.1.16 Archaeological protection and site management framework

The current proposal fails to offer the necessary spatial or procedural certainty required to protect our irreplaceable cultural landscapes. To ensure the physical and spiritual integrity of our tūpuna whenua, we require an archaeological framework that prioritises avoidance and management.

The following mandatory standards must be integrated into the conditions for a co-designed Archaeology Management Plan (AMP):

1. All pā sites listed in Table 0.5 must be avoided. This includes a mandatory 20-metre exclusion buffer around the edge of all archaeological features as delineated by GPR.
2. Protective fencing must be installed prior to any construction activity within the associated zone. Within these fenced areas, machinery operation is strictly prohibited except for essential surface tracking (where no alternative exists) or the installation of the protection fencing itself.
3. A maintenance regime, including a minimum of quarterly mowing, must be established for all fenced pā sites to prevent degradation.
4. An Accidental Discovery Protocol and the overarching AMP must be co-developed with the Pou Ahurea Roopu and Patuharakeke. This framework must explicitly define:
    a. Decision-making protocols regarding the archaeology of our whakapapa.
    b. Comprehensive management strategies for the accidental uncovering of kōiwi (human remains) and taonga tūturu (in place prior to construction start).
    c. Specific tikanga-led approaches for information gathering prior to any authorised destruction of known features.
5. The AMP must establish clear roles and communication lines, ensuring mana whenua maintain oversight of all archaeological matters throughout the project's duration.

7.1.17 Pest management and ecological restoration

We require a prescriptive pest control framework that establishes clear performance standards and long-term commitments.

As the spatial extent of mitigation is yet to be confirmed, we reserve the right to refine these targets once detailed ecological data is provided. Before Patuharakeke can provide further advice, the following requirements must be addressed through consent conditions:

1. Specific areas for intensive pest control and the duration must be identified, with a primary focus on Piroa.
2. The conditions must establish clear, measurable suppression targets for all compensation measures to ensure a verifiable net gain in biodiversity.
3. The conditions must establish clear, measurable monitoring targets for mokomoko, pekapeka, pepeketua and invertebrates to ensure a verifiable net gain in biodiversity.

Aggregate supply and geological integrity

While we understand the project is not currently seeking to secure material within the main works consents, the sourcing and movement of aggregate represent a significant cultural and environmental impact. To maintain the integrity of our whenua, we require aggregate supply conditions that prioritise local reuse and the preservation of geological provenance.

As the final material requirements and sourcing strategies are yet to be confirmed, we reserve the right to refine these standards once the detailed design and construction methodology are provided. The following mandatory principles must be integrated into any future material supply conditions:

1. The project must prioritise the reuse of excavated material within the project corridor. This is essential to ensure that whenua remains within its rohe and to minimise the environmental footprint of importing external fill.
2. If aggregate must be imported, the procurement process must prioritise local quarries within the rohe. This ensures that the physical materials used in the project maintain a consistent geological connection to the landscape.
3. The provenance of gravel must be formally integrated into the project’s Toi Strategy. This ensures that the sources of all imported materials are recorded, traced, and acknowledged across the project's life cycle.

4. Any material supply strategy – including extraction, transport, or storage – must ensure that all physical and incidental effects on Te Paritū Pā are avoided entirely.
5. Patuharakeke must be formally engaged during the detailed design and subsequent consenting phases to review and endorse the selected material sources.

7.1.18 Climate resilience and emissions framework

The ‘outcomes-based’ approach fails to account for the long-term climatic impacts of the project or the preservation of the Mauri and Mana Motuhake value groups. To ensure the project is truly resilient and consistent with low-carbon objectives, we require a prescriptive climate and emissions framework.

As critical data regarding flood modelling and business case rationale remains outstanding, we reserve the right to refine these requirements once full technical information is provided. The following mandatory standards must be integrated into the project's design and delivery:

1. An Embodied Emissions Strategy must be co-designed and developed during the detailed design phase to identify, assess, and implement a long list of emissions reduction options for both the construction and operational phases.
2. A shared-use path for walking and cycling must be constructed for the entire length of the alignment to support climate-resilient transport
3. The conditions of consent must define specific performance standards to prevent adverse downstream impacts, including:
    a. Maximum flood levels for downstream properties and infrastructure.
    b. Mitigation of instream velocity changes resulting from new infrastructure, including the use of blue-green solutions.

Before we can provide final advice on the Climate Resilience value group, we must be allowed the opportunity to review:

- A full assessment of instream velocity and flood-level changes.
- The Project Business Case and Cost-Benefit Analysis to verify the rationale behind the preferred solution.

8 Reference list

Bull, L. (2025). *Existing Environment Report - Avifauna*. www.nzta.govt.nz

Bull, L. (2026). *Assessment of Effects on Avifauna Ecology Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Campbell, M., & Brown, A. (2026). *Assessment of Effects on Archaeology Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

De Luca, S. (2025). *Existing Environment Report - Marine Ecology*. www.nzta.govt.nz

Denmead, L. (2026). *Assessment of Effects on Terrestrial Ecology Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Drury, M., & Roets, S. (2025). *Summary of Desktop Study on Existing Environment (Sections 2 and 3)*.

Hasan-Zadeh, M. (2026). *Assessment of Operational Stormwater Effects Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Hickey-Elliott, A., Yungnickel, M., Wu, J., van Ginkel, L., & Robinson, H. (2024). *Brynderwyn Hills Recovery Project - Ecological Impact Assessment*.

Keesing, V. (2025). *Existing Environment Report - Freshwater and Terrestrial Ecology*. www.nzta.govt.nz

Keesing, V. (2026). *Assessment of Effects on Freshwater Ecology Alternative to the Brynderwyn Hills - Brynderwyn Hills section*. http://creativecommons.org/licenses/by/4.0/.

Lister, G., & Jones, M. (2025). *Existing Environment Report Landscape, Visual and Natural Character*. www.nzta.govt.nz

NZTA Waka Kotahi. (2025). *Northland Corridor Alternative to the Brynderwyn Hills: Environmental Specialists and Planning Hui*.

NZTA Waka Kotahi. (2026a). *Substantive Application under the Fast-track Approvals Act 2024 - Volume A - Main Application*.

NZTA Waka Kotahi. (2026b). *Substantive Application under the Fast-track Approvals Act 2024 - Volume B-RMA Approvals*.

Patuharakeke. (2026). *Cultural Values Assessment: Section 2B - Northern Corridor RONS*.

Patuharakeke Te Iwi Trust Board. (2014). *Patuharakeke Hapū Environmental Management Plan*. www.patuharakeke.maori.nz

Patuharakeke Te Iwi Trust Board. (2025). *Patuharakeke Hapū Environmental Management Plan - DRAFT Climate Change Update 2025*.

Soltau, L. (2026). *Assessment of Effects on Groundwater Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Te Pou Taiao o Patuharakeke. (2025). *Patuharakeke CCCV*. https://storymaps.arcgis.com/stories/4285bfee052a4db582234cd9264410e5

Valizadeh, N., Rocamora, E., & Santelices, L. (2026). *Assessment of Flooding Effects Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Whitfield, S. (2024). *Brynderwyn Hills Recovery Project - Scoping Survey Assessment Report*.

Woodhouse, A. (2026). *Assessment of Effects on Highly Productive Land Alternative to the Brynderwyn Hills – Brynderwyn Hills section*.

Appendix A Patuharakeke Cultural Values Assessment

Appendix B Patuharakeke Values Management Plan (Draft)

Patuharakeke
TE IWI TRUST BOARD

Patuharakeke
Values Management Plan
[DRAFT]

Section 2B - Brynderwyn Hills
Alternative Highway Project 2026
For NZ Transport Agency Waka Kotahi

Contents

1 Introduction

We, Te Pou Taiao o Patuharakeke Te Iwi Trust Board (PTITB), are the mandated voice for Patuharakeke Hapū. As ahikā, mana whenua, and mana moana of the region south of the Whangārei Harbour, we hold inherent obligations to engage in all matters that impact te taiao.

