Proposed Eastern Bays Shared Path
Eastern Bays, Hutt City
LANDSCAPE & VISUAL ASSESSMENT

Prepared for Hutt City Council by
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Contents

EXECUTIVE SUMMARY

Hutt City Council proposes to construct a wider continuous shared path for pedestrians and cyclists along the coastal edge of Marine Drive, which will require replacing and extending existing seawalls to provide structures that are resilient to storm surges and future sea level rise. The proposed works require resource consent from GWRC under the Regional Coastal Plan for the Wellington Region and the Proposed Natural Resources Plan for the Wellington Region for works below MHWS.

Landscape Context

Marine Drive has a distinctive pattern of settlement and land use. The road is contained between the harbour and the hills. At a local scale, each bay has a unique identity, the cumulative product of the settlement pattern and the bay landform including the curvature of the bay, the steepness of the hills and their proximity to the coastline, the orientation of the bay and its exposure to the prevailing winds and the coastal edge.

Hutt City currently does not identify outstanding natural landscapes (ONLs) and features (ONFs) or special amenity landscapes (SALs) in its district plan. The Landscape Evaluation Draft Technical Review Assessment undertaken for Hutt City in 2016 did not identify any ONFLs or SALs within the project area.

A natural character assessment was undertaken in 2016 for Greater Wellington Regional Council and Hutt City Council. No *Outstanding* or *Very High* Natural Character areas are identified within the Eastern Bays coastal terrestrial area, which is assessed as having Moderate natural character.

Biophysical Effects

Considered over the length of the Eastern Bays, there is a small loss of local landform and the overall biophysical adverse effects are Low. At a local scale, effects in Point Howard north of the beach are considered Moderate, mitigated in part by the proximity of the revetment and path to the Point Howard wharf entry and carparks, and its location over an existing rock structure. In Sunshine Bay, the proposed revetment sits within the bay rather than near the headland with no relationship to the landform context. Because it replaces an existing seawall, localised effects are considered Moderate.

Effects on Natural Character

The proposed shared path and seawall structure has a very low impact on the overall experiential natural character attributes, which derive largely from the wider landscape setting of the harbour and the Eastbourne Hill backdrop.

Adverse effects of the proposal on natural character are considered to be Low for the wider Eastern Bays coastal landscape. At a local ‘bay and beach’ scale, the effects of the proposed shared path and seawall on overall experiential natural character attributes will depend largely on the ability of the design to respond to the local landform and land use patterns. With an appropriate Landscape and Urban Design Plan in place, effects on natural character will be Low.

Effects on Visual Amenity

While it is an important component of the Eastern Bays landscape, the narrow fringe of land between the road and the water has a low visual prominence. The existing collection of road shoulder, paths and structures along Marine Drive will be replaced by the shared path, concrete curved wall and revetments.
The shared path will look different and provide a different user experience by changing the scale of the road corridor and creating a more consistent and formal coastal edge, but overall the adverse effects on visual amenity are considered to be Low.

Effects at a local scale and on a bay by bay basis will be determined by the detailed design that will be undertaken in consultation with each bay community in the Landscape and Urban Design Plan (LUDP). It is anticipated that the LUDP will provide further visual mitigation and the potential for beneficial visual amenity effects.

Construction Effects
The visual impact of construction will be localised and temporary, with each bay expected to take 3-6 months to complete. Adverse effects are short term and considered to be Very Low.

Mitigation Measures
A suggested condition of this consent is that a Landscape and Urban Design Plan (LUDP) be developed in consultation with Hutt City Council, the Eastbourne Community Board, local resident organisations and the Eastern Bays community. This is supported by the landscape and visual assessment. Within each bay and at a local scale, final effects on natural character and visual amenity will be determined by finer grained detailed design.

Analysis against Statutory Provisions
The impact of the proposal on natural character, natural features and natural landscapes has been reviewed and evaluated in accordance with relevant objectives and policies in the New Zealand Coastal Policy Statement 2010, Greater Wellington's Proposed Natural Resources Plan and Regional Policy Statement. Overall adverse experiential effects on natural character are Low. Effects are mitigated through the use of consistent path and seawall detailing to reduce visual impact of new structures and the use of a LUDP to provide a detailed design that responds to local landscape, history and land use.

Adverse effects of the project on natural landscapes and features in the Eastern Bays coastal environment occur within a narrow band of development along the coastal edge. Effects are mitigated through a seawall design that responds to the bay landform and minimises loss of beach and rocky foreshore landform, and are Low.

It is proposed to replace beaches at Point Howard, Lowry Bay and York Bay with like for like, using nourishment with local material of a similar colour and texture. Local effects on these natural features are Moderate – Low and adverse.

Conclusion

The main landscape issue for the proposed Eastern Bays shared path and seawall is the potential effect on natural character of the coastal environment. The proposal is seen as an appropriate development in this location for the following reasons:

- The existing coastal edge has been modified by the road and historic seawall structures that have disrupted natural ecological processes.

- Within the wider Eastern Bays landscape, the particular elements, features and experiential values that contribute significantly to the experiential natural character value of the area remain unchanged.
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- Works are confined to narrow fringe of land between the road and the water. While it is an important component of the Eastern Bays landscape, this coastal edge has a low visual prominence.
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- The shared path will look different and provide a different user experience with local nuance and character replaced by a wider, more formal path and modified coastal edge. The proposed LUDP is seen as the primary mitigation measure for the potential loss of local landscape character and identity.

1.0 PROJECT OVERVIEW

1.1 Introduction

The Eastern Bays Shared Path is a key project in providing a safe and integrated network for commuting and recreational purposes under the current strategy 'Walk and Cycle the Hutt 2014 – 2019'. The project is considered part of the Great Harbour Way/Te Aranui o Pōneke which is a walking and cycling route around Te Whanganui-a-Tara, the harbour of Wellington from Fitzroy Bay in the east to Sinclair Head in the west.

