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FILE	R:\3_Projects (Environmental)\3-38571.00 Kaituna
SUBJECT	Kaituna Landscape and Visual Effects

1 Introduction

The purpose of this technical note is to provide advice on specific queries raised by the Bay of Plenty Regional Council (BoPRC) and Western Bay of Plenty District Council (WBOPDC) associated with the Kaituna River Re-diversion and Ongatoro/Maketu Estuary Enhancement Project, Supply of Further s92 Information.

This assessment is a desktop assessment, and has been undertaken based on analysis of aerial photos and the Notice of Requirement and Resource Consent Application, prepared by Opus, July 2014.

Specific issues raised by the Consenting Officer for comment are related to the following:

- Effects/nature of the earthworks activities (removal of the causeways, minor recontouring along southern edge of island and widening of Ford's Cut); and
- Effects of the new footbridge on the visual audience.

2 Potential Visual Effects

Background
This assessment considers the existing landscape character and visual amenity as a baseline for assessing the potential effects that the proposed activities will have on the Maketu Estuary, wetland and wider coastline.

A comprehensive assessment of the landscape and visual effects of the proposed works is not provided here other than general comments.

Landscape Assessment
Landscapes that are considered to be most sensitive to change include environments with a high degree of 'naturalness'. The degree of naturalness of an environment is determined by considering the level of modification or change, when compared to a totally natural or 'pristine' environment. Therefore, a landscape with a high degree of 'naturalness' is one that is void of any development or evidence of interference by people. Conversely, a landscape that is significantly modified by a greater level of development or change by human intervention is

considered to have a low degree of 'naturalness'. It is accepted however, that man-made structures can form part of a relatively natural environment, and retain some degree of natural character.

Landscape effects are assessed in terms of the potential impact of change on the existing environment (i.e. the natural character values of an area and a surrounding landscape).

Visual Assessment
A Visual Assessment describes the existing landscape, its visual qualities, where it can be viewed by the general public and surrounding land uses. This assessment considers perceptual factors, attune with the definition of amenity values provided in the Resource Management Act 1991, which states '*those natural and physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes*' (Resource Management Act 1991, section 3).

The magnitude of visual effects on the viewing public, and the visual amenity of the coastal environment is determined by the nature and scale of change relative to the existing environment.

Consequently, the following features can potentially have adverse effects on the landscape character and visual environment:

- Dominant structures and/or development patterns in open landscape areas, or elevated positions (noticeable scale and form).
- Design elements that are of a complex visual design such as large bridge structures, concrete retaining walls, abutments and the like (incompatible with the natural character and have a dominant visual effect on the estuary).
- Modification of natural landscape elements and/or natural landscape features.
- Loss of large areas of indigenous vegetation.

2.1 General Landscape Comments

It is clear when examining the historical data and aerial photographs of the subject site that, over time, the natural landscape character and patterns of natural processes have changed. The estuary and surrounding area has been significantly modified and are characterised by human elements, although the shoreline is more natural in character.

The estuary and surrounding area is not considered to be pristine, nor does it exhibit significant visual amenity values. This evaluation is made for the reason that the natural processes and patterns have been disrupted over time by land conversation for farming which have impacted negatively on the natural character and quality of the landscape.

Visibility of the proposed works will generally be limited due to flat land and subsequently this work will have a low viewing angle across the landscape. Visual exposure is mainly focused on a small number of vantage points within close proximity to the proposed works. Given the limited viewing opportunities of this landscape unit, small scale change of a similar nature to landscape features currently present within this landscape are not considered to cause any significant averse visual effects on the area.

Proposed Footbridge
While the proposed footbridge will introduce a man made element into the landscape, it is considered that this structure will not discernibly alter the amenity and character of the wider landscape.

In terms of visual effects, and given the large expanse of the coastline and estuarine area within which the proposed footbridge will be located, the proposed structure will not dominate views towards these areas. This is because the proposed bridge will be in the same position as the original causeway, and will in fact be smaller in appearance and scale to that of the existing structure. Furthermore, the proposed bridge will be open underneath and therefore less visually prominent than the existing causeway.

Given the context of this already modified landscape, the proposed footbridge is deemed to present a relatively small change to the existing landscape character.

It is recommended that the visual effects (i.e. linearity) of the proposed bridge could be softened through careful consideration of its built form, finishes and materials so as to be in keeping with the coastal setting e.g. timber, low reflective finishes, visually recessive colours and natural stone.

Proposed Earthworks

The existing artificial causeways currently visually define sections of the estuary's edge, and contrast with its natural shape, profile and form. In addition, these structures currently prevent the natural tidal flow of the estuary. As a result of this the Papahikahawai Creek is characterised by stagnating water, algae growth and rubbish gathering on the surface of the water, affording the Creek a neglected and to some extent 'polluted' appearance.

By removing these man made elements, the natural processes of the estuary will be reinstated and improved. Proposed works will return the island, estuary margins and wetland to a condition more in keeping with its natural character and appearance. The proposed earthworks will also enable natural flushing of the estuary, thereby improving the ecological qualities of the environment.

In terms of scale, the proposed modifications are of such a small nature that they are considered to have a less than minor adverse effect on the existing landform, and will in fact have a positive ecological benefit on the environment.

Although the natural character and values of the site will initially be affected by earthworks (during the construction phase), there is a significant benefit in enhanced natural character and perceived visual amenity values resulting from the removal of the artificial causeways.

Loss of Vegetation
The vegetation cover throughout the estuary environment has been significantly affected over time by farming processes and is considered to be highly modified. Consequently, the proposed earthworks will have a limited impact on native vegetation and is not considered to have any adverse effects on existing vegetation patterns.

3 Conclusion

The landscape and visual effects of the proposed works are considered to be less than minor. There are a number of areas where the proposed works will have a positive effect on the landscape character and visual amenity of the area.

Construction activities are likely to introduce landscape and visual effects, however these are considered to be less than minor due to the relatively small scale and short duration of the proposed activities.

While the proposed works will bring about a permanent change to the landforms within the estuarine environment, the size, form and massing of the proposed earthworks and footbridge are considered in keeping with the landscape character of the estuary and wider coastline, and will have positive benefits to the overall landscape unit. The proposed works will not only enhance and compliment the landscape character but return it to a more natural state.

In terms of visual effects, the flat nature of the landscape generally constrains views towards the estuary. For distant viewing audiences construction of the bridge and removal of the causeways is considered to have no discernible adverse visual effects. For closer vantage points the proposed works the changes will be positive due to the perceived natural effect that the proposed works will have on the setting and its amenity.

It is also important to highlight that for most viewers the more naturally coherent estuary margins and free flowing channel will likely be perceived as positive, that is, contributing to the positive visual amenity and a high quality natural environment.

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