

## Appendix 2 - Urban and Landscape Design Framework Mitigation Principles

The following lists those general landscape and planting principles from section 4.2.1 – Landscape and Planting. A suggested process for implementing the ULDF then follows.

### 4.2.1 - Landscape

#### General objectives

- Maintain and enhance natural landform patterns where practicable.
- Establish the Expressway as an attractive environment, integrated with the wider landscape.
- Protect natural drainage patterns.
- Enhance and retain views of significant landscape features where practicable. The key physical and cultural landscape features which are visible from the Project and/or existing SH1 include:
  - o Foothills of the Tararua Ranges
  - o Ōtaki River
  - o Sand dune topography
  - o Ōtaki township
  - o Ōtaki Railway Retail Area
  - o Ōtaki Lake development
  - o Ōtaki 'Clean Tech' area
  - o Mary Crest bush remnants
  - o Te Hapua sea cliff escarpment between Te Kowhai Road and Te Hapua Road
- Create a landscape that contributes to improving ecological value and biodiversity within the designation and in the surrounding environment. This would utilise a series of green fragments or 'fingers' along the Project length.
- Ensure that the experience of travelling through different character areas is maintained both along the Expressway and the local arterial (existing SH1). It is important that road users experience transitions between rural and urban environments for way-finding purposes, and for variety along the journey.
- Create a self-sustaining, low maintenance landscape.
- Where practicable, treat Expressway surface run-off via an appropriate treatment process such as swales and/or planting with native vegetation along road margins. This will treat the run-off before it drains to streams or enters the ground water.

- Where appropriate, establish screen planting and re-establish affected shelterbelt patterns to reduce the visual effect of the Expressway and traffic within the wider landscape.
- Mitigate ecological effects through habitat creation and enhancement (including water bodies).
- Where earthworks are required, integrate with the surrounding landscape by mimicking the natural landform and vegetation cover where practicable.
- Where practicable, integrate structures into the surrounding landscape so as not to compete with the landscape features. Project outcomes are more likely to be successful, if infrastructure and landscape are considered parts of a single design concept. Investing in high-quality landscape, infrastructure and “highway elements” is more likely to produce a favourable design result than “applied” decoration or overlaid enhancements.
- Create a self-sustaining, low maintenance landscape.
- Create a safe user environment by ensuring that the landscape treatment does not impede the efficient use of cycleway, walkway and/or bridleway footpaths.
- Median widths should be consistent with the wider Wellington Northern Corridor RoNS where practicable. Within a 6 m median, low height and low maintenance planted medians are preferred to grass, due to the maintenance requirements for mowing grass and subsequent lane closures to do so.

### **Local arterial road objectives**

- The SH1 Revocation Project should identify opportunities to convert the existing SH1 into an attractive local road environment, conducive to local traffic, as well as pedestrian and cyclist activity.

### **Gateway objectives**

- Gateway treatments should be located along the Expressway before the approach to off-ramps which provide access to Ōtaki from the north and south. Informing Expressway users of access points to Ōtaki with visual cues will enhance business sustainability for the Railway Retail Area in particular, but also the river-side industrial and proposed 'Clean Tech' areas,
- Utilise the natural urban containment lines of the waterways (Waitohu Stream in the north, and Ōtaki River to the south) to emphasise the gateway experience. These waterways are key thresholds in a sequence of gateway experiences, and where practicable, should be emphasised by open views towards the water, and formal landscape treatments from the approach to the off-ramps to the banks of the adjacent waterways, marking the entry into the urban environment.
- Lighting and local artwork could also be considered/integrated as part of an overall gateway theme.
- Employing natural features and elements of infrastructure as part of the gateway experience is likely to be more successful than just installing purpose-made signs, artworks or “markers” as stand-alone elements.

- Any signs and commissioned artwork should be considered as a complimentary part of the gateway experience and draw on the Ōtaki Vision and sense of place.
- Formal, bold planting design shall be integrated with signage at entry/exit thresholds to Ōtaki. Consider integration of sculptural or cultural elements influenced by local artists.

## **Planting**

Where practicable, the following principles will be applied:

- Design planting to emphasise the surrounding landscape and to reflect adjacent landuse and vegetation patterns.
- Emphasise underlying topography, for instance by establishing riparian planting along margins of streams, but leaving the high points within duneland areas in open pasture.
- Plant in a bold manner using restricted species palettes and broad spatial patterns in order to suit the scale of the landscape, and the speed at which motorists will view it.
- Design planting within the Project corridor to achieve continuity with vegetation and landuse patterns beyond the corridor.
- Other than where road margins are being returned to a pastoral use or there is a specific urban context, re-vegetate cut and fill batters with a simple palette of pioneer shrubland and grassland species specific to the Kāpiti Ecological District.
- Ensure that underlying landscape patterns continue on both sides of the Expressway and its associated roading development.
- Provide planting patterns that create a sequence of enclosure and openness that reflects the surrounding landscape.
- Bring landuse and vegetation patterns as close to the carriageway as practicable.
- Planting will provide all year round visual interest, maintain ecological corridors along the Project and will also be located to frame key views towards the western foothills of the Taraua Ranges and gateways.