Construction of a wider continuous shared path along the coastal edge of Marine Drive requires replacing and extending existing seawalls to provide structures that are resilient to storm surges and future sea level rise. The design of the shared path and seawalls has been refined following consultation with the public, local resident groups and other stakeholders on a range of design options.

The proposed works require resource consent from Greater Wellington Regional Council (GWRC) under the Regional Coastal Plan for the Wellington Region and the Proposed Natural Resources Plan for the Wellington Region for works below Mean High Water Springs (MHWS).

Hutt City Council has commissioned Drakeford Williams Ltd to prepare a landscape and visual effects assessment for the proposed shared path and seawall, to be included as part of the Assessment of Environmental Effects (AEE) required for the resource consent application to GWRC and HCC. It considers the landscape and visual effects of the proposal on views from private property, public places and open spaces. The assessment also considers effects on natural coastal character for the local landscape and on the wider Eastern Bays coastal landscape.

1.2 Base information

Plans referred to include:

- Stantec - *Eastern Bays Shared Path Concept - DBC*.
  DWG 80509137-01-001-C220 to 242, Rev J (08-18);
- Stantec - *Draft Consenting Scope Eastern Bays Shared Path. August 2017;*
- Stantec - *Eastern Bays Shared Path Design Features Report Final. September 2018; and*
- Stantec - *Consultation Report Eastern Bays Shared Path. September 2017.*

The landscape and visual assessment has also been informed by other technical reports associated with this AEE including:

- Intertidal Ecology Report. *EOS Ecology;*
- Recreation Assessment. *Rob Greenaway & Associates*
- Coastal Physical Processes Report. *NIWA*;
- Beach Nourishment Design. Tonkin & Taylor; and
- Coastal Vegetation and Avifauna Report. *Sustainability Solutions Ltd.*

1.3 Glossary

The following acronyms have been used throughout the report:

CSW	Curved concrete sea wall ie a single, double or triple curve concrete wall
CMA	Coastal marine area
GWRC	Greater Wellington Regional Council
HCC	Hutt City Council
LUDP	Landscape and Urban Design Plan
MHWS	Mean High Water Springs
NZCPS	New Zealand Coastal Policy Statement 2010
PNRP	Greater Wellington Proposed Natural Resources Plan
RPS	Greater Wellington Regional Policy Statement
SNR	Significant Natural Resource Area

2.0 STATUTORY CONTEXT

The proposed works require resource consent from GWRC under the Regional Coastal Plan for the Wellington Region and the Proposed Natural Resources Plan for the Wellington Region for works below MHWS.

Under Policy 24 of the NZCPS, coastal hazards including climate change effects are to be assessed over at least 100 years, which for this Project effectively means out to 2120. Policy 24 also requires assessments to take into account national guidance and the best available information on the likely effects of climate change on the region. The operative coastal guidance provided by the Ministry for the Environment (MfE) is the 2017 edition of *Coastal Hazards and Climate Change – A Guidance Manual for Local Government*.

A Wellington City and Hutt City natural character assessment was undertaken in 2016 for Greater Wellington Regional Council and Hutt City Council. No *Outstanding* or *Very High* Natural Character areas were identified within the Eastern Bays Shared Path site.

Hutt City currently does not identify outstanding natural landscapes (ONLs) and features (ONFs) or special amenity landscapes (SALs) in its district plan. Council commissioned landscape architects and landscape planners from Boffa Miskell Consultants to carry out an evaluation of Lower Hutt's landscapes. The evaluation has been undertaken but remains in draft form. No ONFLs or SALs have been identified within the Eastern Bays Shared Path site, although the Hutt City draft Technical Assessment[1] identifies the Eastbourne Hills that backdrop the site as a SAL.

In November 2018 Council decided not to promote a change to the District Plan but to proceed with a non-regulatory approach for the identification and protection of significant areas including areas of significant indigenous vegetation and significant habitats of indigenous fauna, outstanding natural features and landscapes, and areas with high natural character values in the coastal environment.

[1] Boffa Miskell for Hutt City Council. Landscape Evaluation Draft Technical Assessment. December 2016.

No features or structures within the project footprint are listed in the Hutt City District Plan as significant natural, cultural and archaeological resources. None of the seawall structures are listed in Greater Wellington's *Coastal Historic Heritage.* The Skerrett Boatshed, owned by the Hutt City Council and located in Lowry Bay, is listed on the New Zealand Historic Places Trust Register as a Category 2 building.

The terrestrial part of the project cuts through SNR 44 (Port Howard) and is close to SNR 11 (little penguin haven at Sunshine Bay). These relate to a threatened plant species and penguins and are assessed in the Coastal Vegetation and Avifauna Report[2].

3.0 LANDSCAPE CONTEXT

3.1 Background and history

The coastline from Point Howard to Eastbourne sits on the eastern edge of Te Whanganui a Tara - Wellington Harbour, extending around a number of rocky headlands and small bays. These bays are known collectively as the Eastern Bays and include Point Howard, Sorrento Bay, Lowry Bay, York Bay, Mahina Bay, Sunshine Bay, Days Bay, Rona Bay, Eastbourne village and Robinson Bay.

Due to their orientation and location at the entry to the harbour, the Eastern Bays have a long history of use, initially by Māori who occupied kāinga in the sheltered bays and more substantial pā on the headlands, and later by early European settlers who drove stock along the coast between the Hutt Valley and the Wairarapa.[3]

Access improved after the 1855 earthquake, which raised the eastern shoreline by 2 metres. The track was upgraded and the bays became a destination for Wellingtonians for both day time excursions and holidays. Ferry service for day excursions to Lowry Bay started in the 1880s and then extended to commuter services to Days Bay and then Rona Bay, which in turn increased the demand for residential development.

Marine Drive remains the main access to the Eastern Bays, although the road has been progressively upgraded and widened: to the west out over rocky outcrops and the foreshore; and to the east and particularly at the headlands, into the landform so that in many locations what appears to be the natural coastal escarpment in reality is a steep cut batter into the toe of the Eastbourne hills.

