

# 3. OVERALL OUTCOMES





### 3. OVERALL OUTCOMES

The overall outcomes for the project are to let the landscape speak for itself (designation condition D26) by designing:

- A clean uncluttered highway
- A stitched together landscape
- To celebrate the cultural footprint and values of mana whenua in the landscape

The outcomes are described in three tiers as shown on the following diagram:



#### 3.1 CLEAN, UNCLUTTERED HIGHWAY

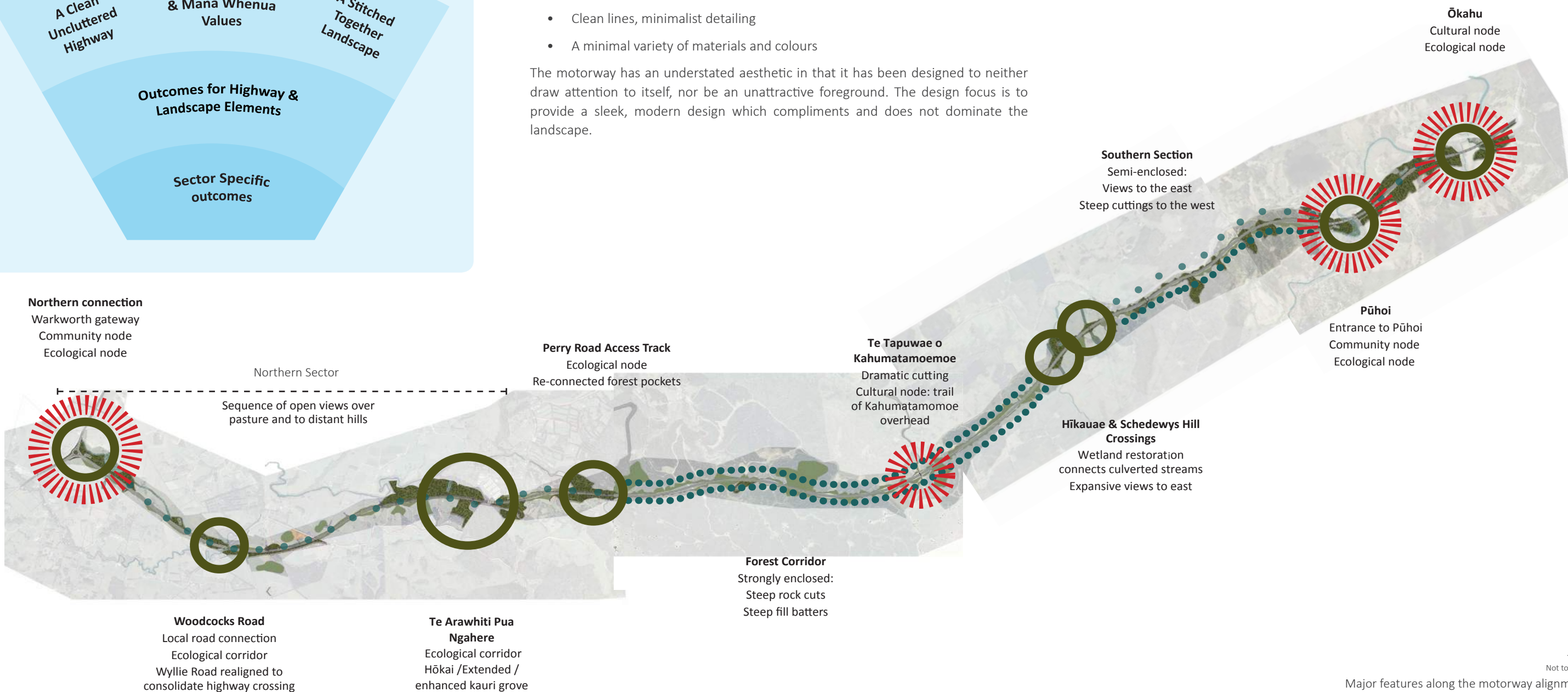
The Highway Outcomes of the Project are addressed in detail in Section 4, where ‘a clean, uncluttered highway’ is the focal outcome.

The Project aim is a motorway which enhances the experience of travelling through the landscape with minimal motorway furniture, whilst considering the ‘Safe System’. The Safe System approach aims for a more forgiving road system that takes human fallibility and vulnerability into account. Under a Safe System the whole transport system is designed to protect people from death and serious injury.