NZTA Waka Kotahi is seeking approvals for Section 2B, which provides an alternative 17.6km route through the Piroa (Brynderwyn Hills) to enhance transport resilience following extreme weather events like Cyclone Gabrielle. Section 2B is a central component of the broader Te Hana to Port Marsden Highway Road of National Significance.

Our role as mana whenua in the project area and broader landscape must be uplifted as part of the Section 2B project; we must be supported to have the capacity and capability to participate as a Tiriti partner and to manage our whenua, wai, and significant sites in line with our tikanga.

This management plan, prepared for use by Patuharakeke, NZTA Waka Kotahi, and those constructing, maintaining and operating the Section 2B highway, contains our story; our cultural values and how effects on these must be managed.

It sets out our plans and expectations for cultural induction, kaitiakitanga, mahi we want to be involved with, and monitoring we want to undertake. The management plan outlines our communication protocols with our hapū and the roles and responsibilities for implementing them.

The project construction and operation must be undertaken in accordance with this plan to ensure that the effects on our traditions and connections with our whenua, wai, wāhi tapu, sites of significance and taonga are provided for.

1.1 Purpose and scope

Section 2B Condition XX requires the Patuharakeke Values Management Plan (PVMP). The purpose of the PNVP, as stated by Condition XX, is:

> The purpose of the Patuharakeke Values Management Plan is to mitigate the adverse effects of the project's construction and operation on the values of Patuharakeke.

The scope of the plan is set out in XX of the Section 2B conditions and includes:

1. The Patuharakeke Values Management Plan must include the following, at a minimum (but is not limited to):
    a. A description of Patuharakeke values related to the project area;
    b. The organisation of Patuharakeke within the project, including the roles and responsibilities of personnel implementing this plan;
    c. Confirmation of how Patuharakeke will engage in the project during detailed design, management plans certification, submission of outline plans, construction, and operation;
    d. Communication and information sharing protocols to support Patuharakeke in understanding the state of the taiao;
    e. Site access protocols to ensure Patuharakeke access to the project during construction and operation;
    f. Training and career pathway opportunities that will be provided for Patuharakeke taitamariki and uri;
    g. Identification of mechanisms to ensure long-term access to sites of significance, including but not limited to Waihoihoi Awa, Piroa maunga;
    h. Details of kaitiakitanga monitoring activities and opportunities, locations and protocols;
    i. Process to return taonga resources, such as wood, and other resources impacted by the project to Patuharakeke; and
    j. Details and frequency of Patuharakeke cultural inductions for construction and related teams, and cultural interpretation and mahi toi.

1.2 How to use this plan

This management plan is for Patuharakeke, NZTA Waka Kotahi, and the contractors involved in the construction and operation of the highway to implement and use. It provides an understanding of Patuharakeke cultural values and sets out how effects on those values are to be managed throughout the Section 2B Project. It guides roles, responsibilities, and actions for all parties involved.

1.3 Structure of this plan

The PVMP is structured in two parts – the why and the how:

Part 1 – The Why

The ‘why’ behind the actions, roles and responsibilities that are set out in Part 1 of our plan.

It includes who Patuharakeke are and our cultural values that Section 2B activities will adversely affect. This part should be used to gain an understanding of our story and the values we wish to manage.

Part 2 – The How

We describe ‘how’ to protect the cultural values that we describe in Part 1 of our plan.

Including:

- The measures needed to avoid, remedy, mitigate or offset effects on our values
- Roles and responsibilities of personnel,
- Our plans for cultural inductions, kaitiakitanga, and cultural health monitoring
- Communication protocols and how we will be involved in construction and operation

This part should be used by Patuharakeke kaimahi, NZTA Waka Kotahi and Section 2B contractors to understand their roles and responsibilities and how effects on our cultural values must be managed.

PART 1

2 Our story

This section addresses **Condition XX(a):**

a. A description of Patuharakeke values related to the project area

2.1 Patuharakeke

Ko Manaia te Maunga

Ko Whangārei Terenga Parāoa te Moana

Ko Takahiwai te Marae

Ko Rangiora te Tupuna Whare

Ko Patuharakeke te Hapū

Tihei mauri ora!

Patuharakeke take our origins from the ancient tribes of Ngāti Manaia, Ngāi Tāhuhu, Ngāti Wharepaia, Ngāti Ruangaio and Ngāti Tū. Patuharakeke are a composite hapū of descent from a number of major contemporary iwi groups in the north. These include Ngāti Wai, Ngāpuhi nui tonu, and Ngāti Whātua.

Patuharakeke as ahikā, mana whenua, mana moana of the region located south of the Whangārei Harbour have a long traditional relationship with the area and surrounds encompassed by the project corridor. This status is determined by the tenets of Māori land and sea tikanga, including gifting, long-term occupation and use, whakapapa, and conquest.

The following pepeha is used to describe the traditional and contemporary associations (including customary authority) of Patuharakeke with the area:

> Ko Manaia Te Maunga | Ko Whangārei Terenga Parāoa Te Moana | Ko Takahiwai Te Marae | Ko Rangiora Te Tupuna Whare | Ko Patuharakeke Te Hapū

Our takiwā is the broad area of whenua and moana that we associate with our tūpuna. Our takiwā reflects our Treaty Settlement and Marine and Coastal Area (Takutai Moana) Act 2011 negotiations and comprises overlapping whanaungatanga and shared boundaries. Our rohe represents a more narrowly defined, contemporary area that is used for resource management purposes.

Our Strategic Plan 2025-2026 sits above the Hapū Environmental Management Plan (HEMP) and outlines our Strategic Pou (Figure 2.1). These Pou are the

pillars of the strategic plan and touch on all the well-being associated with our hapū. The Strategic Plan guides our aspirations and priority actions.

Figure 2.1 Patuharakeke Strategic Pou

The environmental vision and mission statements for the Patuharakeke Te Iwi Trust, as stated in the Hapū Environmental Management Plan 2014 are:

Vision:

> "I ngā rā e hī ika, he kupenga tātai āwhai nuku – If you wish to catch fish, first you need to ensure your net is in good order"

Mission:

> To revitalise the mauri of our taonga tuku iho

The vision and mission are supported by a set of values that guide our assessment of resource management, consenting, and policy analysis and input into our rohe (Section 2.2). A values framework was developed to contextualise our strategic pou into a set of values specific to the project and project area.

2.2 Our values

The framework for this CIA comprises three value groups with interlinked values and associated statements (see tables below). The groups include core Patuharakeke values that share themes and have been formed for this CIA. There is overlap between the values associated with each value group due to the interconnectedness of all elements of te ao Māori.

2.2.1 Mana motuhake

Giving effect to whanaungatanga, manaakitanga, mana whenua, tikanga and mātauranga.

This value group reflects our position as mana whenua in our rohe and our obligations to exercise authority over our lands, waters, and taonga. It encompasses our strategic goal to support development initiatives (Pou Whaioranga) and uphold our vision for our people and environment through governance (Pou Kāwanatanga). Our values related to Mana Motuhake as relevant to the project are set out in Figure 2.2 below.

Mana motuhake links to Hoe Tere (the steering paddle) of our Climate Waka, which represents our rangatiratanga. A genuine partnership in the highway project is essential to support us to ‘steer’ an independent path through the climate crisis.