The following photographs illustrate changes to the road and the shoreline over time.

[2] Overmars, F. 2018. Assessment of Environmental Effects of the proposed Eastern Bays Shared Path project on coastal vegetation and avifauna. Christchurch, NZ: Sustainability Solutions.

[3] Te Ara, the Encyclopaedia of NZ. http://www.teara.govt.nz/en

Figure 1: Lowry Bay 1905 Turnbull Library

At some point in time when the road was widened, the remnant rock outcrop (*above*) on the coastal edge of the road has been removed.

Figure 2: Lowry Bay 1910 Turnbull Library

Figure 3: Lowry Bay 1920 Turnbull Library

Figure 4: Lowry Bay 1920 Turnbull Library

Figures 1- 4 illustrate the widening of the road and the overall change in scale of the road footprint over a period of 15 years.

Figure 5: Mahina Bay 1956 Turnbull Library

Figure 5 illustrates the raising of the road and changes in the road gradients in order to facilitate surface run-off. Note the drain on the inland side of the road, and a seawall structure of some kind in the foreground embayment.

3.2 Wider landscape setting

The Eastern Bays sit on the eastern edge of Te Whanganui a Tara Wellington Harbour, backdropped by the Eastbourne hills and with views out over the harbour. They are made topographically and visually distinct by the steepness of the hill slopes, the beech forest cover and their location between the industrial area of Seaview on largely reclaimed land to the north, and the more exposed coastal escarpment, and beaches to the south, from Burdan's Gate to headlands at Pencarrow Head, Baring Head and Turakirae Head.

The Eastern Bays are described in the 2012 Hutt Landscape Study:

> *The coastline of this character area comprises a series of small sandy bays separated by rocky headlands. Flat land is scarce, with the largest flat areas located in Days Bay, Lowry Bay and Eastbourne, where the meeting of sediment-laden currents has allowed build-up of the foreshore. Elsewhere, the land rises steeply from the water to a sharp ridge that varies in height from 230m asl to 370m asl and separates the coast from the Wainuiomata basin and Gollans Stream catchments.*[4]

The Great Harbour Way[5] report describes the wider Wellington coastal landscapes as ranging from undeveloped wild and relatively 'natural' coast to highly developed and modified urban areas. On this continuum, the Eastern Bays are defined as having a

[4] *Hutt Landscape Study 2012. Landscape Character Description*. Boffa Miskell Ltd. April 2012.

[5] *Great Harbour Way – Te Aranui o Poeke.* Boffa Miskell 2009.

Residential Coast landscape character. The hills are zoned Hill Residential on the lower slopes and East Harbour Regional Park on the upper slopes and ridgelines.

Defining characteristics include:

- A sequence of well-defined bays and headlands;
- Contained and defined by the vegetated Eastbourne hills with their distinctive cover of beech forest, mixed broadleaf forest and scrub;
- Panoramic views out across the harbour to Matiu/Somes and Makaro/Ward Islands, Te Motu Kairangi/Watts Peninsular, Wellington city, Horokiwi Ridge and the coastal hills above Hutt Road;
- A managed coastal edge with low rise residential development overlooking the harbour. The closest undeveloped and unmodified coastline is located outside the Eastern Bays, in the South Coast character area immediately south of Burden's Gate and within the East Harbour Regional Park.

3.3 Marine Drive Shared Path - the project site

The project site is located between Seaview and Eastbourne village. North of the project site is the Seaview industrial area. The street landscape is utilitarian, even where Seaview Road meets the coastline and Seaview marina, with the road enclosed between an armco barrier (protecting pipes linked to the Seaview tanker terminal) and the large scale cut batters of the Pt Howard headland.

South of the project site and beyond Windy Point, the build-up of the foreshore has created a wide band of flat land extending from Rona Bay through to Robinson Bay, now densely developed and known collectively as Eastbourne village.

The proposal excludes Days Bay, which has a similar landform and residential development pattern to Lowry Bay but a more urban and public interface with the road including: green open space both sides of the road together with Williams Park; areas of formal parking on both sides of the road; the Days Bay wharf; shops and cafes; and a promenade complete with urban furniture and an avenue of Norfolk Island pines.

The shared path route has a distinctive pattern of settlement and land use. From Point Howard to Days Bay, and from Windy Point to Muritai Road, Marine Drive runs along the edge of a residential landscape, albeit a landscape of low density and intermittent built development.

The road is contained between the harbour and the hills, adjacent to the coastline and with a high drop off to water. The coastal edge is seen from the road but there are limited opportunities to stop and engage with the water. Consequently beaches, rocky foreshore areas and the existing path are mostly used by local residents.
The exception is Point Howard beach, which has parking, a safe beach and public facilities and is used over summer by a wider pool of Hutt residents.

3.4 Site description by bay

The proposed shared path extends from Point Howard through to Sunshine Bay and from the southern end of Days Bay to Russo Point. *Appendix 12.1 Site Description by Bay* of this report contains a detailed description of the bays and their landscape characteristics.

Each bay has a unique identity, the cumulative product of the settlement pattern and the bay landform including the curvature of the bay, the steepness of the hills and their proximity to the coastline, the orientation of the bay and its exposure to the prevailing winds and the coastal edge.