Through careful design of a ‘family’ of highway elements, the outcomes provided are:

- A refined and minimalistic aesthetic
- A cohesive suite of highway elements
- A standardised spatial layout of highway elements
- An aesthetically clean highway margins
- Green margins, minimising herbicide maintenance
- Clean lines, minimalist detailing
- A minimal variety of materials and colours

The motorway has an understated aesthetic in that it has been designed to neither draw attention to itself, nor be an unattractive foreground. The design focus is to provide a sleek, modern design which compliments and does not dominate the landscape.





### 3.2 A STITCHED-TOGETHER LANDSCAPE

The motorway delivers ‘a stitched together landscape’ to let the landscape speak [D26]. Conceptually, this means that the motorway allows the landscape patterns and processes (including forests, farmland, grassland, rivers and local roads) to continue uninterrupted - the intention is that road users will experience travelling through a varied landscape rather than along a motorway corridor.

Stitching creates visual connections between areas; for example, a visual link between areas of productive forestry land on both side of the road, or stream planting connections. The way the stitch occurs is not always by way of planting. In particular, the landscape surrounding the motorway through Warkworth will be stitched together through:

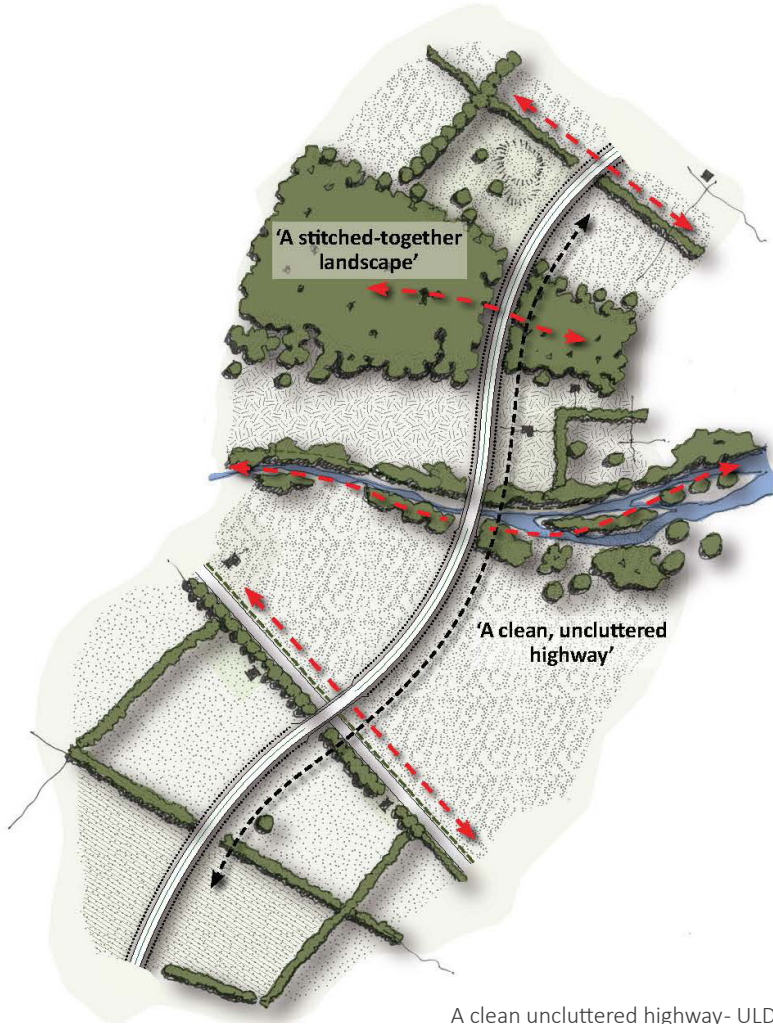
- Identifying existing areas that have similar aesthetic and ecological qualities and connecting them through similar planting treatments. This includes locating high value mitigation planting in areas of higher ecological value
- Reducing the earthworks footprint and extent
- Minimising the intrusion of the motorway in the surrounding landscape
- The integration of ecological mitigation and landscape planting to achieve the best outcome for both, and connect ecological nodes and corridors with existing natural vegetation patterns
- Planting ‘boldly’ in scale with the landscape beyond the motorway. In response to this, a number of kōwhai trees will be planted at the northern roundabout, as the symbol of Warkworth, as noted in section 6.3 of the ULDF
- Creating wetlands that provide stormwater management, while appearing natural, through planting design
- Connecting the Mahurangi River from one side of the motorway to the other, as it naturally crosses the motorway
- Providing new connections to Warkworth and maintaining local road and shared path connections without disrupting the existing access and community rhythm

