

# Identification of Outstanding Natural Features and Landscapes

## Otamataha - Misson Cemetery

### Description:

Located on the edge of central Tauranga, Otamataha comprises the remnant headland known as Te Papa. Prior to the reclamation of Sulphur Point and Chapel Street, Otamataha formed the headland to this part of Tauranga.

Historically a Pa for Ngati Maru, the site became the Mission Cemetery and contains the earliest Pakeha graves in Tauranga. The site holds significant historical values to the City and has been recognised as such in the recently adopted Historic Reserves Management Plan (December 2008).

The landscape surrounding and within the landscape feature has been significantly altered through infrastructure and transit based development. The Tauranga bridge and associated roading connections extend around the periphery of the site, resulting in the loss of natural features and landform.

To the south of the site the new Sebel Hotel complex sits immediately adjacent to the site, and screens much of the site's edge from view from the CBD area.

Significant landscape features of the site comprise the remnant pohutukawa along the seaward edge and a significant stand of exotic specimen trees. The raised cliff edge and vegetation cover extends above the water's edge and the Sebel Hotel, creating visual connection between the site and central Tauranga.

### Core Values:

- Moderate natural science values associated with the remaining geomorphological values.
- Moderate representative values due to the location and vegetation patterns.
- Moderate shared and recognised values at a City level.
- High historical values due to its significant archaeological features and heritage values.
- Moderate aesthetic values associated with vegetation patterns along the harbour edge.
- High Maori values associated with historical and associative relationships.

### Management Guidelines:

- Protection of the coastal edge from new structures that will contribute to scarring of the landscape and loss of the natural landscape patterns and native vegetation cover.
- Enhancement of coastal vegetation patterns and native bush patterns on the periphery of the feature.
- Enhancement of integration of existing access tracks and structures into the landscape through the use of native vegetation.





**Evaluation:**  
The following table details the summary of the assessment criteria:

ASSESSMENT CRITERIA							
Outstanding Natural Feature and Landscape	Natural Science Factors	Aesthetic Values	Expressiveness	Transient Values	Shared / Recognised Values	Maori Values	Historical Associations
Otamataha - Mission Cemetery	✓	✓	✓	✓	✓	✓	✓
Evaluation of Values	Moderate	Moderate	Moderate	Moderate	Moderate	High	High
Description of Values	<p>The site and its surrounds have been significantly modified, but the site displays the remnant headland and natural features of the Te Papa peninsula.</p> <p>The feature is not considered rare as many parts of the harbour edge comprise similar landforms, however the location and vegetation patterns are considered rare.</p>	<p>Large pohutukawa contribute to the significance of this site, displaying moderate levels of vividness and naturalness.</p> <p>Modification to the site, as a cemetery, has resulted in the inclusion of large historical exotic trees that also contribute to the coherence of the feature's margins.</p>	<p>The landform is highly expressive of its natural processes; however, its margins have been significantly altered through hard infrastructure and built development.</p>	<p>Transient values are attributed to the large remnant pohutukawa trees that extend around the feature. These are highly significant to the feature.</p>	<p>The associations with this site are largely connected to its historical importance. Widely known in Tauranga as the Mission Cemetery, the site has a distinctive cloak of vegetation that contributes to its recognised values.</p>	<p>Historically a pa site, this area is of high significance to Maori due to the occupation and battles that were fought in this area.</p>	<p>Comprising some of the City's earliest settler and missionary graves, the site is of high significance to Tauranga.</p>

# Identification of Outstanding Natural Features and Landscapes

## Coastal Dunelands

### Description:

Comprising the remaining undeveloped areas of the coastal environment the dunes that extend to meet Papamoa Beach Road are currently zoned Conservation Zone and are protected from development. The Te Tumu block comprises the remaining wider area of undeveloped duneland between residential Papamoa and the city boundary and is zoned Rural.

The coastal dunelands extending along the coast comprise a variety of formations and widths. The areas identified as being outstanding natural features and landscapes are located where modification to the dune has been minimal through a lack of built form and earthwork modifications. The dune system is largely apparent with the natural processes of the rear dune being apparent. Much of the built edges of the coastal landscape have lost any reference to the rear dune system that once existed.

The frontal dune system that extends along the coastal edge of residential housing, whilst significant, does not portray outstanding natural landscape values, due to the impacts of residential development. This, however, is an important part of the coastal environment and should continue to be protected from development. These areas have been included as important amenity landscapes.

The Te Tumu block comprises two sand mining consents which contribute to the loss of the natural landscape patterns in this area. Whilst compromised, the remainder of the landscape comprises high natural science values and high aesthetic values. Potential for education and research is an opportunity for the existing dune environment, particularly in regard to coastal geomorphological processes and natural vegetation cover. Whilst the shared and recognised values are low, the Maori values are high, due to the cultural connections to this landscape.

The secondary and tertiary dune systems are considered important to Tangata Whenua and comprise sites for koiwi (human remains) and the location of many battles which occurred along the dunes. The dune formations are in a degraded condition and whilst prominent have been highly modified through the farming and forestry land use activities. The connection of these rear dunes to the coastal edge has also been modified significantly for rural land use activities. Whilst a part of the natural dune environment these secondary dunes are not considered outstanding natural features. Development of built form should be avoided where possible within these rear dunes and the landforms could be maintained at large as reserve or open space areas for future interpretation of the landscape.



### Core Values:

- Moderate to High natural science values associated with the geomorphological values.
- High representative values due to the location and vegetation patterns.
- Low to Moderate shared and recognised values as a distinct feature.
- Moderate to high aesthetic values associated with vegetation patterns.
- High Maori values associated with historical and associative relationships.