Point Howard to Sorrento Bay

Figure 6

- Settled but hillslopes and road edge are well vegetated and have high natural values
- Steep hill slopes extend to the coastal edge
- Inland edge of road varies in width and composition creating an informal edge
- Modified and structured coastal edge, seawalls visible in places
- Beaches set down below road
- Sandy, shallow beach at Point Howard.
- Low tide beach only at Sorrento Bay
- Rock outcrops at the road edge and off shore

Lowry Bay

Figure 7

- Bay enclosed by vegetated hills
- Residential development on floor of the bay extending onto lower hill slopes
- Dense development along Marine Drive creates an almost urban streetscape along inland edge of road
- Modified coastal edge, visible seawall structures and beach landscape complete with boardwalk, decking and boat sheds
- Main southern beach at road level, with a gentle sloping sandy surface and a consistent beach exposed at high tide

York Bay

Figure 8

- Established residential development set into a matrix of vegetation
- Steep hillslopes at the headlands, easing in the middle of the bay
- Informal edge to inland side of the road, with vegetation screening views of built development
- Modified coastal edge, wide range of visible seawall structures
- Low drop from road to moderately sloping, stony beach.
- Southern beach (main beach) has a narrow section exposed at high tide

Mahina Bay

Figure 9

- Slightly convoluted bay form along coastline
- Intermittent clusters of houses along the inland side of the road, interspersed with vegetation
- Houses backdropped by steep, vegetated landform
- Modified coastal edge, limited range of seawall structures
- Rock outcrops at the road edge and off shore
- Gently sloping beach sits just below road with only localised areas exposed at high tide

Sunshine Bay

Figure 10

- A wild, exposed landscape
- A more random settlement pattern than other bays and appears less developed
- Road contained between coastal escarpment and coastline
- A visibly eroding road edge
- A moderately sloping gravelly beach just below the road, with localised areas exposed at high tide
- Long stretches of rock outcrop along coastline

Windy Point

Figure 11

- Connects Days Bay to Eastbourne village
- Multi-storey residential development forms a built edge to road
- Urban character reinforced by kerb and footpath on inland side of road
- Steep drop between road and foreshore at southern end of bay
- Stretches of rock outcrop along coastline
- Large drop from road down to rock outcrops, exposed patches of gravel at low tide.

3.5 Overall defining characteristics

Considered as a whole, the project site has a number of consistent and defining characteristics although Lowry Bay can be considered as atypical in terms of its topography and the urban character of its streetscape, particularly along the inland side of the road.

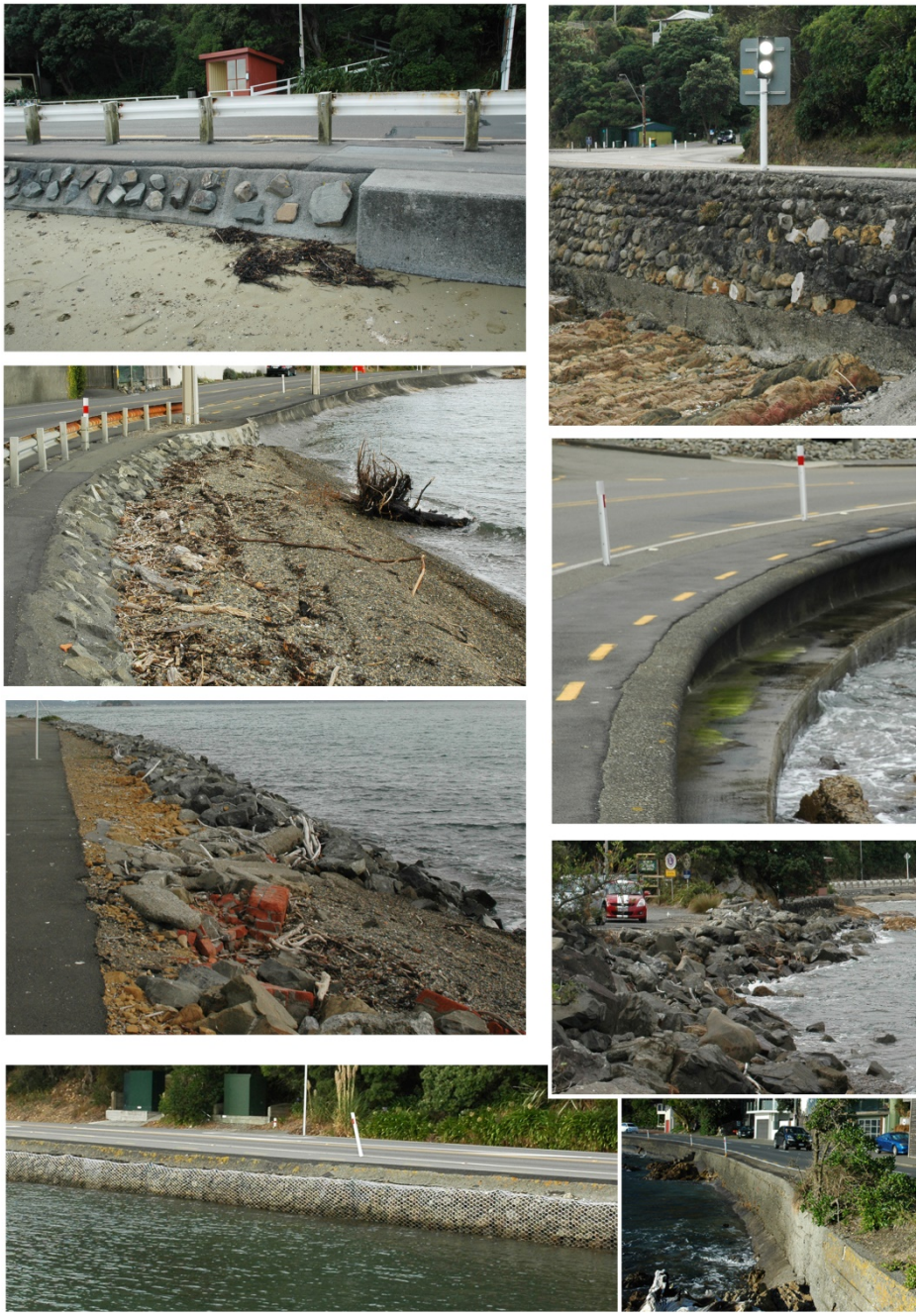

Figure 12: Seawall structures along Marine Drive

These include those same characteristics that define the wider Eastern Bays character area, namely:

- A sequence of well-defined bays and headlands;
- The proximity of the Eastbourne hills;
- Panoramic views out across the harbour; and
- A modified and managed coastal edge.