Design planting to reflect the character of specific aspects and locations along the Expressway as follows:

### **Riparian Margins:**

- Where waterways are crossed by the Project and riparian margins can be fenced from stock, riparian margins should be planted with native riparian plants to emphasise natural topography; enhance habitat and improve water quality.
- Extend planting to the embankment fill batters at all stream crossings. Use species that are appropriate for the conditions on fill batters and that merge with the character of the adjacent stream planting. Plant tall species in suitable locations where they do not restrict views along the stream.
- Any stream banks which are affected by construction works should be appropriately replanted to prevent erosion, encourage habitat and restore vitality to the waterways.

- Encourage multifunctional riparian planting with the aim to provide shade for stock and a healthy habitat for aquatic fauna, as well as emphasising the waterways across the land.
- Plant any proposed stormwater wetlands with indigenous wetland species naturally found along the Kāpiti Coast.
- Use riparian and margin species indigenous to the area. <http://www.gw.govt.nz/ecological-zones-of-the-wellington-region/lists> appropriate plant species.
- Where practicable, follow Figure 19 (refer page 52 of ULDF) as a guide for streamside planting for habitat development.
- When selecting species for planting adjacent to the Ōtaki River, refer to the Ōtaki River Environmental Strategy (1999) and consider how proposed planting will tie in to any adjacent planting Friends of the Ōtaki River (FOTOR) has undertaken in the area.

#### **Screen/buffer areas:**

- Where appropriate, place screen planting to mitigate the visual effects that the Project will have on the travelling public and residential properties, while contributing to the visual qualities of the Project corridor.
- The retention of existing planting will be considered to retain screening for various properties adjoining the Expressway designation.

#### **Cut Batters:**

- Re-vegetate cut batters with a simple palette of low-growing pioneer shrubland and grassland species, as appropriate.
- Select planting types and species to respond to adjacent landscape character.

#### **Fill Batters:**

- Rehabilitate fill batters to merge with surrounding landscape patterns.
- Merge re-vegetation on fill batters with adjacent riparian planting at stream crossings.
- Overfill and re-grass fill batters where they merge with existing pasture. In such instances the fence-line might be located inside the designation so that the adjacent land use appears to extend as far as the road.

#### **Urban and Recreation Areas:**

- Planting design for areas that will become KCDC's maintenance responsibility such as along the existing SH1 and in Ōtaki township needs to be designed in conjunction with KCDC's 'Streetscape Strategy and Guideline' document.
- Where appropriate, existing planting will be retained as part of the landscape and urban design redevelopment of the Ōtaki Railway Retail Area. Particular consideration will be given to the retention of large trees given the scale and stature they bring to what will be a significantly re-built part of the local community. Consideration will also be given to retaining existing shrub and 'front garden' plantings as screening for various properties adjoining the Expressway designation.

- CPTED principles will be applied, with particular consideration given to ensuring visibility of pedestrian and cyclists relative to personal safety and traffic safety.
- Consider the mature size of plant species and locate them practically. For example, flax should be planted a minimum of 2m away from the edge of footpaths or kerbs to prevent trip hazards or maintenance issues when it has reached a mature size.
- As discussed with Keep Ōtaki Beautiful and KCDC, consider early planting, particularly in the proposed reconfigured Pare-o-Matangi Reserve. This would allow some new vegetation to establish prior to the removal of the eastern side of the reserve for the construction of the realigned NIMT railway and Expressway.
- Involve Keep Ōtaki Beautiful and KCDC in the plant species selection for the reconfigured Pare-o-Matangi Reserve.

### **Suggested Process for implementing the ULDF**

Based on the ULDF, an Environmental, Urban Design and Landscape Master Plan (“EUDLMP”) is to be developed to demonstrate integrated design development and a consistent design direction for the Project, which integrates both natural and built form into the landscape context of the route. The EUDLMP will be reviewed by NZTA to ensure the master plan reflects the purposes of the scheme, the consent requirements and represent value for money. The integrated EUDLMP and Maintenance Manual (“Master Plan and Manual”) that is to be prepared as part of the Contractors Environmental Management Plan (“CEMP”) shall be prepared in conjunction with suitably qualified landscape, urban design, avian and terrestrial ecology professionals.

Key built elements for which a consistent design style should be specified in the Principal’s Requirements and developed in the Master Plan shall include as a minimum:

- Bridges and abutments form/ aesthetic treatments;
- The connectivity, surfacing and form of footpaths and cycleways;
- Retaining walls and finishes, where required;
- Acoustic barriers and finishes/materials, where required;
- Safety barriers;
- Boundary fences;
- Gantries and support structures;
- Lighting;
- Signage;
- Retention of as many existing trees as possible provided they are in good health and a robust condition and do not present a safety hazard; and
- Detail about the species and location of plants.

A Landscape and Urban Design Maintenance Manual (“the Manual”) shall be developed by suitably qualified landscape and urban design professionals as part of the CEMP. The Manual shall address:

1. On-going succession planting;

2. Annual care of plants;
3. Specific management tasks required to achieve the design intent;
4. Regular application of fertiliser and re-mulching of planted areas;
5. Mowing regimes and safe access points for maintenance;
6. Spraying requirements;
7. The control and limitation of litter and graffiti; and
8. Programme of works and draft budget for maintenance under the network management contract.