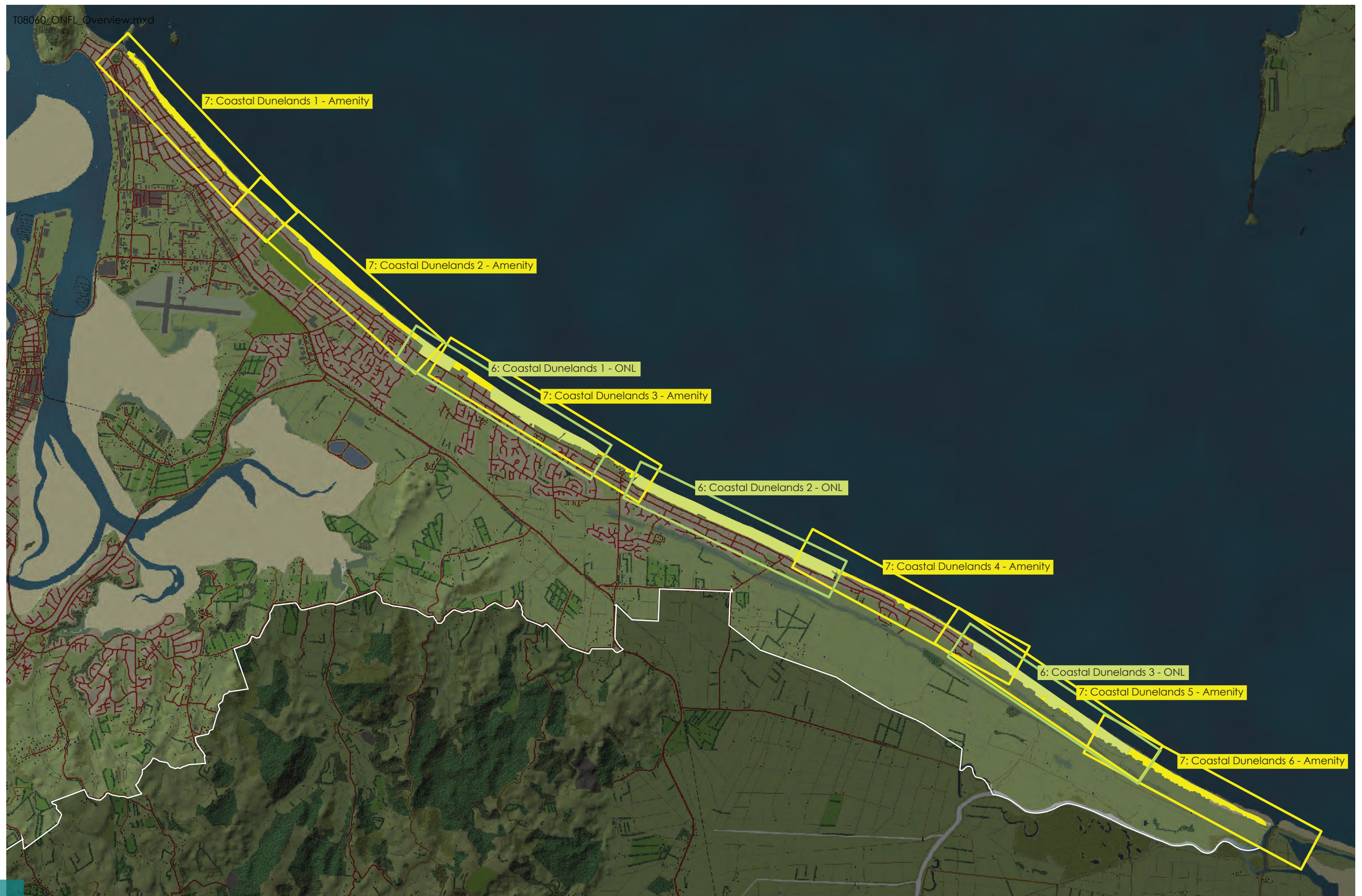
### Management Guidelines:

- Protection of coastal duneland from new structures that will contribute to scarring of the landscape and loss of the natural landscape patterns and native vegetation cover.
- Protection of the coastal duneland from earthworks associated with buildings, access roads, and tracks that fall outside maintenance of existing tracks.
- Enhancement of coastal vegetation patterns and native bush patterns on the feature.
- Enhancement of integration of existing access tracks and structures into the landscape through the use of native vegetation.
- Integration of sand mining sites into the remaining dune environment to complement the natural landscape patterns.

**Evaluation:**  
The following table details the summary of the assessment criteria:

ASSESSMENT CRITERIA							
Outstanding Natural Feature and Landscape	Natural Science Factors	Aesthetic Values	Expressiveness	Transient Values	Shared / Recognised Values	Maori Values	Historical Associations
Coastal Dunelands	✓	✓	✓	✓	✓	✓	✓
Evaluation of Values	Moderate - High	Moderate	High	Moderate	Low - Moderate	High	Moderate - High
Description of Values	<p>The coastal dunelands are highly representative of the wider natural dune system that once dominated this landscape. The extent and width of the dune system is a core representative value of this landscape.</p> <p>Although the rarity is considered low within the region, it is a rare feature within the City due to the loss of the rear dune environment to housing.</p>	<p>The land use within these areas generally supports the coherence values of the landscape, except for the pockets of historical sand mining which has disturbed the natural landscape patterns.</p> <p>The features in their own right are not highly vivid; however, the dune environment on a larger scale is vivid, but not distinctive, to the Papamoa coastline.</p> <p>The dunes' natural systems are largely intact with moderate values due to isolated areas of sand mining and pedestrian walkways.</p>	<p>The landform is highly expressive of the natural coastal geomorphological processes which form it.</p>	<p>Transient values are moderate as a result of the dynamic dune environment and flowering of coastal native vegetation cover.</p>	<p>The shared and recognised values are generally low, however wider parts of the dune environment are highly recognised through publications and postcards and are closely related to the accessibility of that landscape.</p>	<p>The coastal dune system comprises numerous cultural associations and was an area in which numerous battles occurred, food gathering and occupation was found.</p>	<p>A large number of archaeological sites are found along the coastal dunes. Having been left as an unmodified landscape the historical associations are generally considered moderate to high.</p>









6: Outstanding Natural Feature and Landscape: Coastal Dunelands 1



6: Outstanding Natural Feature and Landscape: Coastal Dunelands 2



6: Outstanding Natural Feature and Landscape: Coastal Dunelands 3



# Important Amenity Landscapes

**Important Amenity Landscapes** are those landscapes that contribute to the amenity of Tauranga City. Whilst not outstanding these landscapes are important and require management to ensure their values are maintained.

Factors, values and associations of which Important Amenity Landscapes comprise are: naturalness, natural science factors, aesthetic values and coherence, landscape patterns, shared and recognised values, recreational values, natural character values, maori values, and historical associations

## Coastal Dunelands

### Description:

While the entire coastal dune environment is of high importance to the City, a number of residential and recreational developments have resulted in extensive modification to the natural dune systems.

The modifications include:

- Access tracks from private property to the coastal edge;
- Earthworks modifying the natural dune system, creating a strongly geometrical profile;
- Encroachment of residential yard space into the natural dune environment;
- Built development and carparking within the frontal dune system;
- Loss of secondary dunes through the development of the wider dunes into residential development;
- Development of rear dunes as grazing paddocks.