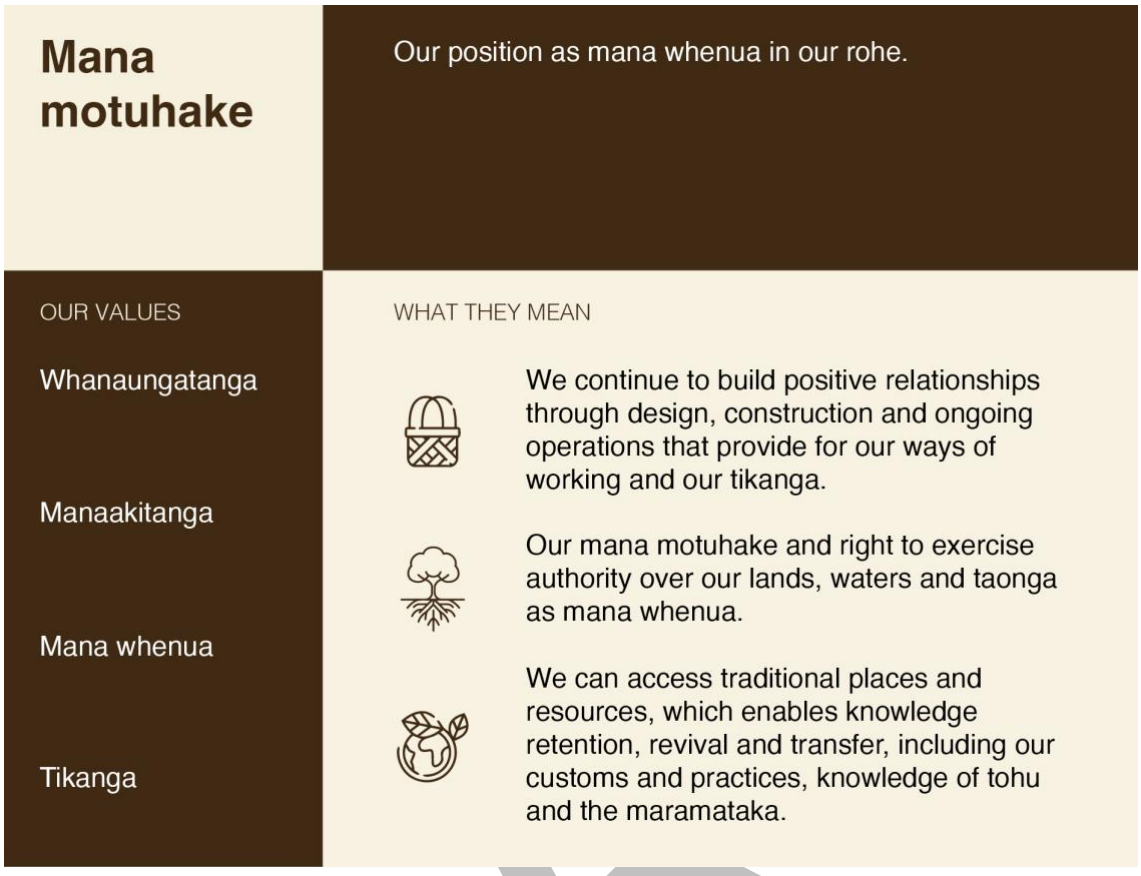


Figure 2.2 Mana motuhake value group composition

2.2.2 Mauri

Giving effect to kaitiakitanga, mātauranga, mauri and wairuatanga.

Mauri concerns the 'life force' and health of the natural environment. This group focuses on our responsibility to minimise environmental impacts and enhance the health of te taiao.

Mauri links to Hiwi Taha Mauī (the port hull) Hiwi Taha Matau (the starboard hull) on our Climate Waka – representing mitigation and adaptation. Our climate strategy focuses on ecosystem-based adaptation, which has informed our recommendations in this CIA. Biodiversity preservation is one outcome of protecting our environment. Enhancing our taiao also recognises its role as critical infrastructure for climate resilience, such as flood risk reduction and local surface cooling.

The Catchment Context, Challenges and Values (CCCV) story map[1] refers to a number of marine, freshwater and terrestrial species of significance to Patuharakeke found in the southern Waipu rohe (Te Pou Taiao o

[1] Refer to Patuharakeke CCCV story map for more information: https://storymaps.arcgis.com/stories/4285bfee052a4db582234cd9264410e5

Patuharakeke, 2025). These are considered taonga tuku iho and share our whakapapa going back to the atua including Ranginui and Papatūānuku.

Our values related to Mauri as relevant to the project are set out in Figure 2.3 below.

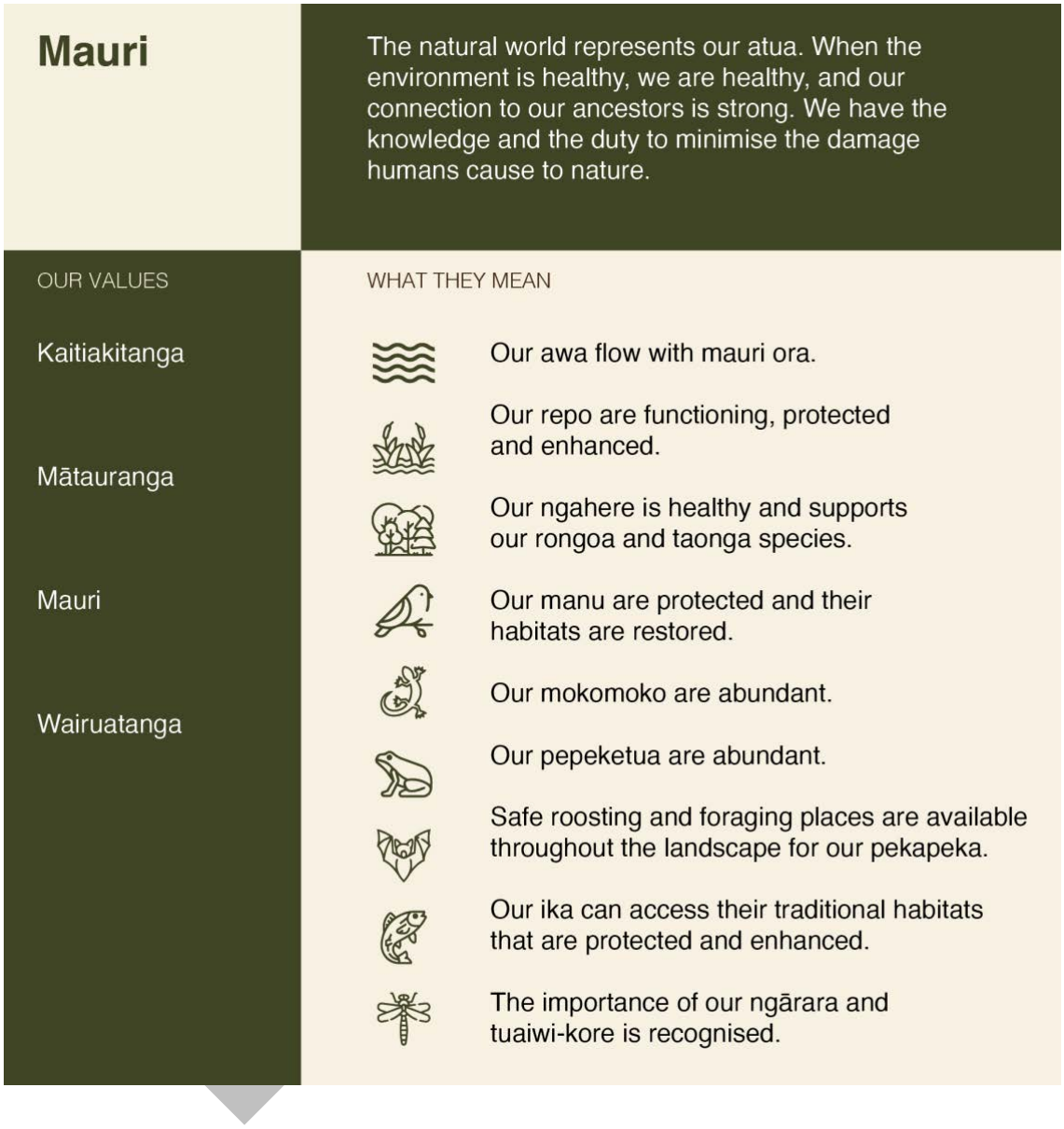


Figure 2.3 Mauri value group composition

2.2.3 Whakapapa

Giving effect to kaitiakitanga, mātauranga and tikanga.