More localised and site specific characteristics include:

- Variable width path along the coastal side of road;
- Very little coastal vegetation;
- Coastal edge modified by a wide range of seawall and retaining structures;
- Proximity of the road to the water's edge;

- Largely informal interface with road edge on the inland side of Marine Drive;
- Each bay has a narrow, moderately steep beach, rocky foreshore and rock outcrops extending out into the harbour; and
- A lack of at-grade access for most beaches.

Figure 13: The interface between the road and the active beach

4.0 EXISTING NATURAL CHARACTER

4.1 Natural Character Assessment

Methodology for defining **the extent of the coastal environment** and **coastal natural character** is attached in Appendices at the end of the report.

Appendix 12.3 details current best practice natural character methodology, developed by Boffa Miskell for use in the Marlborough Sounds, together with a detailed assessment of the Eastern Bays project site coastal natural character. Methodology is based on NZCPS 2010 with a detailed methodology for the assessment of experiential natural character.

Appendix 12.4 assesses the project site coastal natural character using criteria from the New Zealand Coastal Policy Statement 2010.

Appendix 12.5 assesses the project site coastal natural character using criteria from the GW Proposed Natural Resources Plan NRP: Objective O17, Policy P25 and Policy P134.

Appendix 12.6 assesses the project site coastal natural character using criteria from the GW RPS.

The overall assessment of existing coastal natural character is consistent across the 4 methodologies.

The three broad attributes of coastal natural character are:

- Abiotic (non-living)
- Biotic (living)
- Experiential (perceptual)

In the project site, the coastal environment includes the area within the Coastal Marine Area (CMA) encompassing the sea bed and foreshore, and coastal edge extending across the established residential development along most of the accessible flatter toe slopes up to (but not including) the vegetated hills that backdrop the Eastern Bays.

This assessment focusses on the experiential attributes as a detailed evaluation of abiotic and biotic attributes is beyond the landscape and visual area of expertise.

Abiotic attributes
The natural landforms including the Eastbourne hills and east harbour ridgeline, the bays, headlands and rocky foreshore are clearly legible, as is the receiving environment of Wellington harbour and the wider Wellington ridgeline and hill top landscape.

The Coastal Natural Character Assessment notes:

> *'Much of the shore along this section of the coast has been modified to some extent with sea walls constructed to protect the coastal road. Breakwaters and jetties occur in places as well as reclamation and buildings.'*[6]

At the site specific scale, the natural processes and patterns along the Eastern Bays coastline have been disrupted by the construction of Marine Drive along the coastal edge. An access track was formed prior to the 1855 earthquake, but the consequent land uplift provided the opportunity to form a road over the rocky edge to the coast rather than having to excavate into the hills. The road has been progressively raised and widened: to the west out over rocky outcrops and the foreshore; and to the east into the headlands.

The combination of coastal uplift and progressive road improvements make it difficult to establish where the natural shoreline would lie. The built coastal edge, the presence of seawall, continually modified retention and drainage structures, and grade separation between the road and the beach indicate that the shoreline has been extensively modified. Aside from the headlands, there are only two sites along the route where there is no significant retaining structure between the beach and the road, namely Sunshine Bay opposite the Sunshine Service Station and Lowry Bay just south of the bus shelter (opposite Cheviot Road). In both locations the adjacent road edge has been frittered away and there are remnants of previous structures and in the case of Sunshine Bay, riprap material has been placed over the beach.

The Eastern Bays coastline has experienced short-term periods of erosion, accretion and sediment re-distribution (i.e., concentration of sediment according to size) on daily, weekly, seasonal, annual and interannual timescales. The mixed sand and gravel beaches can vary over time within each bay with the proportions of the mix changing with storm surges. (*Coastal Physical Processes.* NIWA June 2018) However based on historic aerial photographs the Coastal Process report concludes that there has been little to no long-term shoreline change on beaches north of Eastbourne since the early 1900s.

What has changed, as evidenced in Hutt City aerial photographs from 1957 to 2017, is the gradual formalising of the road itself and the interface between the road corridor and the coast. Changes include increased road markings and road furniture, stronger lane definition and incremental widening of the road shoulder as the road and seawalls are upgraded or repaired.

Although these structures have affected coastal processes, the active beach, which is defined by Great Wellington as the area from the toe of the seawall or the edge of the road out to the limit of wave breaking, appears to be relatively unmodified and with high natural character.

Biotic attributes

On the inland side of the road, the land on the lower hill slopes is zoned residential in one form or another for the length of the project site. While the upper slopes and ridgelines have a mixed beech and broadleaf forest cover, the lower slopes have a

[6] Boffa Miskell. Coastal Natural Character Assessment. May 2016.

more diverse mix of native and exotic vegetation, both planted and self-sown. In addition there are a number of cut batters adjacent to the road, naturally revegetating with a mix of taupata, flax, pohutukawa, pine, gorse and agapanthus.

The Coastal Natural Character Assessment notes:

> *'Much of the foreshore and gentler sloping toe slopes have been modified by urban development including roading and housing and consequently this has removed much of the former native forest which occupied the harbour edge, including areas of kahikatea swamp forest in Lowry Bay which were drained following the 1855 Wairarapa earthquake.'*[7]

There is little evidence of natural coastal or rocky shore vegetation along the seaward side of the road. Vascular vegetation is generally absent from existing concrete seawalls, rock riprap, and exposed rocky substrate and much of the shoreline in the intertidal zone within the project area contains seawalls that currently do not support a high diversity or density of biota.

There are individual plants of taupata and other colonising coastal vegetation on some of the large rock outcrops and on the headlands, and seagrass in the low intertidal zone at Whiorau/Lowry Bay. While native sand binders such as pīngao and spinifex are present in Whiorau/Lowry Bay, these are most likely to have been planted rather than be naturally occurring. Most of the larger trees and shrubs along the coastal edge have been planted, and used for their amenity rather than ecological values. The pohutukawa for example have been nursery grown as single trunk trees rather the naturally occurring multi-trunked spreading trees.