- Establishing contextual consistency with the existing SH1 to the north and the Northern Gateway Toll Road to the south
- Protecting and connecting distinctive natural features, such as the kauri forest, with additional planting
- Designing a low motorway alignment which does not dominate the landscape, and structures and embankments that accommodate natural features – such as the bridge over the Mahurangi River and the viaduct (Te Arawhiti Pua Ngahere) to minimise impacts on the kauri forest

The urban and landscape design of this roading project is concerned with ‘fit’ of the corridor within the wider landscape including: how the motorway addresses amenity, functionality, land use and ecological sustainability, connectivity and community at a range of scales and over generations. Robustness, operational requirements and low maintenance have been key to both structure and landscape design. Ongoing maintenance requirements have been integral in selecting materials, the planting palette, and the landscape management approach

The ULDF Landscape Outcomes reflected in this ULDSP are:

- Stitching together streams and riparian margins on either side of the highway
- Stitching together ecological corridors
- Restoring adjacent vegetation and land-use patterns
- Planting in a bold manner in scale with the landscape beyond the highway
- Planting consistent with the existing natural vegetation patterns
- Connecting existing and new roads and footpaths
- Protecting distinctive natural features
- Recognising and highlighting human landmarks, including cultural footprints



A clean uncluttered highway- ULDF



Taken from Viv Davie-Martin Drive looking west



**Existing stream plant community**  
Species include regenerating and mature kahikatea, mānuka, kōwhai, oioi, cortaderia splendens, pukio, harakeke.

**Planted to tie-in with meandering streams**  
Planting has been focussed in this area to tie in with the river and surrounding vegetation, resulting in an enhanced ecological area.

**Stormwater wetland planting**  
Species match those found in existing wetlands in the area and include, but are not limited to kahikatea, mānuka, kōwhai, oioi, cortaderia splendens, pukio, harakeke and ti kouka. Despite being engineered wetlands, these help strengthen the stitch across the new road and contribute to enhancement of the local ecology.

**Large existing native trees**  
Large native trees have been avoided during clearance works, as much as practicable to preserve the ecological value of these trees.

**Terrestrial ecological mitigation planting**  
Species include puriri, tanekaha, kauri, miro, among others, matching the large tree species present in the adjacent mature existing native vegetation

**Wetland planting**  
Species include oioi, purua grass, pukio mingimingi, giant umbrella sedge, wiwi and harakeke. Species have been selected to match the existing plant communities.

**Existing stream plant community**  
Species include regenerating and mature kahikatea, mānuka, kōwhai, oioi, cortaderia splendens, pukio, harakeke.

**Planting beneath Te Arawhiti Pua Ngahere**  
Species include kawakawa, wharauhara and puku puku. Species have been selected to cope with dry, shady conditions under the viaduct. The planting is irrigated with water captured from the road.

**Kauri forest**  
This is the largest and most ecologically significant remnant of native bush in the Project vicinity. It contains a complex ecosystem of plant and animal communities.

**Landscape restoration planting**  
Restoring adjacent vegetation patterns to native bush from pasture, stitching this area to the existing vegetation of the Mahurangi River.

**Terrestrial ecological mitigation planting**  
Species include puriri, tanekaha, kauri, miro, among others, matching the large tree species present in the adjacent mature existing native vegetation

**Soil disposed sites (SDS)**  
In this sector soil disposal sites are to be hydro-seeded grass following final contouring of earthworks. This conserves the rural character and outlook from the new road.

**Hydroseeded grass cut and fill slopes**  
In locations where ecological values are considered to be low, hydroseeded grass will be used as the landscape treatment. In steeper, engineered sections that are often inaccessible, hydroseeding is an effective landscape treatment and in-keeping with the rural landuse.

**Open views of surrounding landscape from motorway**  
This helps road users to get an appreciation of the wider environment and visually stitch the landscape together.

**Cut slope (red)**  
**Existing pasture**

**Fill slope (green)**

Example of a Stitched Together Landscape

Not to scale





Tributary of Mahurangi River (M15)



Kōwhiri<sup>1</sup>

### 3.3 CELEBRATION OF MANA WHENUA VALUES AND CULTURAL FOOTPRINT

Section 6 of this document addresses the cultural outcomes of the Project, where the “Celebration of Mana Whenua Values and Cultural Footprint” is focused in the urban and landscape design [D26].

Hōkai Nuku is the authorised voice of the four Iwi and Hapū mana whenua of the Project area – Ngāti Manuhiri, Ngāti Mauku/Ngāti Kauae of Te Uri o Hau, Ngāti Rangō of Kaipara and Ngāti Whātua, who provide specialist advice for the Project.