Whakapapa ties to our Rā Kei (Mizzen Sail of our Waka Hourua), which represents taitamarikitanga (succession). The protection and preservation of our significant sites is essential for the resilience of future generations. Our tamariki and mokopuna will face a vastly different world to that of our tūpuna, so it is crucial they are able to maintain connections to their hapū and identity through the footsteps of our ancestors.

The proposal is located within a rich cultural landscape we refer to as the 'footprints of our tūpuna' (**Error! Reference source not found.**). This landscape spans from the northern slopes of Piroa (Brynderwyn) to the great expanse of Waipu flatlands, streams and rivers, and estuaries out to our Pariwaka, Waipu, Uretiti takutai coastline, which are bounded on the west and north by the Tangihua, Kukunui and Mareretū Ranges. It contains numerous wāhi tapu, wāhi taonga, and archaeological sites, such as pā, puna (springs), gardens, middens, and storage pits ki uta ki tai that provide physical evidence of our long occupation. Other important tūtohu whenua or cultural markers include our motu – Taranga and Marotiri (also known as the Hen and Chicken offshore Islands) – seaward to the east and Te Paepae o Tū (Bream Tail).

Our values related to Our Whakapapa as relevant to the project are set out in Figure 2.4 below

Figure 2.4 Whakapapa value group composition

2.2.4 Climate resilience

The deepening climate crisis represents the single greatest threat to our Taonga Tuku Iho today. As the highway traverses the southern boundary of our rohe, it must be evaluated through the lens of our Climate Waka to ensure it contributes to a just and equitable transition to a zero-carbon and climate-resilient future. While the project approach is focused on cost-effectiveness, it also must consider ways to avoid embedding a long-term reliance on fossil fuels.

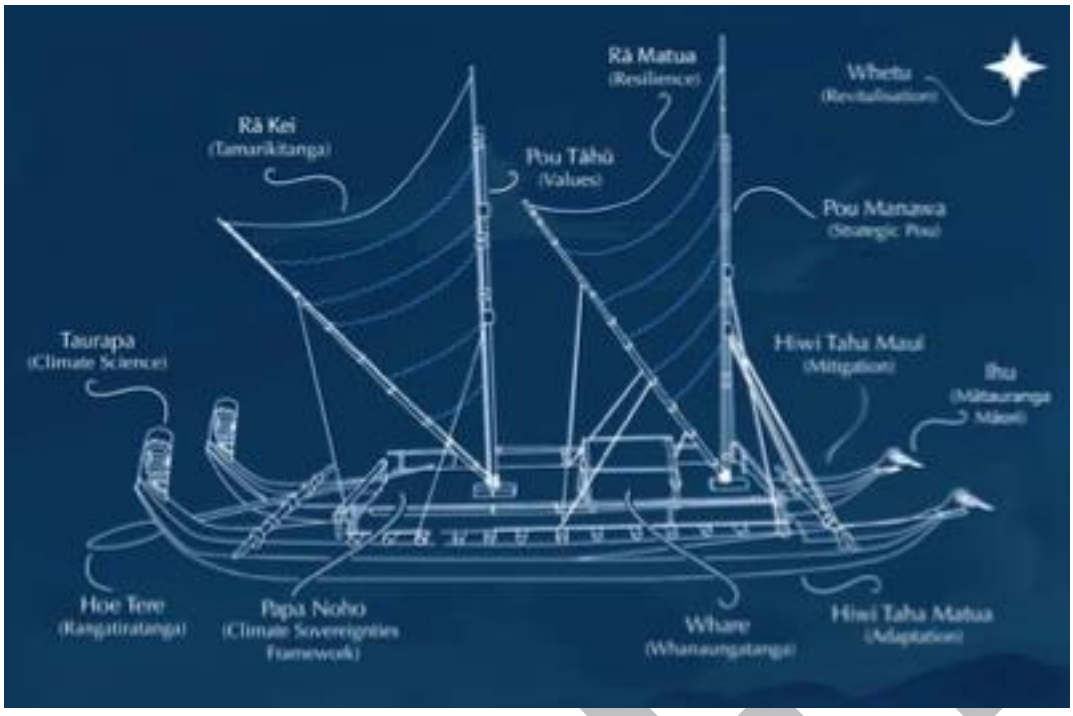


Figure 2.5 Patuharakeke Climate Waka

We have built our metaphorical Waka Hourua (double-hulled waka) to support our uri through unprecedented storms, setbacks and challenges that we will face in the deepening climate crisis (Patuharakeke Te Iwi Trust Board, 2025). The Climate Waka framework also prioritises revitalising the mauri of our taonga tuku iho. Figure 2.5 includes:

- Whetu (Guiding Star) – Revitalisation: Our principal mission is to ensure ecosystems and people thrive despite a rapidly warming world.
- Ihu (Bowsprit) – Mātauranga Māori: A holistic lens that considers the interconnectedness of all living things through whakapapa to lead our climate response.
- Taurapa (Stern Post) – Climate Science: Provides accurate data and modelling to inform planning decisions.
- Hiwi Taha Mauī (Port Hull) – Mitigation: The urgent action required to stop greenhouse gas pollution and reach net-zero by 2050.
- Hiwi Taha Matau (Starboard Hull) – Adaptation: Practical measures to prepare for inevitable impacts, such as sea-level rise and extreme weather.
- Hoe Tere (Steering Paddle) – Tino Rangatiratanga: Our political self-determination allows us to lead our own independent path toward a better future.

The existing State Highway 1 is highly vulnerable, having closed for 73 days in 2023 due to Cyclone Gabrielle and other extreme weather events. While Section 2B is intended to enhance regional resilience, the Patuharakeke Climate Waka demands that this infrastructure does not come at the cost of our local climate defences. The removal of indigenous vegetation, waterways and wetlands directly depletes our flood capacity and natural carbon sinks; there is potential for increased flood levels and velocities; and the project will include significant embodied and operational carbon emissions.

Our values related to Our Climate Resilience as relevant to the project are set out in Figure 2.6 below.

Climate resilience	The natural world represents our atua. When the environment is healthy, we are healthy, and our connection to our ancestors is strong. We have the knowledge and the duty to minimise the damage humans cause to nature.
OUR VALUES	WHAT THEY MEAN
Net-zero alignment	All developments within our rohe work to achieve net-zero carbon emissions by 2050.
Enhanced resilience	Our resilience is enhanced through strengthening our communities and natural defences.
Sovereignty protection	Our climate sovereignty is protected to steer us through the climate crisis.
Succession (taitamarikitanga)	Succession is secured by empowering our taitamariki with the climate literacy and authority needed to thrive in a changing world.

Figure 2.6 Climate resilience value group composition

PART 2

3 Our role on the project

This section addresses **Condition XX(b) and (c)**:

b. The organisation of Patuharakeke within the project, including the roles and responsibilities of personnel implementing this plan.
c. Confirmation of how Patuharakeke will engage in the project during detailed design, management plans certification, submission of outline plans, construction, and operation.

Table 3.1 outlines the roles Patuharakeke holds in relation to the project and the responsibilities of those roles.

Table 3.1 Patuharakeke roles and responsibilities on Section 2B

Role	Responsibility
Governance	
Patuharakeke Te Iwi Trust Board (PTITB)	Represents Patuharakeke in providing strategic guidance, oversight and accountability to Patuharakeke and its members. Is the affected representative body under the RMA and Fast Track Act.
Patuharakeke Chief Executive	Represents Patuharakeke in the governance of the Project. This role includes attendance at Project Steering Group and Project Boards for decision-making and guidance. Liaises and reports to the PTITB. Signs on behalf of PTITB.
Project management*	
Patuharakeke Project Manager	Responsible for delivery of the Patuharakeke programme of works, as well as oversight of the wider Section 2B project on behalf of Patuharakeke. Reports to the Patuharakeke Chief Executive.
Integration lead	Works alongside project partners (including contractors) and NZTA Waka Kotahi to coordinate and integrate activities on behalf of Patuharakeke. Reports to the Patuharakeke Chief Executive.