These modifications have resulted in the degradation of the natural science factors, expressiveness and aesthetic values evident on the dunes where modification has not occurred. Although degradation of the overall dune environment has occurred, these landscapes still comprise areas of high levels of natural character and visual amenity values. These areas collectively combine to provide a contiguous natural coastline that, while not outstanding, contributes to the natural patterns and processes of those more significant areas of the coastal environment

### Core Values:

- Low to Moderate natural science values associated with the geomorphological values, due to extent of modifications within the dunelands.
- Moderate to high representative values due to the location and vegetation patterns.
- Moderate expressiveness values.
- Low to moderate shared and recognised values as a distinct feature.
- Moderate to high aesthetic values associated with vegetation patterns.
- High Maori values associated with historical and associative relationships.

### Management Guidelines:

- Protection of coastal duneland from non recreational structures that will contribute to scarring of the landscape and loss of the natural landscape patterns and native vegetation cover.
- Protection of the coastal duneland from earthworks associated with non recreational buildings, access roads, and tracks.
- Enhancement of coastal vegetation patterns and native bush patterns on the feature.
- Enhancement of integration of existing access tracks and structures into the landscape through the use of native vegetation.
- Removal of encroachment of residential activities within the natural dune environment, including inappropriate vegetation patterns.

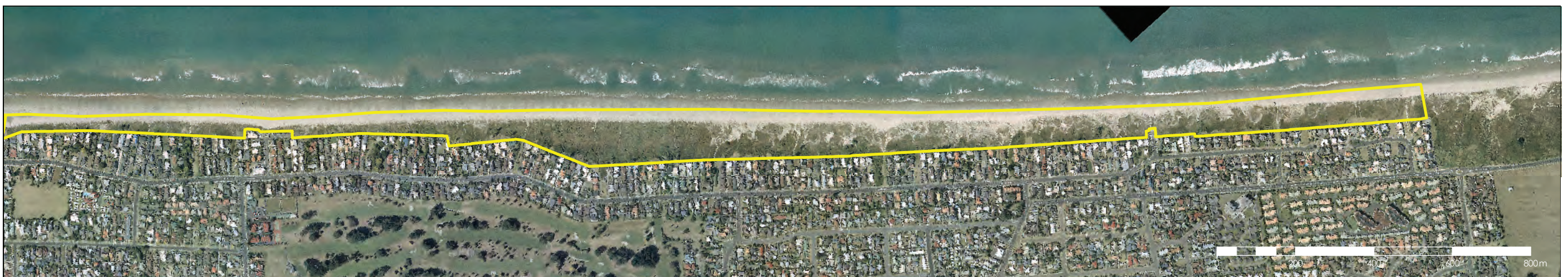




# Important Amenity Landscapes



6: Important Amenity Landscape: Coastal Dunelands 1



6: Important Amenity Landscape: Coastal Dunelands 2



6: Important Amenity Landscape: Coastal Dunelands 3





6: Important Amenity Landscape: Coastal Dunelands 4



6: Important Amenity Landscape: Coastal Dunelands 5



6: Important Amenity Landscape: Coastal Dunelands 6



# Important Amenity Landscapes

## Upuhue

### Description:

Upuhue is a large volcanic dome which extends from the Papamoa/Welcome Bay hillside. Upuhue is sited between Mangatawa and Papamoa Hills with Kairua Road extending along the northern edge foothills. Upuhue comprises distinctive landscape patterns as a result of Maori occupation. More recently the site has been used for pastoral farming with the foothills comprising horticultural cropping and shelterbelts.

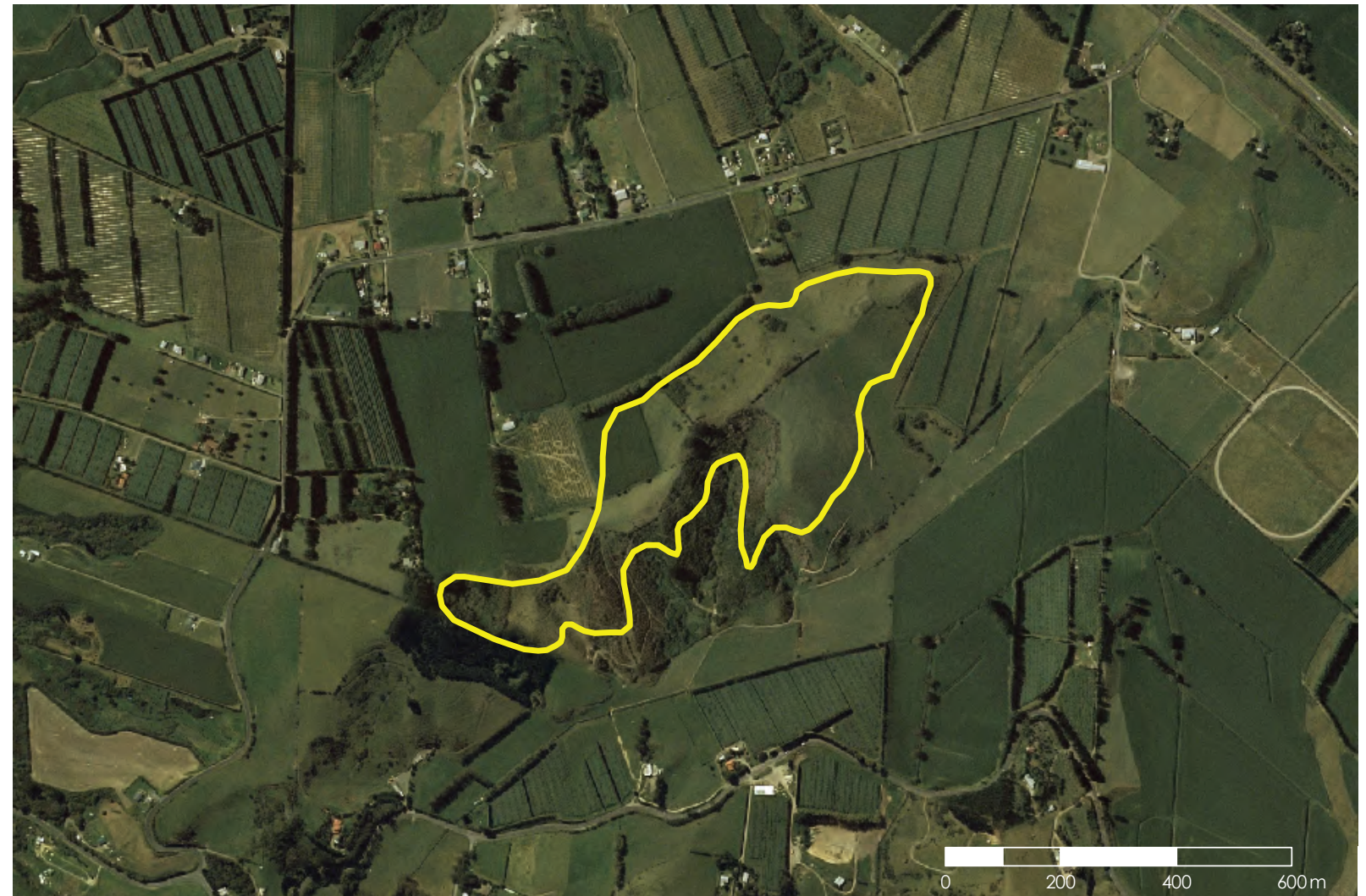
Vegetation patterns on the feature are poor with rural weed cover contributing to the loss. The proximity of surrounding structures and horticultural blocks has contributed to the obscuring of the feature and its foothills. Although not highly prominent and vivid, the landscape demonstrates natural geomorphology and high Maori and historical values.