The following cultural values provide guidance as to how mana whenua view the world:

- Mauri (life force): The interconnectedness of all things means that the wellbeing of any part of the environment will directly impact on the wellbeing of people
- Kaitiakitanga (Guardianship rights and responsibilities): The obligation to protect and enhance the mauri and wellbeing of all natural resources for the benefit of ourselves, other people living in our homeland and for future generations
- Ki uta, ki tai (from source to the sea): The mauri of waterways is also viewed holistically and includes from the source of the waterway to the sea and reinforces the view that activities upstream also impact on the well-being of the river and land downstream.

The Hōkai Nuku Cultural Footprint Framework expresses mana whenua connections to their ancestors (Mana Tangata), highlights iconic identity markers that provide reference points in the environment (Mana Whenua), and notes specific associations through historical events and activities (Pūtake).

When considering opportunities to celebrate the Cultural Footprint and values in the landscape, Hōkai Nuku has developed design principles so that these outcomes are achieved.

### Hōkai Nuku Design Principles from the ULDF:

#### Rangatiratanga:

Affirming the self-determination of iwi and hapū and the Treaty partnership between Hōkai Nuku and the Transport Agency, is honoured by active engagement throughout the project development.

#### Mana Tangata:

- Tūpuna are celebrated in the naming of structures
- The use of macrons and bilingual signage

#### Mana Whenua:

- Cultural reference points are acknowledged with pou whenua, pou paenga and other designs
- Enduring cultural artworks

#### Kaitiakitanga

- Guardianship rights and responsibilities are actualised with enhanced indigenous planting which supports the ecosystem and cultural practices.
- Protecting and enhancing waterways
- Utilising sustainable design and practices
- Ability to access appropriate planting for cultural harvest (subject to appropriate safety constraints)

Hōkai Nuku has collaborated with NX2 to recognise the Cultural Footprint Framework and implement the mana whenua values through the Hōkai Nuku design principles alongside the project wide design principles.

### 3.4 SECTOR SPECIFIC OUTCOMES

The ULDF and conditions set specific landscape outcome expectations which, when considered together, acknowledge the localised environmental factors that make this sector unique and let the landscape speak. The ULDF gives effect ‘to appropriately integrate the Project into the surrounding landscape and topography, having regard to the local landscape character and contexts along the highway route’ [D26]. Section 6.1 of the ULDF sets specific outcomes to be achieved in the Warkworth sector. “Specific permanent ULDSP” are required in two locations in this sector.

The Warkworth ULDF outcomes include:

- A viaduct named Te Arawhiti Pua Ngahere, over a tributary of the Mahurangi River at chainage 52100, which minimises effects on the kauri forest, stream, and reduces obtrusiveness from nearby houses
- Maintenance of stream integrity
- Planting and/or earthworks to soften the appearance of sections of highway elevated on fill embankments
- Connectivity of the Wyllie Road, Woodcock Road, and Carran Road local routes
- Appropriate naming of structures and landscape features
- A distinctive landmark that evokes Warkworth at the northern tie-in with SH1
- Management of potential flooding at northern end
- Mitigation of the highway from properties on rural roads, and maintenance of access across the highway between the divided parts of the Civil Family Farm

The ULDF provides for specific ULDSPs to be integrated with the sector ULDSP if they specifically address the concerns and requirements of D38. Specific permanent ULDSP are required in two locations in this sector:

- D38AA(b):
  - Screen planting between the highway and Viv Davie-Martin Drive. This may include planting the fill batters on the east side of the highway (including the approaches to the Carran Road Flood Relief Bridge and the Woodcocks Road viaduct), and strategic planting of exotic or indigenous trees within the designation to further soften views of the highway. Consider planting on rolling land to the north so as to screen oblique views of the northern roundabout with existing SH1
  - Mitigation of elevated views to the south-west over the highway from properties on Viv Davie-Martin Drive, including planting on the fill embankments and the intervening in-designation land, so as to soften the highway and integrate it within the landscape
- D38AA (d):
  - Rehabilitation of land between the highway and Mahurangi River (Right Branch) opposite Wyllie Road, including extending tōtara bush and removal of any construction access track

The sector specific outcomes are considered in the overarching motorway design; they have been front of mind for the entire design team who collaborated in the choice of materials, plants, landscaping inputs, and all technical design elements such as safety considerations. The methods of how the motorway and landscape design achieve the ULDF specific outcomes are described in sections 4-6.

<sup>1</sup>Robinson, Ben, 2014.