Patuharakeke Kaiwhakahaere Taiao	Manages the Patuharakeke Taiao team and Kaitiaki teams, providing tikanga support and guidance. Reports to the Patuharakeke Chief Executive.
Workstream/Systems*	
Consent/ taiao lead	Works in the consenting, design and compliance workstream alongside partners, other hapū and iwi and NZTA Waka Kotahi. Responsible for leading and delivering on the engagement with consenting changes, new applications, In General Accordance statement reviews, Outline Plan reviews, taiao design (stormwater, fish passage, ecological management and offsetting) workstream on the Section 2B project on behalf of Patuharakeke. Provides expert advice and guidance to Patuharakeke and NZTA Waka Kotahi where and when required. Reports to Patuharakeke Project Manager
Legacy outcomes advisor	Works in the Legacy outcomes workstream alongside partners, other hapū and iwi and NZTA Waka Kotahi. Responsible for leading the Patuharakeke legacy outcomes, training and procurement for Patuharakeke on the Section 2B project. Reports to Patuharakeke Project Manager.
Design/ toi co-design lead	Works in the Design workstream alongside Alliance partners, other hapū iwi and NZTA Waka Kotahi. Responsible for delivering co-design of infrastructure such as bridges, tie ins, round abouts, including toi and integrated design of the Section 2B project on behalf of Patuharakeke. Reports to Patuharakeke Project Manager

Communications, information and Engagement Advisor	Responsible for implementation of our communications and engagement plan (Chapter 4). Reports to Patuharakeke Project Manager
Kaitiaki*	
Pou Tiaki	Manages and coordinates Patuharakeke Kaitiaki. Implements our kaitiaki plan (Chapter 7). Reports to the Patuharakeke Kaiwhakahaere Taiao.
Kaitiaki x 8	Implements our kaitiaki plan (Chapter 7). Reports to the Patuharakeke Pou Tiaki.
Patuharakeke Taiao and Commercial Services**	
Planting team	Implements and delivers planting outcomes for Patuharakeke. Reports to the Patuharakeke Kaiwhakahaere Taiao.
Pest control team	Implements pest control outcomes for Patuharakeke. Reports to the Patuharakeke Kaiwhakahaere Taiao.
Monitoring	Implements cultural health monitoring and other monitoring such as ecological monitoring. Reports to the Patuharakeke Kaiwhakahaere Taiao.
Cultural education	Works to leverage Patuharakeke collective expertise and resources in Tai Tokerau to increase cultural awareness of Patuharakeke history and values. Reports to the Patuharakeke Kaiwhakahaere Taiao.

*subject to final discussions with NZTA Waka Kotahi on resourcing and funding.

**Patuharakeke has taiao and commercial services to support the Section 2B project. Their responsibilities are set out to demonstrate what support they can offer.

NZTA Waka Kotahi and Section 2B contractors have roles and responsibilities under this plan too. Where activities have the potential to impact our values, the personnel planning, designing and undertaking those activities must be aware

of the contents of our management plan and notify us so we can provide input and participate.

3.1 How we will engage with the project

3.1.1 Work in partnership

The project and those working on it must continue to work in good faith and honour our role as Tiriti partners and our Terms of Reference agreement with NZTA Waka Kotahi throughout the project. We will discuss and agree on partnership principles and ways of working in this section of our management plan.

3.1.2 Commercial opportunities

We want to be involved in the construction, ongoing operation and maintenance of the Section 2B highway. In chapter four, we set out our taiao and commercial services. We want to discuss these opportunities with NZTA Waka Kotahi and, wherever possible, be engaged to provide these commercial services.

To formalise our involvement, a procurement strategy should be developed that includes:

- scoping contracts,
- joint ventures,
- business start-up opportunities,
- career training and employment pathways.

3.1.3 Cultural and Environmental Design Framework- Integration of cultural values (condition xx)

We will engage with the project through the proposed Cultural and Environmental Design Framework (CEDF) Condition XX that requires integration of the following cultural values:

Site of significance	Mitigations to be embedded during design of the project
Piroa	A stop over area that includes a cultural gateway feature (e.g., Pou Whenua or Waharoa) and information about the significance of Piroa. Cut batters and spoil sites are contoured and revegetated to mimic natural landforms and heal visual scars on the maunga.

	Key areas for planting a significant Kauri Grove. A large predator control area. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Waihoihoi awa	Avoid diversion. Investigate the creation of a Waihoihoi recreational rest area/swimming hole type reserve at the proposed diversion if possible that can also be suitable for a consent condition monitoring point. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Kauri forest	Kauri Ora assessment and protection mechanisms including Kauri Ora Hygiene stations and boardwalks (if appropriate). Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Confluence of the Ahuroa, Waihoihoi and Waipu awa	A continuation of the Waipu River walkway trail and way finder interpretation as per the cover photo. Safe fishing jetty. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Pepeketua	Develop an education program with local schools. Patuharakeke are resourced to become a trained handler for a Wildlife Act Authority. Undertake a research project to understand the populations of Pepeketua in this location. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour

	starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.
Connection and tribal pathways maunga to moana	Design planting to (natural character, ecology and landscape) connect awa corridors, repo and bush remnants ki uta ki tai. Integrate gravel whakapapa information into our Toi strategy so the whakapapa of gravel can be traced across the project. Develop an app triggered by geofencing technology sharing sites of significance stories, taonga kōrero, cultural interpretation and storyboard information for a driving tour starting at the peak of Piroa to the confluence of the three awa below, and for walking/cycling touring.

The CEDF will set out the cultural and environmental landscape and context of the project area. It will include a series of design principles that describe how the development should respond to the unique cultural and environmental conditions, including planting activities, pest control, development of physical infrastructure, Mahi Toi, pou whenua and signage/storyboards. The CEDF is to be developed in conjunction with the Project team through detailed design and conditions.

3.1.4 Involvement in activities and management

We wish to be actively involved in the management of construction activities associated with Section 2B.

Management plans will be prepared for most activities. These will be implemented as the road is constructed. Below, we have set out our expectations for our involvement in the plans and activities undertaken under them (Table 3.2).

We expect NZTA Waka Kotahi will require

- changes to the existing consents and designations,
- new consents,
- the submission of outline plans,
- the development of site-specific plans,
- the development and certification of management plans,
- changes to management plans,

- the development of In General Accordance Statements,
- several detailed design gateways.

We expect to

- Engage early to help set direction
- Discuss changes that may be required
- Review drafts and design holds
- Provide feedback in ways that work for us
- Provide a formal written letter of support where appropriate signed by our Chief Executive

Table 3.2 outlines, in draft, some of the ways we expect to be involved in construction and operation activities.