### Core Values:

- High natural science values associated with the remaining geomorphological values.
- Low to moderate representative values due to the location and vegetation patterns.
- Low shared and recognised values at a district level.
- Moderate to high historical values due to its significant archaeological features and heritage values.
- Low aesthetic values associated with pastoral landscape and horticultural landscape.
- High Maori values associated with historical and associative relationships.
- Moderate amenity values associated with the lack of access and aesthetic coherence.

### Management Guidelines:

- Management of rural farming practices to provide for protection of the skyline and archaeological features through light stock pastoral farming.
- Management of immediate foothills to ensure structures and land use patterns do not detract from the feature and its aesthetic values.



6: Important Amenity Landscape: Coastal Dunelands 3



# Important Amenity Landscapes

## Matapihi Headland Margin

### Description:

The Matapihi Peninsula comprises a significant part of the inner Tauranga Harbour. Forming the main part of the visible harbour edge for the Central Business District and early Avenues, this rural landscape contributes to visual amenity values. A vegetated edge that protects the harbour margin (an outstanding natural landscape) from dominant built form. The retention of this vegetated edge contributes to the remaining natural character values of Tauranga Harbour and provides a positive interface between the developed rural landscape and the harbour margin.

### Core Values:

- Moderate natural science values associated with the remaining geomorphological values.
- Moderate representative values due to the location and vegetation patterns.
- Low shared and recognised values at a City level.
- Moderate aesthetic values associated with pastoral landscape and horticultural landscape.
- Moderate Maori values associated with historical and associative relationships.
- Moderate rural character values providing an edge between Tauranga Harbour and built development.
- Moderate natural character values play a role in protecting the natural character values of the harbour margin.
- High amenity values relating to the aesthetic coherence of the harbour edge and relationship of built form to the harbour edge.

### Management Guidelines:

- Management of removal of mature vegetation within a designated area along the harbour edge to ensure the vegetation cover dominates the harbour margin.
- Management and protection from erosion along the harbour margin.
- Enhancement of native vegetation along the harbour margin.
- Management of built form and reflectivity along the harbour edge to minimise the visual effect built form has upon the natural character values of the Tauranga Harbour and its margin.





# Important Amenity Landscapes

## Bethlehem Headland Margin

### Description:

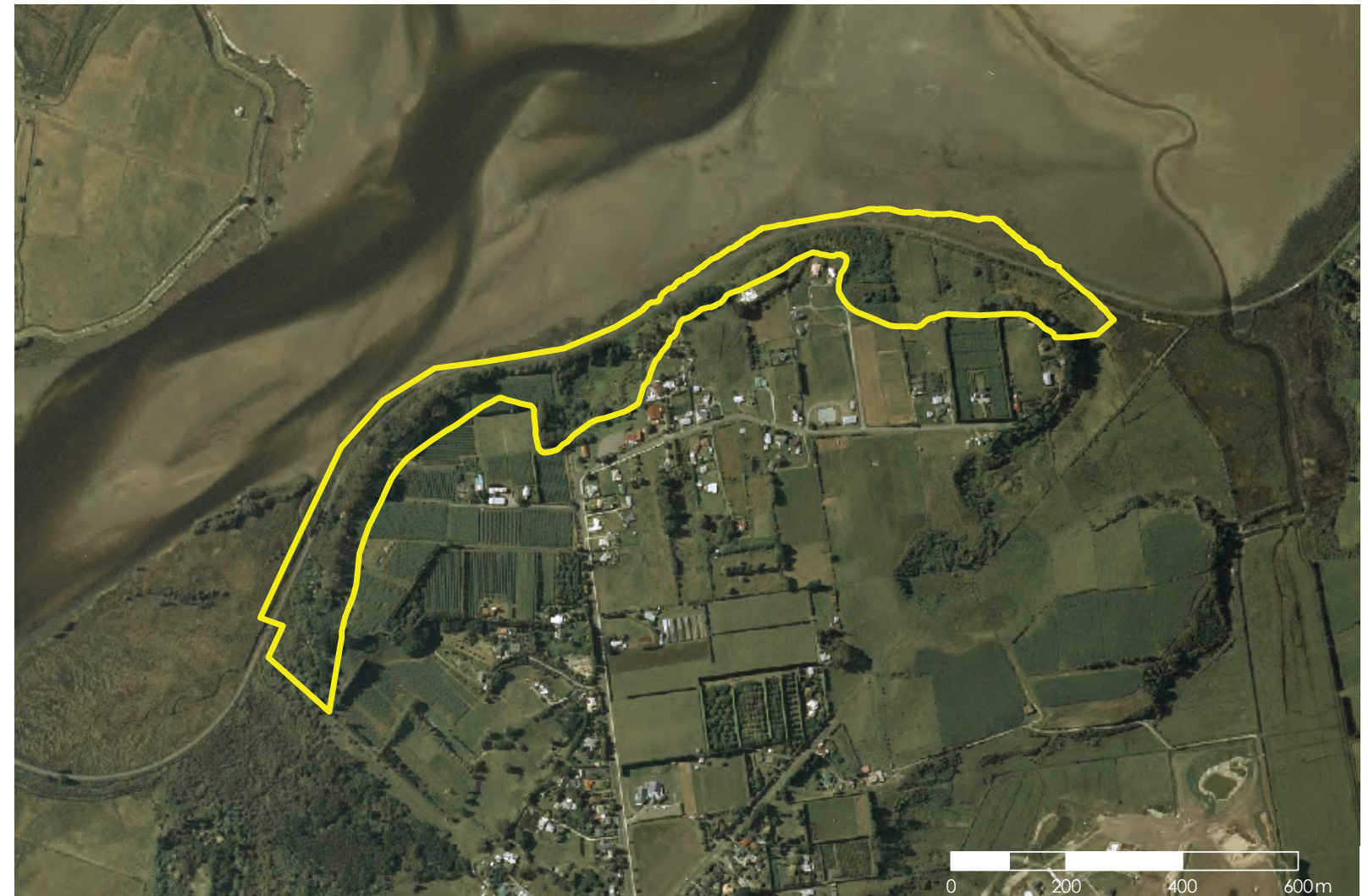
The Bethlehem Headland Margin comprises an inner harbour edge that is an important part of Tauranga Harbour. The area plays an important role in maintaining the natural character values of the harbour and its margins. The vegetated areas provide an edge that protects the harbour margin (an outstanding natural feature and landscape) from dominant built form. The retention of this vegetated edge contributes to the remaining natural and rural character values of Tauranga Harbour, providing a positive interface between the developed rural and residential landscape and the harbour margin.