Despite the lack of vegetation on the coastal edge, the continuous sweep of native forest cover along the Eastbourne hills combined with the richness and density of the vegetation surrounding areas of residential development create a perception of natural character along Marine Drive. This is reinforced by the planting of specimen pohutukawa at the headlands - trees that are non-local species, with a non-natural form and in modified locations but that are strongly suggestive of a coastal landscape.

Summary biotic and abiotic attributes

At a local scale, the road and residential development have disrupted the natural ecological sequences, patterns and interconnected processes that would have extended across the coastal environment from the top of the escarpment out to the bottom of the adjacent sea. In this respect both abiotic and biotic natural character attributes have been compromised for the length of Marine Drive along the project site.

4.2 Experiential natural character values

The project is located within a landscape context where the wider landscape expresses the underlying geomorphic processes although at a local scale the progressive

[7] Boffa Miskell. Coastal Natural Character Assessment. May 2016.

widening of the road into the coastal edge has masked the upper extent of the intertidal zone. The coastal edge landform has been progressively modified over time to allow for road widening, particularly at many headlands where there are steep cuts into the rocky hillside on the inland edge of the road and excavation into the rock outcrops on the seaward side of the road to create building platforms and layby areas. However the landscape above the residential areas is largely unchanged and has a high level of naturalness.

There is little evidence of a natural sequence of coastal or rocky shore vegetation along the coastal edge. While there are individual plants of colonising coastal vegetation on some of the large rock outcrops and on the headlands, much of the vegetation along the seaward side of the road by pumping stations and bus shelters has been planted for its amenity rather than its ecological values.

At a local scale, the perceived natural character of Marine Drive and the narrow fringe of land between the road and the water varies depending on where it is viewed from. In views from the road and residential development east of the footpath, the seawall structures have a low visual prominence. While in reality the road corridor has become wider and increasingly formalised over the last 50 years, the coastal edge appears informal and picturesque, complementing the relatively undeveloped, uneven structure of the inland edge of the road and sitting precariously close to the edge of the carriageway.

While in reality the road corridor has become wider and increasingly formalised over the last 50 years, the coastal edge appears low key and picturesque. This is due in part to its location precariously close to the edge of the carriageway, the piecemeal construction and the relatively undeveloped, informal structure of the inland edge of the road.

Viewed from the footpath, beach and water, the existing road edge is distinctly makeshift: seawalls have created '*untidy and abrupt juxtapositions'*[8]; there are numerous pipes and drains protruding into the water; and there are any number of rough and ready repairs along the coastal edge using materials that are inappropriate in the coastal landscape.
However the experiential character is derived from the contrast and or balance between the natural beach, rocky foreshore and rock outcrop elements and the modified coastal edge with seawall structures, ramps and steps.

In summary the coherence of the landscape derives from the wider setting including the enclosing, vegetated hillslopes, the sequence of bay and headland, the rocky outcrops and the harbour waters and the the natural processes of the beach environment including the changing sea, light and weather conditions. These values are heightened by the proximity of the sea edge to the road. Drama comes not from the landform but from the interaction of the road and the water, particularly at high tide and in heavy seas.
Also the site 'borrows' natural character due in part to its location between the industrial Seaview landscape and suburban Eastbourne and the consequent contrast in perceived natural character values. Overall, and in spite of the highly modified coastal

[8] *3.1 Seawall*. Eastern Bays Design Guide Booklet

edge, the Eastern Bays project site's natural character (experiential) values are considered to be Moderate.

The Coastal Natural Character Assessment notes the overall natural character rating of the Eastern Bays coastal terrestrial area as Moderate.

5.0 THE PROPOSED WORKS

5.1 Scope of works

It is proposed to construct a new shared path for pedestrians and cyclists along 4.2km of the coastal edge of Marine Drive, extending from Point Howard to Muritai Road, Eastbourne. Reallocation of existing road space on the inland side of the road corridor or narrowing the road corridor itself is not considered a viable option. Consequently the construction of a shared path will require widening the existing road shoulder/sealed edge along the coastal side of the road by extending onto the beach and rocky foreshore platforms, although the ecological sensitivity of the coastal edge constrains path expansion in a number of places.

5.2 Design and Construction Methodology

5.2.1 *Design Process*

The Design Plans (Stantec 2018xx) for the proposed shared path and seawalls were determined using multi-criteria analysis (MCA) following three workshops by a panel of specialists across a range of disciplines. Scores were differentiated between beach and non-beach areas, and the group's combined scores were weighted based on the discipline.

Based on landscape and visual criteria, this design was preferred to all of the other path width and seawall options due to the following:

- Retention of existing landform sequence of bay and headland;
- Retention of local bay character including features such as trees and rock outcrops;
- Use of revetments only where necessary for coastal resilience, and at headlands rather than within the bays;
- A consistent path width where possible to reduce the visual impact of path changes;
- A limited range of construction materials and wall types; and
- Physical and visual access to the beach maintained.

The preferred wall types were taken to the community for consultation and resulted in the final design plans. The overall selection process is described in the Stantec *Eastern Bays Shared Path Alternatives Assessment* report (April 2018).

5.2.2 *Final Design*

The proposed design has been developed bay by bay on a site specific basis, responding to a range of issues including but not limited to the structural condition of

the existing walls, the width of the existing road reserve, coastal processes, the effects of encroachment on ecological, recreational amenity, landscape values and community feedback.

In addition, the proposed design and seawall elements provide for climate change and resilience by adding 2.5 - 3.5m to the road corridor as well as replacing seawalls with more resilient structures. The proposal is not a long-term solution but meets the dynamic adaptive planning principles of "*buying some time*" as well as potential for incremental upgrades as SLR and extreme event impacts and their changing frequency require.[9] Cross-sections based on the Preliminary Design showing SLR of 0.5m (2070) and 1.0m (2120) have been developed and are included in the Coastal Processes Report.