Table 3.2 Patuharakeke expectations for involvement in the management of Section 2B

Management Plan	How will Patuharakeke be involved?	When will Patuharakeke be involved?	Anticipated frequency and duration of involvement
Construction Environmental Management Plan (Condition XX and Schedule XX). Includes: • Construction Noise and Vibration Management Plan (not yet conditioned) • Construction Traffic Management Plan (not yet conditioned) • Ecology Management Plan (not yet conditioned) • Erosion and Sediment Control Plan (Condition XX) • Construction Air Quality Management Plan (not yet conditioned)	• Patuharakeke must be involved review process of the management plan and site-specific management plans with input and advice where applicable. • Notified of any incidents or accidental findings. • Opportunities for Patuharakeke kaitiaki to assist with field observations, data gathering and monitoring where applicable.	Prior to construction for management plan preparation. During construction for site specific plan preparation and observations.	Reviewing capacity during management plan preparation and submission to Council. There will be field observation, data gathering and monitoring opportunities for the duration of the project.
Ecology Management Plan (not yet conditioned). Includes: • Freshwater Ecology Management Plan (not yet conditioned) • Lizard Relocation Area Management Plan (not yet conditioned) • Avifauna Management Plan (Condition XX) • Bat Management Plan (not yet conditioned)	• Patuharakeke kaitiaki can undertake all ecological activities (excluding those activities where personnel need to be named on permits) • Project ecologists to offer training to Patuharakeke. Where this is not practical, knowledge and results will be shared with Patuharakeke. • Patuharakeke kaitiaki can work directly under the supervision of consultant ecologists. • Patuharakeke will be consulted on site-specific methodologies to be undertaken.	All construction phases Post-construction monitoring	Reviewing capacity during management plan preparation and submission to Council. Will depend on resources available. Patuharakeke kaitiaki can undertake large parts of the ecological management activities if resourced appropriately and supporting where necessary to build capability.

Management Plan	How will Patuharakeke be involved?	When will Patuharakeke be involved?	Anticipated frequency and duration of involvement
• Frog Management Plan (not yet conditioned) • Pre-construction surveys for 'at risk' or 'threatened' braided river bird species; 'at risk' or 'threatened' wetland bird species; New Zealand Pipit; lizard survey and salvage; frog survey and salvage; 'at risk' or 'threatened' invertebrate species. • Bat roost surveys (Condition XX). • Fish removal or recovery (not yet conditioned). • Fish ecology monitoring during and after construction.			
Habitat Management Plan (Not yet conditioned)	• Patuharakeke kaitiaki can undertake all ecological activities (excluding those activities where personnel need to be named on permits) • Project ecologists to offer training to Patuharakeke. Where this is not practical, knowledge and results will be shared with Patuharakeke. • Patuharakeke kaitiaki can work directly under the supervision of consultant ecologists. • Patuharakeke will be consulted on site-specific methodologies to be undertaken. • Patuharakeke Pou Taiao will be involved in the co-design of wetland and habitat restoration/creation. • Co-design of monitoring and maintenance protocols. • Acknowledgement as a SQEP • Review of management plan and any updates	All construction phases Post-construction monitoring	Reviewing capacity during management plan preparation and submission to Council. Will depend on resources available. Patuharakeke kaitiaki can undertake large parts of the ecological management activities if resourced appropriately and supporting where necessary to build capability.

Management Plan	How will Patuharakeke be involved?	When will Patuharakeke be involved?	Anticipated frequency and duration of involvement
Erosion and Sediment Control Plan (Condition XX and Schedule XX). Includes: • Chemical Treatment Plan (Condition XX) • Erosion and Sediment Control Monitoring Plan (Condition XX • Dewatering Management Procedure (not yet conditioned) • Emergency Spill Response Procedure (Condition XX) • Stream Works Procedure (not yet conditioned) • Hazardous Substances Procedure (not yet conditioned) • Site-Specific Erosion and Sediment Control Plans (Condition XX)	• Patuharakeke have been involved in the authoring and review process of the management plan. They can also be involved in the authoring and review of sub-plans and procedures where applicable. • Can be involved with advice and reviewing of site-specific management plans with input and advice where applicable. • Opportunities for Patuharakeke kaitiaki to assist with field observations, data gathering and monitoring where applicable.	Prior to construction for management plan preparation. During construction for site specific plan preparation and observations.	Reviewing capacity during management plan preparation and submission to Council. Field observations, data gathering and monitoring opportunities for the duration of the project.
Archaeology Management Plan (not yet conditioned)	• Patuharakeke kaitiaki will be invited to observe and participate in the archaeological construction excavations. • Patuharakeke kaitiaki can observe topsoil stripping / earthworks in monitored (with archaeologist) and on-call (without archaeologist) management zones. • Patuharakeke can potentially be involved in post-processing of field-samples (if required and undertaken locally). • Patuharakeke will be notified of any archaeological discoveries.	Pre-construction archaeological excavations Pre-construction works (where potential for soil disturbance) During construction earthworks	Whenever formal archaeological excavations are undertaken (both pre-construction and during construction). Any time topsoil stripping occurs or for the first metre of earthworks (or deeper if local erosion deposits >1 m). During any updates to the archaeology management plan and heritage applications

Management Plan	How will Patuharakeke be involved?	When will Patuharakeke be involved?	Anticipated frequency and duration of involvement
Communications Plan (not yet conditioned)	• The Section 2B Communications Cohort includes Patuharakeke, who contribute to, review and support the ongoing delivery of the Communications Plan to ensure they are responsive to the cultural landscape and mana whenua	All phases	Attendance at hui
Contaminated Site Management Plan (Condition XX)	• Patuharakeke will be invited to review the CSMP and the approach to contaminated land during the plan preparation/consenting phase. This includes any site-specific management plans that are needed. • Patuharakeke kaitiaki will observe topsoil investigations (soil sampling). • Patuharakeke will be updated on the findings of any investigations. • Patuharakeke will be notified of unexpected discoveries of contamination and consulted on response options.	Pre-construction investigations Pre-construction soil disturbance works During construction earthworks Post-construction validation/monitoring	Reviewing capacity during management plan preparation and submission to Council. Field observations, data gathering and monitoring opportunities for the duration of the project.
Ecology Offset Site Layout Plans Prepared for offset planting, replacement planting, wetland restoration, stream creation and riparian planting	• These plans can be prepared in consultation with Patuharakeke. • The plans will be implemented by the landscape manager and subcontractors. • Residual effects monitoring will be covered under the Ecology Management Plan	Preparation of plans Construction works	Reviewing capacity during layout plans preparation and submission. Kaitiaki involvement and potential commercial involvement during implementation.
Material Supply and Spoil Site Design Reports	• Patuharakeke will be invited to review the Design Reports. • Patuharakeke must be involved in developing rehabilitation plans for Material Supply Sites through Design Review Audits	Pre-construction (Design Reports) Construction (Rehabilitation Plans)	Reviewing capacity in preparation and submission. Ongoing involvement in development of Material Supply Site Rehabilitation Plans.

4 Communication protocols and whānau engagement strategy

This section addresses **Condition XX(d)**:

d. Communication and information sharing protocols to support Patuharakeke in understanding the state of the taiao

4.1 Purpose

Ideas include (need refinement)

- Legacy database of information for our Tamariki/mokopuna and other projects
- Ability to understand/support the project in real time

4.2 The type of information we would like

The following list identifies the types of information NZTA Waka Kotahi must share with Patuharakeke to ensure our role as mana whenua and kaitiaki is upheld through an open flow of information.

4.2.1 Detailed design and pre-construction data

Before works begin, specific design decisions will be finalised that directly impact our values.

- **Micro-alignment and avoidance records:**
    - Documentation of how the road alignment or tie-down areas were modified to save specific rākau rangatira, such as the identified kauri, tōtara, and kahikatea stands.
- **Material supply and spoil strategies:**
    - Finalised plans for the source of all imported aggregates (to trace gravel whakapapa) and the location and contouring of spoil disposal sites.
- **Final engineering specifications for taiao:**
    - Detailed drawings for all culverts and fish ramps, including the specific design approach used to enable fish passage for each structure.
- **Refined ecological offsetting calculations:**

- Updated SEV and BOAM modelling results based on the final project footprint to ensure a "net gain" is still achievable.

4.2.2 Construction phase monitoring and reporting

During the five-year construction period, real-time data is critical for our role as kaitiaki.