### Core Values:

- Moderate natural science values associated with the remaining geomorphological values.
- Moderate representative values due to the location and vegetation patterns.
- Low shared and recognised values at a City level.
- Moderate aesthetic values associated with pastoral landscape and horticultural landscape.
- Moderate rural character values providing an edge between Tauranga Harbour and built development.
- The moderate natural character value of the vegetated edge plays an important role in protecting the natural character values of the Tauranga Harbour margin.
- Moderate to high amenity values along the harbour margin, relating to the aesthetic coherence and relationship between the feature and the Tauranga Harbour.

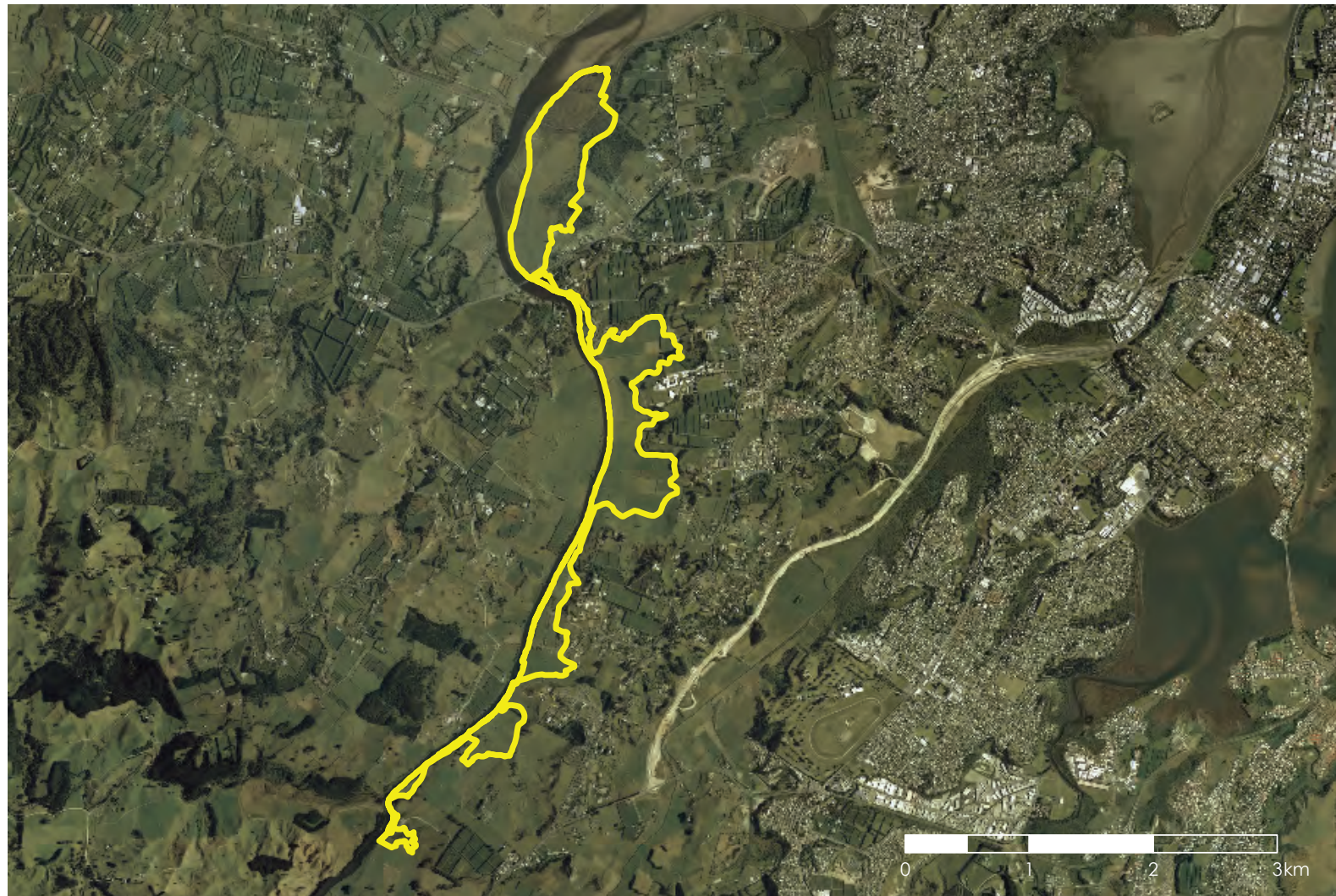
### Management Guidelines:

- Management of removal of mature vegetation within a designated area along the harbour edge to ensure the vegetation cover dominates the harbour margin.
- Management and protection from erosion along the harbour margin.
- Enhancement of native vegetation along the harbour margin.
- Management of built form and reflectivity along the harbour edge to minimise the visual effect built form has upon the natural character values of the Tauranga Harbour and its margin.





# Important Amenity Landscapes



## Wairoa River Valley

### Description:

The Wairoa River Valley forms the boundary between Tauranga City and the rural landscape of Western Bay of Plenty District. Within the valley there are distinctive landforms comprising:

- River flats and harbour plains.
- Rolling slopes.
- Escarpments.
- Plateau.

The lower rolling slopes, escarpments and river flats retain a small area of the rural landscape that contributes to the rural character values of the Wairoa River, with the remainder being found within the Western Bay of Plenty District. The river flats comprise a high water table that is poorly drained with volcanic alluvium and peat soils. The plains are a mix of pasture, wetland and saltmarsh, toward the river mouth.

The lowland river flats within Tauranga City are distinctive and a recognisable landscape for the City. This landscape is viewed from numerous vantage points along the Wairoa River itself, Moffat Road, Cambridge Road and from the State Highway 2 bridge. The edge between the river flats and the adjoining Tauriko-Bethlehem plateau is the area where development has occurred. In many places the development dominates the escarpments and the river edge, particularly where development is near the river margin.

This river environment provides a peri-urban boundary between urban and rural landscapes. The Wairoa River is highly significant to Ngati Kahu and the spatial relationship of the river to its surrounding landscape is also of importance to tangata whenua.