Works include a continuous sealed shared path between 2.5 and 3.5m wide, new concrete curved seawalls (**CSW**) similar to the existing seawall at the south end of York Bay, revetments and a range of steps and ramps to access the foreshore. More detailed plans and design treatments will be developed for individual bays to acknowledge local requirements. This will be addressed in a Landscape and Urban Design Plan (**LUDP**), a suggested condition of this consent.

The proposed works are described in the following Stantec documents:

- *Eastern Bays Shared Path Concept - DBC*.
  DWG 80509137-01-001-C220 to 242, Rev J (08-18); and
- *Eastern Bays Shared Path Design Features Report Final. September 2018.*

5.3 **Design Principles**: the following general design principles have been taken into account for the project. They have informed the design to date and will be used to guide the later stages of detailed design. The principles are based on the Eastern Bays Marine Drive Design Guide[10] but have been expanded to deal with the effects of climate change.

These design principles are:

- Achieve compatibility along the bays by consistency in the location and design of elements, use of materials.
- Consideration of the whole environment into an integrated solution.
- Minimise encroachment into the coastal zone, and into beach areas in particular.
- All work must be an improvement on what is existing.
- Change seawall type if necessary at a promontory, rock outcrop or other major feature within the bay, or in locations where a ramp or set of steps provides a logical/neat transition point between wall types.

[9] NIWA. Coastal Physical Processes report (s5.9-5.11).

[10] *Eastern Bays Marine Drive Design Guide.* Graeme McIndoe and Hutt City Council 1998 & 2009 update.

- Recognise the individual character of each bay by reinforcing and strengthening those valued patterns that establish the unique identity of the bay.
- Locate all elements carefully to avoid visual clutter and maintain a focus on the seashore and natural environment.
- Design the seawall to be multi-functional.
- Design the seawall to be easily adaptable to accommodate sea level rise.

5.4 Shared Path

The shared path is continuous and in two sections. It extends from Point Howard to the south end of Sunshine Bay, and from the south end of Days Bay around Windy Point to the intersection of Marine Drive and Muritai Road. Days Bay itself lies outside the scope of this project. The shared path transitions back into existing sealed road shoulder or path at the end of each section.

Minor changes have been made to existing paths at Point Howard in the vicinity of the wharf entry and carpark, and through Whiorau Reserve to create more cohesive linkages to the proposed shared path.

While the overall width of the path varies between 2.5 and 3.5m, the surface and edge treatment is consistent for the length of the Eastern Bays Shared Path. The path is asphalt and is defined by a concrete kerb block on the inland (road) side of the path and by a 300mm wide flush concrete trim on the coastal edge of the path. This replicates the existing section of coastal path at the south end of York Bay, built in 2009. Additional traffic services that may be required such as safety barriers, road markings and signage will form part of the detailed design stage.

Around the Eastern Bays (excluding Days Bay) there will be 2,887m of 3.5m wide shared path, including the existing pathway at the south end of York Bay, 955m of 2.5m wide shared path including a 195m section linking the end of Seaview across the Pt Howard wharf entry to the Pt Howard beach, plus 245m of shared path running through Whiorau Reserve using an existing path with localised widening to create a consistent 3.0m width. An additional 170m of path will transition between 2.5 and 3.5m.

In short, over 65% of the route will have a 3.5m wide shared path and the remainder of the route has a narrower path adjoining beaches and headlands where landform and site layout would be compromised by a wider path.

5.5 Seawalls

Two seawall types are proposed: a revetment structure and a concrete seawall with a single, double or triple curve profile, depending on the height difference between the shared path and the beach/rock platform. For most of the Eastern Bays Shared Path route, the proposed works will replace existing seawalls, albeit it with larger scale structures.

Based on the EOS mapping of existing walls[11], the only new sections of seawall to be constructed on 'unmodified' coastal edge occur along Lowry Bay beach, Sunshine Bay beach and at the south end of Mahina Bay, some 280-300m of seawall and revetment in total. In total, and allowing for the toe of new revetments wrapping out and around rock platforms, the proposal will result in an additional 350m of new seawall along the Eastern Bays shared path route.

5.5.1 **Revetment**: the revetment structure consists of top double layer of large rock riprap (the primary armour) overlaid onto smaller rocks. The final size rock specification for primary armour will be refined during detailed design. Stantec plans[12] are based on conservative estimates for wave protection and use a 0.7m diameter rock for primary armour. In the finalised designs, revetments in less exposed locations may use smaller diameter rock and consequently be slightly smaller structures with reduced encroachment. The native Eastern Bays brown rock is greywacke and is not suitable for revetment construction. The revetment rock therefore will be imported grey rock, similar to the rock used in the Lowry Bay gabions, and Sunshine Bay and Whiorau Bay revetments.

Rock at the top of the revetment will sit up to 300mm above the path with the top of the revetment level for 2.1m before it slopes down to the water. The revetment gradient generally is 1V:2H, however there will be minor undulations in the revetment surface that reflect the underlying rocky foreshore landform.

There are 430m of revetment proposed along the Eastern Bays shared path including localised areas where the revetment structure transitions to steps or the concrete seawall. Four of the five revetments replace existing revetment/riprap structures; the only new revetment is located at the south end of Mahina Bay, over a rock platform that extends across the Mahina/Sunshine Bay headland. Generally the revetments are located at the end of a bay and adjoining the headland. The exception occurs at Sunshine Bay, where the structure sits beside the Sunshine beach and overlays an existing, recently upgraded revetment. In all 14% the seawalls are revetment.