- **Kaitiaki monitoring logs:**
  - Daily or weekly records from our embedded monitors covering earthworks, vegetation clearance, and in-stream works.
- **Environmental protection data:**
  - Real-time instream turbidity and sedimentation monitoring results, including any "stop-work" trigger events .
  - Groundwater drawdown data and its measured effect on the baseflow of our tūpuna awa.
- **Fauna management records:**
  - Reports on the search, salvage, and tikanga-led translocation of pepeketua, mokomoko, kauri snail, and ika .
- **Heritage and discovery notifications:**
  - Immediate reporting of any accidental discoveries (kōiwi, taonga tūturu, or unknown archaeological features) and the subsequent application of agreed protocols.
- **Embodied emissions reporting:**
  - Periodic updates on construction material selection and emissions profiling to ensure alignment with our net-zero goals .

4.2.3 Post-construction and operational data

Once the highway is operational, we require information to monitor the long-term health of our rohe.

- **Offsetting success and maintenance:**
  - Annual reports on the establishment and health of restoration planting, including verification of eco-sourced seed usage and the efficacy of pest control in the Piroa ranges.

- **Infrastructure performance:**
    - Monitoring results from fish passage structures and stormwater treatment swales/wetlands to confirm they are meeting cultural and ecological performance standards.
- **Long-term resilience data:**
    - Post-operation flood velocity and level monitoring for two years to assess the project's impact on downstream communities and ecosystems.
    - Assessments of artificial lighting spill on sensitive habitats like ngahere and wetlands.
- **Land management:**
    - Identification of any excess land to be returned to the hapū or placed under ngā whenua rāhui.

4.3 Resourcing for information sharing

To support our strategy, dedicated resources are required from both Waka Kothai and project partners. These include:

- Administration support to access and learn how to use online shared files and platforms,
- Access permissions and dedicated logins to digital applications that contractors use to track activities,
- Technical support for creating information out of data,
- Mapping support for preparing visual materials and mapping project activities.

5 Access protocols

This section addresses **Condition XX(e) and (g)**:

e. Site access protocols to ensure Patuharakeke access to the project during construction and operation.

g. Identification of mechanisms to ensure long-term access to sites of significance, including but not limited to Waihoihoi Awa, Piroa maunga;

5.1 Project access

- Ensure Patuharakeke have the permissions they need to access monitoring, construction, and maintenance areas relevant to significant sites (including awa, repo, and ngahere) and taonga species.

- Ensure Patuharakeke has the appropriate health and safety training, vehicles, radios, PPE and permissions to enter construction and maintenance sites in all zones.

- Invite Patuharakeke to site inductions so they can learn about site protocols such as sign-in/out processes, radio communications protocols, and any 'buddy' systems.

5.2 Long-term access

- Support Patuharakeke in building good relationships with landowners to facilitate ongoing access.

- Secure legal access to significant sites and taonga species areas prior to making decisions on the status of excess land. To be developed during detailed design and plans to be finalised before construction starts.

- Access will include Waihoihoi Awa, Pīroa maunga and predator control area, Kauri and Kahikatea forest at a minimum.

6 Training and career pathways

This section addresses **Condition XX(f)**:

f. Training and career pathway opportunities that will be provided for Patuharakeke taitamariki and uri

There are significant opportunities to upskill our taitamariki and uri through the Section 2B Project that we would like to discuss with Waka Kotahi and our construction partners (Table 6.1). Facilitating these discussions will be the job of our Legacy Outcomes Advisor (whose role description is set out in Section 3 of this plan).

Table 6.1 Opportunities for taitamariki and uri development

Potential Roles	Opportunity
Project governance and management	

Hapū Liaison and Communication Officers	Experience opportunities and career pathways in communications, planning, or liaison roles to ensure the community is informed and that the environmental and cultural mitigation conditions are upheld throughout the project's lifespan
Health and safety	Training and shadowing opportunities in a wide range of health and safety activities across the project.
Sustainability and resource management	Planning for kai and pūngao (energy) sovereignty, such as establishing solar arrays or firewood banks linked to the project's land use.
Environmental and ecological restoration	
Kaitiaki monitors and field technicians	Specialist training as fauna ecologists or handlers working with specific species. Training in species translocation protocols, specifically for pepeketua, mokomoko, and ika.
Ecological surveying and data collection	Training in ecological monitoring, interpretation and reporting. Building skills in using the SEV (Stream Ecological Valuation) and BOAM (Biodiversity Offsetting Accounting Model) methodologies.
Native plant husbandry	Training in seed eco-sourcing, propagation, and horticulture.
Environmental management and monitoring	Training in monitoring water quality, managing chemical treatment for sediment ponds, and ensuring the extensive erosion and sediment control plans are functioning correctly to protect downstream catchments.
Biosecurity officers	Training to implement and monitor strict hygiene protocols for kauri dieback and other pest invasions
Cultural heritage and technical archaeology	

Archaeological technical assistants	Work alongside professional archaeologists during the required investigations, mapping, and potential excavation of sites prior to or during construction. Training in the use of Ground-Penetrating Radar (GPR) to delineate pā sites and burial anomalies.
Mātauranga specialists	Opportunities to lead cultural inductions for project staff and manage tikanga-led accidental discovery protocols. Training to oversee earthworks, implement accidental discovery protocols, and protect wāhi tapu.
Design and Toi specialists	Working alongside specialists to create pou whenua, waharoa, and cultural gateway features that tell our stories along the new corridor.
Climate science and resilience	
Climate resilience mapping	Involving taitamariki in sea-level rise contouring and managed retreat planning for our kāinga and marae.
Hydrological analysts	Monitoring stream velocity changes and flood modelling to protect our northern floodplains
Carbon emissions profilers	Developing the Embodied Emissions Strategy to track project footprints and manage our goal of a net-zero rohe by 2050.
Construction, engineering, and trades	
Heavy machinery operation	Training and employment for excavator, bulldozer, and dump truck operators.
Civil and geotechnical engineering	Partnering with Waka Kotahi to provide hands-on experience in road design, earthworks, and green infrastructure development.
Bridge and structure building	Training pathways in concrete works, steel tying, piling, and carpentry.
Temporary traffic management	The project will require a large workforce of trained traffic management operatives to manage lane

	shifts, stop/go operations, and construction haulage routes

7 Kaitiaki

This section addresses **Condition XX(h).**

h. Details of kaitiakitanga monitoring activities and opportunities, locations and protocols

7.1 The purpose of Patuharakeke kaitiaki on the project

Kaitiakitanga is our duty of care and responsibility toward our taonga tuku iho. Patuharakeke has a long history of engagement in environmental protection, managed today by the PTITB Taiao Unit. Our kaitiaki actively monitor the ecological health of the Waipu Estuary, advocate for the rehabilitation of mahinga kai, and undertake restoration actions for taonga species. This role is vital to our future aspirations as the traditional owners of these resources.

The highway traverses areas under our kaitiakitanga. As such, the purpose of our Project Kaitiaki is to:

> Actively monitor construction impacts and ensure the mauri of the environment is sustained.

To achieve this purpose, we will enact kaitiakitanga and undertake our role as kaitiaki through being involved in all areas of the project construction and operation of the Section 2B highway, with a particular focus on being kaitiaki in:

- activities in the Piroa – Brynderwyn range (the gateway to our rohe).
- protecting our taonga species.
- protecting our wāhi tapu.
- protecting our awa and repo.
- focusing on and protecting spiritual safety and wairua.
- restoration and rehabilitation of our taonga sites and species habitats.
- building capability in long-term management of our sites and species.
- developing our capacity and capability in relation to all of the above.

7.2 Our kaitiaki

We expect the availability of the equivalent of eight full-time Patuharakeke kaitiaki resources, and we will divide this resource amongst our people as we see appropriate.

Our kaitiaki will participate in the project to achieve their purpose, including:

1. Overseeing and participating in environmental practices.
2. Overseeing and participating in construction activities.
3. Performing karakia as they see necessary.
4. Being present at pre-construction meetings.
5. Maintaining and protecting wairua and spiritual safety.