The landscape between the river mouth and the State Highway 2 bridge provides a continuation of the river plains landscape, transitioning into a harbour plains landscape. The area supports sites of ecological significance and contributes to the natural character values of the Wairoa River and Tauranga Harbour margin. The open space and natural character values in this area are of significant importance to this landscape and should be managed to avoid development.







#### Core Values:

- Moderate natural science values associated with the remaining geomorphological values.
- Low to moderate representative values due to the location and vegetation patterns.
- Low shared and recognised values at a City level.
- Moderate to high historical values due to its significance archaeological features and heritage values.
- Low aesthetic values associated with pastoral landscape and horticultural landscape.
- High Maori values associated with historical and associative relationships.
- High rural character values associated with pastoral plains, balanced with the river plains landscape across the river to the west.
- High open space values associated with the pastoral plains landscape, providing recognition of the river valley landscape patterns.

#### Management Guidelines:

- Management of rural farming practices to provide for protection of open space values of the rural landscape.
- Continuation of the rural zone within the low river plains and management of built form within 300m of the river margin.
- Enhancement of native vegetation along the river margin in accordance with the outcomes of the Wairoa River Valley Strategy.
- Management of built form along the river escarpments to provide for built form that integrates with the rural landscape.
- Protection along the river mouth harbour plains from built development to protect open space values and areas of ecological significance.
- Management of continued farming.









## Part 4 :: Significant Viewshafts





# Viewshafts

Views to the landscape within Tauranga City provide visitors, residents and tangata whenua with a ‘sense of place’ and contribute to the character of the area. The outstanding features and landscapes both individually and collectively provide a character that is unique, recognisable and iconic to the City and Region. Protection of views to these areas from further obstruction through subdivision, use and development, has been recognised as important to ensuring the character of the City is maintained.

It is recognised that visual understanding of landscape introduces subjective interpretation. People understand and view the landscape differently based on numerous subjective factors including their cultural beliefs, experiences through life, whether they live within that landscape or are visiting it.

Identification of outstanding natural features and landscapes has been reviewed and assessed within Part 3 of this study. Therefore the purpose of the identification of views to these features is not to reanalyse the subjective values placed on the view to that feature, but to quantify the extent of view and the potential risks to that view.

Due to the topography of the Tauranga City and the prominent and expansive nature of some of the outstanding natural features and landscapes there are numerous viewing points toward outstanding natural landscapes and features.

Determining the extent of view has been undertaken utilising analysis of GIS data sets, existing planning provisions and extensive field work. All views were photographed and located utilising GPS.

An extensive number of view points were located during the field work and the analysis of the significance of the view was determined utilising the following criteria:

- Extent of existing view to outstanding natural feature and landscape.
- Extent of view within the permitted built environment.
- Risk of view being obstructed by intermediary development within existing permitted planning provisions.
- Distance from outstanding natural feature.
- Visual impact of foreground upon that feature.
- Length of experience of the view in time for transient views e.g. 20 seconds at 50km/hr

Numerous view points throughout the City are available from unobstructed views public reserves located along the coastal edge, harbour margins and along ridgelines. Many of these view points are managed in perpetuity and therefore a high level of assurance is given to the protection of the view, given the purpose of many of Tauranga City Council’s reserves for the appreciation of public views to the surrounding landscape.

During identification of sightlines numerous views were observed to a feature, with similar extent. The view with the highest extent of view of Mauao and least risk of being built out through permitted activities was selected. Sightlines where views were at low risk of being obscured from built development due to their elevation and being in close proximity to the harbour edge were also eliminated from the identified sightlines.

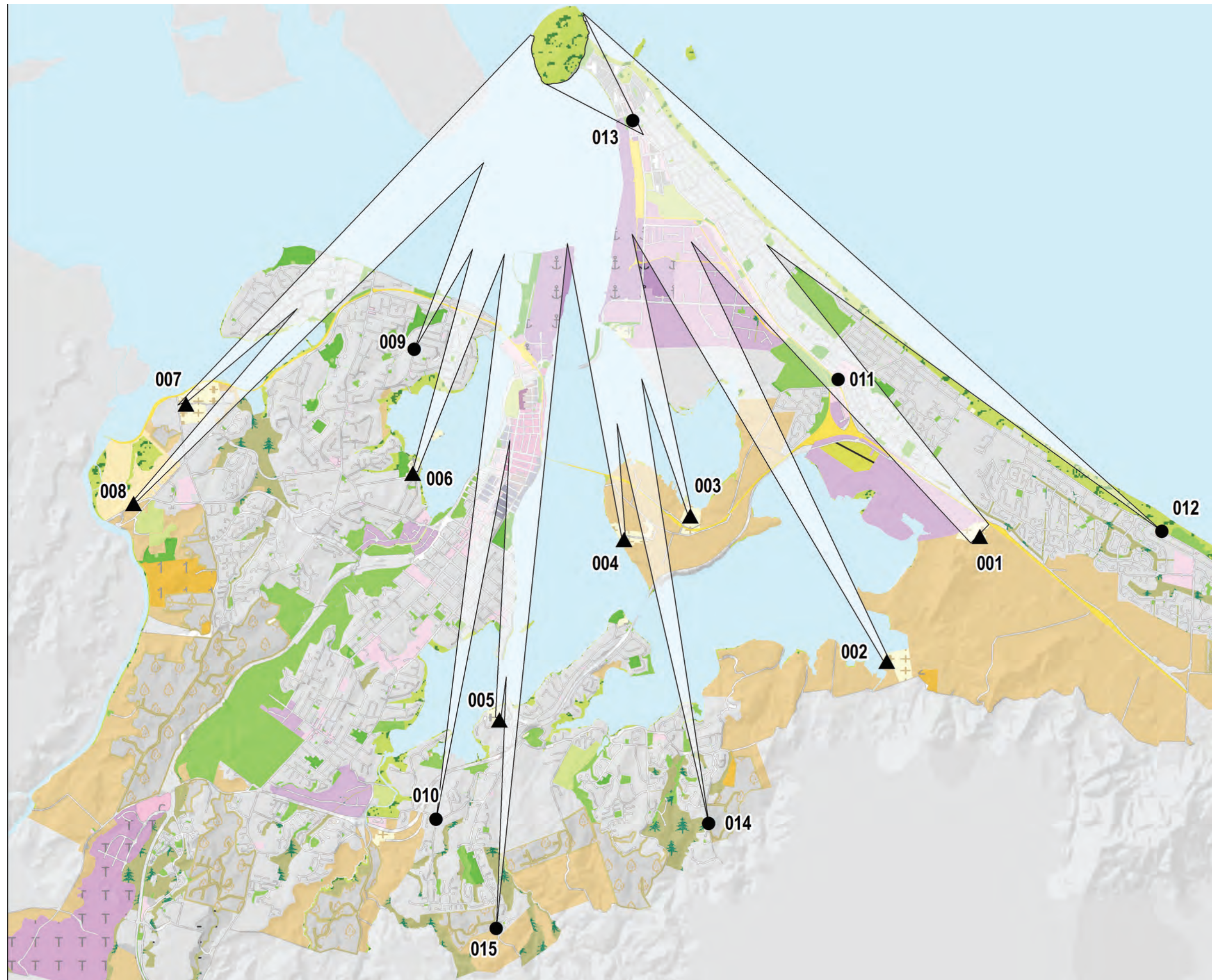
In many other cases the intermediary landscape between the viewpoint and the feature was determined as having low risk of obscuring a view as the elevation and type of development required to obstruct such a view would be fanciful, i.e. 30 metres plus. Alternatively numerous viewpoints were excluded, as whilst the view is apparent now, the intermediary vegetation patterns and permitted building envelope under the immediate zone rules were such that the view is likely to be obscured. The intention for the protection of viewshafts to outstanding features was for the application under discretionary activities and non complying activities, therefore allowing permitted activities to continue without restriction.

The following viewshafts have been identified as Outstanding Natural Features and Landscapes:

Viewshaft No.	Viewing Point	Destination
009	Grange Road	Mauao
010	Poike Road / Hollister Lane	Mauao
011	Maunganui Road	Mauao
012	Papamoa Beach Road	Mauao
013	Maunganui Road / Rata Street	Mauao
014	Waikite Road	Mauao
015	Ohauiti Road	Mauao

These are depicted on the map on the facing page (Page 189)







# Viewshafts from Marae to Mauao

All of the identified outstanding natural features and landscapes hold significance to tangata whenua due to the cultural values associated with these natural features. Many Tauranga City marae were sited to overlook their whenua, creating a visual connection with it, and in numerous cases the views were of Mauao and its foreground.

In many instances Mauao is the most prominent and visible outstanding natural feature and landscape of which a high proportion of marae have partial views to. The continued development both within marae and their immediate surrounds have resulted in a number of these views being completely or partially obscured. This loss of visual connection has occurred at Whareroa Marae, where the wharenuī is orientated toward Mauao, but its view has been completely obstructed by permitted industrial activity.

Mauao is considered an outstanding natural feature which is iconic to Tauranga City and the region. SmartGrowth Combined Tangata Whenua Forum reviewed the landscape management and protection strategies for the City, providing recommendations for management of views to Mauao from marae. Significant cultural heritage and landscape values are placed upon Mauao and recommendations to protect significant viewshafts were identified.

The adjacent diagram is extracted from the SmartGrowth study and demonstrates the numerous views from the wider City, where views have been obstructed from built development both within and surrounding marae.

Both Ngaiterangi and Ngati Pukenga iwi management plans identify Mauao as having very high cultural and spiritual significance to Tangata Whenua. The obstruction of views to Mauao is considered to be of significant concern and any future loss of view should be managed through protection of the view.

It has been considered that whilst there are other visual connections to culturally significant landscapes throughout the City from marae, the visual connection to Mauao is consistent amongst the majority of marae and has many risks associated with the potential loss of views through discretionary and non-complying activities.

**Method:**

Determining the extent of view has been undertaken utilising analysis of GIS data sets, existing planning provisions and GIS mapping of views from marae. The extent of the viewing point was taken from the full extent of the marae and not just the wharenuī within the marae.

The method of assessment does not consider the management of vegetation within the viewshaft. Subsequently some views may be compromised through obstruction by vegetation that is permitted under the District Plan, however in many instances this is not the case.

The assessment of the extent of view takes into consideration the permitted building envelope for the City and evaluates this as the starting point. All development that exceeds this baseline is considered within the sightline as requiring assessment as part of the application for resource consent, as discretionary or non-complying activities.

An assessment of value for each view has been undertaken at desktop level only with consultation with each iwi and associated hapu. A wider public perception study has not been undertaken as it is considered the views are culturally significant and subjective to each hapu and their iwi authority. The management of the quality of the feature has been assessed within the assessment of outstanding natural features and landscapes, Part 3 of this study.

**Key Issues:**

- Loss of sightline through internal development within marae
- Loss of sightline through over height built form
- Loss of quality of view through competing development within the intermediary view.

**Management Techniques:**

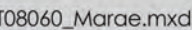
Numerous risks to the loss of view through built development. The consideration of the permitted building envelope has been allowed for and the management techniques provide for assessment of effects for those developments that trigger discretionary or non-complying activity status, due to the potential intrusion into the sightline.

The following viewshafts have been identified as:

- |     |                 |
|-----|-----------------|
| 001 | Tamapahore      |
| 002 | Tahuwhakatiki   |
| 003 | Hungahungatoroa |
| 004 | Waikari         |
| 005 | Hairini         |
| 006 | Huria           |
| 007 | Peterehema      |
| 008 | Wairoa          |

These are identified on Page 189.











# Appendix 1 - References

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	Tauranga City Council and Western Bay of Plenty District Council, 1995. Wairoa River Valley Strategy.	



## MAPS

### Broader landscape characterisation

This table defines the data layers used to create each map. Detailed information on each data layer follows these tables.

Map	Page	Data Layers	Map Document
Landscape types		TCC boundary, SmartGrowth natural character, SmartGrowth landscape types	T08060_Smartgrowth_Natural_Character.mxd
Elevation		Rail, road hierarchy, elevation grid model	T08060_Landform.mxd
Slope analysis		Rail, road hierarchy, slope grid model	T08060_Slope.mxd
Hydrology		River line, river polygon, rail, road hierarchy,	T08060_Hydrology.mxd
Storm water		TCC boundary, rail, storm water catchments, road hierarchy, flood hazard	T08060_StormwaterCatachments.mxd
*Land use / zoning		TCC boundary, planning zones	T08060_Height.mxd
*Green network		TCC boundary, notable trees, street trees, selected planning zones (Recreation, conservation and green belt), rail, road hierarchy	T08060_TreeGrids.mxd
Vegetarian		TCC boundary, rail, road hierarchy, LCDB2 (Land cover database)	T08060_vegetation.mxd
Historic vegetation		TCC boundary, rail, historic vegetation	T08060_vegetation_potential.mxd
Open space		TCC boundary, selected planning zones (recreation, conservation and green belt), rail, road hierarchy	T08060_ecology.mxd
Special ecological sites		TCC boundary, rail, special ecological sites, road hierarchy	T08060_SES.mxd
District boundary		TCC boundary, rail, road hierarchy, boundary changes	T08060_City_development.mxd
Aerial photo 1959		TCC boundary, Aerial photograph 1959	T08060_1959.mxd
Aerial photo 1973		TCC boundary, Aerial photograph 1973.	T08060_1973.mxd
Aerial photo 1992		TCC boundary, Aerial photograph 1992	T08060__Aerial_1992.mxd
Aerial photo 2008		TCC boundary, Aerial photograph 1992	T08060_Aerial_2007.mxd
Suburb names		TCC boundary, rail, suburb	T08060_Suburb.mxd



Landscape Character Units

This table defines the data layers used to create the maps for each Landscape Character Unit. Detailed information on each data layer follows these tables.