NZTA Waka Kotahi and highway contractors must support Patuharakeke kaitiaki by inviting:

- Patuharakeke kaitiaki to pre-construction meetings.
- Patuharakeke kaitiaki to monitoring activities.
- Reading this kaitiaki plan, being aware of opportunities for kaitiaki and discussing these opportunities with kaitiaki.

7.3 Training and resourcing

Our kaitaki will need to be trained and resourced appropriately to perform their roles as kaitiaki. This section sets out the training and resourcing requirements.

Our kaitiaki will need to be trained in specific areas to perform their role effectively. These specific training requirements are:

1. Training to minimum standards for Patuharakeke tikanga, kawa and mātauranga
2. Training to understand health and safety requirements on the project.
3. On job training to understand and participate in environmental management practices.

7.3.1 Resourcing requirements

Our kaitiaki will need the right resources to do their job. This includes health and safety equipment to stay safe, transportation to get to and from the site, a

mobile phone and laptop to be contactable as required, and access to the relevant information and people.

Prior to any pre-construction works, kaitiaki must be issued:

- hi-vis gear
- hard hat
- steel-capped work boots and gumboots
- waders
- eye protection
- ear protection
- sun protection
- first aid kit
- a Four Wheel Drive vehicle
- mobile phone
- laptop

7.4 Opportunities for kaitiaki

There are many opportunities for kaitiaki to participate in the construction and operation of the highway. The following sections describe these opportunities as we understand them. NZTA Waka Kotahi, the design and construction teams and Patuharakeke kaitiaki should use this section as a reference point to understand and unlock these opportunities.

Of course, there will be other opportunities for kaitiaki that are not identified in this section. Patuharakeke (and the project) will be able to identify other opportunities and, should they wish, participate in them.

7.4.1 Pre-construction meetings

Patuharakeke kaitiaki seek invitations to pre-construction meetings held before vegetation clearance, earthworks, and works within or near awa. These meetings are critical for understanding the location and timing of activities, establishing methods for salvaging taonga species, and communicating Patuharakeke cultural values to project personnel.

7.4.2 Protecting taonga species

Patuharakeke kaitiaki intend to be present during earthworks, dewatering, and vegetation clearance to guard our taonga species – particularly pepeketua, mokomoko, ngārara, tuaiwi-kore, pekepeke and manu.

Participating in the search, relocation, and monitoring of these species alongside ecologists provides an opportunity to build hapū capability in habitat restoration. This involvement ensures the mauri of high-value habitat, especially within Piroa, is protected, and that any injured or killed species are managed in accordance with appropriate tikanga.

7.4.3 Monitoring

The project requires monitoring of fauna and vegetation restoration at various construction stages. Patuharakeke kaitiaki will participate in these activities to learn technical skills from ecologists while incorporating hapū mātauranga into the monitoring framework. This technical monitoring is distinct from the hapū-led cultural health monitoring described elsewhere in this plan.

7.4.4 Restoration and rehabilitation

The Section 2B project involves restoring habitats along awa, within repo and within ngahere. Patuharakeke kaitiaki will participate in these restoration efforts to build hapū capability and ensure that environments are rehabilitated to a state where taonga species can flourish.

7.4.5 Notification

Patuharakeke must be included in all notification protocols established within ecological and environmental management plans. The hapū must be notified before works commence and immediately if any taonga species are discovered, injured, or killed to ensure kaitiaki are involved in the subsequent management steps.

7.4.6 Data collection and reporting

Patuharakeke will participate in the collection of environmental data and receive all reports destined for regional councils and the Department of Conservation. This involvement allows the hapū to hold up-to-date information on the state of their rohe, collate knowledge regarding wāhi tapu, and build long-term data management capabilities for future resource leadership.

7.4.7 Erosion and sediment control

Patuharakeke kaitiaki seek to supervise or participate in the installation, testing, and maintenance of erosion and sediment control devices to protect our awa and Mātaitai. This participation allows the hapū to develop best-practice

technical skills while performing karakia to mitigate the spiritual effects of invasive construction practices on the whenua and awa.

7.4.8 Archaeology

Patuharakeke cultural heritage is fundamental to our hapū identity and whakapapa. The dignified management of archaeological sites and ancestral remains, sensitive to Patuharakeke tikanga and kawa, is a high priority. Active kaitiaki involvement is required whenever archaeological materials are investigated or discovered to maintain the spiritual connection to the land and ancestors. We expect a kōiwi management strategy and accidnetal discovery protocol to be developed prior to construction start.

7.4.9 Other opportunities

Post-construction, Patuharakeke seek ongoing commercial and kaitiaki opportunities, including:

- Seed collection and plant provision.
- Participation of ki uta ki tai teams in planting, fencing, and pest control.
- Ongoing monitoring of culvert performance and ecological health.
- First right of refusal for surplus project land to support the growth of our resource base and to restore rangatiratanga.

7.5 Deciding when kaitiaki will participate

Patuharakeke will decide when and where kaitiaki participate. Several construction activities will be occurring at any one time, so our kaitiaki may not be able to participate in all activities and opportunities. There will be several factors to consider when weighing the activities our limited number of kaitiaki should attend.

7.6 Monitoring responsibilities

To be discussed.

7.7 Reporting

We expect our kaitiaki will provide PTITB with regular updates on their progress, activities and learnings.

8 Returning taonga to Patuharakeke

This section addresses **Condition XX(i)**.

i. Process to return taonga resources, such as wood, and other resources impacted by the project to Patuharakeke

8.1 Returning rākau rangatira timber

We consider rākau rangatira, such as kauri, tōtara, and kahikatea, to be chiefly ancestors of the ngahere. Our primary expectation is that these specimens are avoided through project alignment during detailed design; however, where removal is unavoidable and we have made subsequent agreements for their removal with Waka Kotahi, the mauri of the tree must be respected. We expect felled indigenous timber within our rohe, particularly large-diameter logs suitable for toi whakairo or waka construction, to be returned to Patuharakeke for cultural use.

To ensure this occurs respectfully and efficiently, we require the following process:

- **Early notification**

  We must be notified of the timing of the felling of rākau rangatira that are identified for potential removal. This allows us sufficient time to assess the specimen and arrange the necessary logistics and tikanga.

- **Identification and marking**

  Our kaitiaki must be involved in site walkthroughs to physically identify and delineate specific trees of high cultural value for salvage before any vegetation clearance.

- **Cultural protocols**

  We will perform karakia prior to the felling of any rākau rangatira to acknowledge the realm of Tāne Mahuta and appropriately manage the spiritual transition of the mauri.

- **Salvage and extraction**

  Felling and extraction must be undertaken using methods that preserve the length and structural integrity of the timber for carving, rather than treating it as green waste or mulch. This will be facilitated by the project.

- **Logistics and storage:**

  NZTA Waka Kotahi is expected to resource the felling, loading, and transportation of these taonga logs to a designated storage site within our rohe as specified by the PTITB.

8.2 Returning other taonga

This section will be further detailed in due course and may include:

- Rongōa and raranga materials
- Earth materials and significant features (e.g. boulders)
- Taonga tūturu and archaeological materials
- Seeds and seedlings of rākau rangatira

9 Cultural Induction Plan

This section addresses **Condition XX(j)**.

> j. Details and frequency of Patuharakeke cultural inductions for construction and related teams, and cultural interpretation and mahi toi.

This section will include

- The anticipated frequency and timing of cultural inductions.
- Set out the expectation that all staff working on the project will attend a cultural induction.
- Set out any specific Patuharakeke tikanga that attending staff need to be aware of.

Disclaimer

We have used various sources of information to write this report. Where possible, we tried to make sure that all third-party information was accurate. However, it’s not possible to audit all external reports, websites, people, or organisations. If the information we used turns out to be wrong, we can’t accept any responsibility or liability for that. If we find there was information available when we wrote our report that would have altered its conclusions, we may update our report. However, we are not required to do so.

Patuharakeke reserve the right to update this report through the upcoming Fast Track Approvals process.

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