Map	Data Layers	Map Document
Landform and hydrology	Rail, landscape unit, road hierarchy, flood hazard, elevation grid model.	T08060_Mapbook_Landform.mxd
*Ecology	Notable trees, street trees, special ecological sites category 1 and 2, road hierarchy, selected planning zones (recreation, conservation and green belt), landscape unit, aerial photograph 2007	T08060_Mapbook_Ecology.mxd
*People	Marae, marae sightlines, heritage sites, archaeological sites, archeological extent, rail, road hierarchy, landscape unit, planning zones.	T08060_Mapbook_People.mxd

Identified outstanding and significant natural features and important amenity landscapes

This table defines the data layers used to create each map. Detailed information on each data layer follows these tables.

Map	Data Layers	Map Document
Overview map	TCC boundary, rail, outstanding natural feature, important amenity landscape, road hierarchy	T08060_ONFL_Overview.mxd
Individual site maps	Outstanding natural feature, important amenity landscape.	T08060_Mapbook_ONLF.mxd

DATA LAYERS

The table below details the datasets used to create the maps in the report.

Feature Class	Description	Date / Version	Projection	Source	Accuracy	Supply Date
Aerial photo 1959	Scanned aerial photographs and georeferenced.	1959	NZTM	TCC	Unknown	August 2008
Aerial photo 1973	Scanned aerial photographs and georeferenced.	1973	NZTM	TCC	Unknown	August 2008
Aerial photo 1992	Digital ortho rectified aerial photographs.	1992	NZMG	TCC	0.25 m	August 2008
Aerial photo 2007	Digital ortho rectified aerial photographs.	2007	NZTM	TCC	0.25 m	August 2008
Archaeological extent	New Zealand Archaeological Association extent of sites.		NZTM	TCC	+/- 100m	August 2008
Archaeological sites	New Zealand Archaeological Association sites.		NZTM	TCC	+/- 100m	August 2008
Boundary changes	The Tauranga City and boundary changes 1945 – 1980. La Rooij, Marinus, The rating of Maori Land in Tauranga County	October April 2002	NZMG	CFRT	+/- 100m	October 2006
Elevation grid model	Created from Tauranga City Council supplied 1 m contour lines. The grid model output has a cell size of 5metres x 5 metres.	November 2008	NZTM	BML	+/- 5m	November 2008
Flood hazard	Flood Hazard.	Operative TCC District Plan	NZTM	TCC	1:5000	November 2008
Heritage sites	Heritage Sites	Operative TCC District Plan	NZTM	TCC	1:5000	August 2008
Historic vegetation	Potential (i.e. approximation of pre-human) native forest pattern for all of NZ, based on the modelled distribution of major forest species (see Leathwick, J.R.2001. New Zealand's potential forest pattern as predicted from current species-environment relationships. New Zealand Journal of Botany Vol. 39: 447-464).	2001	NZTM	Landcare Research	Computer model	Unknown



Feature Class	Description	Date / Version	Projection	Source	Accuracy	Supply Date
Important amenity landscape	Important landscapes that display important amenity values to the district. Whilst natural in part these areas include influences of built development and human intervention.	2009	NZTM	BML	1:5000	July 2009
Landscape unit	An identified character unit within the broader landscape type, that defines an area of unique and /or similar landscape characteristics.	2009	NZTM	BML	1:5000	July 2009
LCDB2	Land Cover Database. This database is a thematic classification of land cover and land use classes. The LCDB2 was derived primarily from Landsat 7 ETM+ satellite imagery.	Summer 1997/98 and Summer 2001/02	NZTM	Ministry of the Environment	1:50,000	2004
Marae	Marae location have been determined from Tauranga City Council, Western Bay of Plenty District Council and Consultation with the SmartGrowth Tangata Whenua Representatives and the SmartGrowth Tangata Whenua Project team.	July 2003	NZMG	SmartGrowth	1:50,000	September 2008
Marae Sightlines	Sightlines from selected marae to Mauao (Mount Maunganui)	2007	NZMG	Boffa Miskell Limited	1:10,000	2007
Notable trees	Notable trees.	Operative TCC District Plan	NZTM	TCC	1:5000	August 2008
Outstanding natural feature and landscape	A landscape or feature that has been evaluated as comprising outstanding values for its natural science factors, aesthetic values, transient vales, shared and recognised values, maori values and historical associations.	2009	NZTM	BML	1:5000	July 2009
Planning zones	District Plan Zones	Operative TCC District Plan	NZTM	TCC	1:5000	August 2008
Rail	Railway lines. Used for mapping the 1:50000 New Zealand map series.	Version 15	NZTM	Ollivier and Co	1:50000	September 2008
River line	Centrelines of rivers. Used for mapping the 1:50000 New Zealand map series.	Version 15	NZTM	Ollivier and Co	1:50000	September 2008
River polygon	Extent of rivers. Used for mapping the 1:50000 New Zealand map series.	Version 15	NZTM	Ollivier and Co	1:50000	September 2008
Road hierachy	Road centrelines identifying the different level of service for the road network.	Operative TCC District Plan	NZTM	TCC	1:5000	August 2008
Slope grid model	The slope model was derived from the Elevation model GRID (5 metre x 5m metre cell size)	2008	NZTM	Boffa Miskell Limited	+/- 5m	October 2008
SmartGrowth landscape type	Landscape Types are defined primarily on the evolution and configuration of the landform. Landscape Units define areas of similar landscape character based on landform, landcover and landuse. The different landscape units are indicated by the references shown	July 2003	NZMG	SmartGrowth	1:50,000	September 2008
SmartGrowth natural character	The natural character attributes identify areas of the coastal environment which may comprise a constraint on future development, particularly more urban forms of residential development.	July 2003	NZMG	SmartGrowth	1:50,000	September 2008
Special ecological sites	Special Ecological Sites. Originally created by Wildlands consultants.	January 2009	NZTM	TCC	1:5000	January 2009
Storm water catchments	Stormwater catchments	November 2008	NZTM	TCC	1:5000	November 2008
Street trees	Street trees With species type and age joined to point features if possible.	August 2008	NZTM	TCC	1:1000	August 2008