Location of revetment	**Length of (m)**	**Wall type**
Point Howard North – extension of existing revetment /rock armour	63	Replace/extend existing revetment.
North end of York Bay with links with Whiorau Reserve revetment	78	Replace failed revetment/extend existing revetment into the CMA.
Mahina Bay north	110	Replace/extend existing revetment.
Mahina Bay south	42	Revetment over rocky foreshore.
Sunshine Bay	110	Replace/extend existing revetment.
Total (approximate)	**403**	
Total including transition zones	**430**	

Figure 14: Revetment locations and lengths

5.5.2 **Concrete seawall**: the proposed concrete curved wall (**CSW**) will replicate the existing 300m section of curved sea wall at the south end of York Bay. The wall has a flat top that forms the base of the shared path, and a single, double or triple curved face that

[11] *Existing Seawall Type. M*apped by EOS Ecology May-June 2017, Aerial imagery – LINZ
[12] *Eastern Bays Shared Path Concept - DBC*. DWG 80509137-01-001-C220 to 242, Rev F v2

acts as a giant step, with a 900mm tread and an 800mm riser. The height of the proposed CSW reflects the change in level between the road and the foreshore. In Lowry Bay, where the beach effectively is at grade with the road, the CSW will be a single curve, allowing sand to build up within the curve of the wall and softening/reducing the change in level from the shared path down to the beach. There will be sections of triple curve wall at the northern end of Lowry Bay, York Bay and at Windy Point in areas where there is a considerable drop from the road edge to the foreshore. Otherwise all other CSW will be double curve walls of the same scale and dimensions as the existing CSW at the south end of York Bay.

Location	**Length of wall** (approx m)	**Wall type**
Lowry Bay	190	Single curve
Across all bays	2130	Double Curve*
Lowry Bay York Bay Windy Point	330	Triple curve*
Total CSW (approximate)	**2,324**	
100m of wall in northern Lowry Bay could be double or triple curve. They have been counted as triple curve in this table.		

Figure 15: CSW locations and lengths

Eco-mitigation will be incorporated into the concrete surfaces of the seawalls, to provide opportunities to establish biota habitat on areas that are intermittently wetted. This includes a shallow irregular texture on the surface of the lower curve, and 'rock pool' indentations on the flat step. Details of these features are to be provided in the LUDP (a suggested condition of the consent), with input from the design ecologist, engineer, landscape architect and urban designer.

5.5.3 Transitions between wall types

Specialised designs for transition zones between existing and proposed seawalls or between seawall types will be further developed during the detailed design phase.

5.6 Access to the beach and foreshore: in general, steps and ramps for foot traffic and boat/kayak access have been located close to or in the same location as existing steps and ramps, with at least two forms of access to each beach, and additional steps at headlands where the existing landform allows informal access down to the foreshore. Steps and ramps are designed to minimise additional encroachment and integrate with the new seawalls. The proposed structures and a number of variations are fully described in the Stantec *Design Features Report*: *3.2 Beach Access.*

5.7 Beach nourishment: Beach nourishment is a strategy to mitigate loss of beach area available for beach amenity by nourishing the beaches with imported beach-compatible fill, with a secondary benefit of improved coastal protection. Nourishment is proposed for the Point Howard, Lowry Bay and York Bay beaches with a combination of re-use of native beach material removed during foundation construction and new material. The aim for the nourishment is to recreate a beach that looks the same as the beach lost by the construction of the shared path. The beach will be the same width, and as far as practicable will consist of material that matches existing beach sand and gravels in colour and texture. Depending on construction methodology, the

beach profile may be steeper and narrower than the existing beach to allow natural water movement to spread material over time. No allowance has been made for additional material to further widen or enhance the beach.

5.8 **Other design features:** the design approach to stormwater and piped stream outlets that discharge through the seawalls, bus shelters, planting, street lighting, signage and street furniture is described in the Stantec *Design Features Report*. All these features and elements will be designed taking account of the design principles outlined in this report at 5.3.

5.9 **Vegetation:** no significant indigenous vegetation will be removed. A pohutukawa tree (locally known as the Atkinson Tree) in York Bay at CH2495 will be removed to avoid extending the path into the beach area. The tree is in poor health and is unlikely to survive relocation. A pohutukawa in Mahina Bay at CH3040 located between the proposed path and the road will require pruning that may avert its removal. Otherwise the shared path has been sited or has been narrowed at localized pinch points to avoid a number of pohutukawa planted along the coastal edge.

6.0 ASSESSMENT METHODOLOGY

Field work for an earlier shared path proposal was undertaken in April 2016. Photographs from the harbour looking towards the Eastern Bays were taken at low tide, in the early afternoon and on a clear sunny day, when the sun was at a high angle and the shadow lines on existing CSW structures were most pronounced.
Field work for this proposal was undertaken in July and August 2017.

The preliminary designs for the proposed shared path and seawalls were determined using multi-criteria analysis following three workshops by specialists across a range of disciplines. The preferred designs, shown in plans and in visual simulations, were taken to the community and refined during the consultation process. A similar process was followed to determine the design principles and detailing for a range of features across the proposed Eastern Bays Shared Path site.

For this landscape and visual assessment, the visual assessment considered effects on local residents, drivers on Marine Drive, pedestrians and cyclists on Marine Drive, beach users, and people with views from the water on boats, ferries, and kayaks.

Criteria for effects on visual amenity included:

- Visual impact of the structure with a preference for views of natural foreshore rather than built structure;
- Changes to views of /closeness to (versus separation from) the water's edge;
- Visual dominance of structure with regard to dominant versus recessive colour, and geometric/manmade versus organic form; and
- Visual consistency with a preference for elements and structures that are consistent with or similar to existing elements and structures.

The assessment of effects on natural character focussed on experiential attributes including:

- Legibility (geomorphology);
- Legibility (way-finding and orientation);
- Visibility (public and private views);
- Picturesqueness;
- Coherence (heavily influenced by visual perception); and
- Other experiential attributes such as sounds and smell of the sea; and their context or setting.

7.0 LANDSCAPE AND VISUAL ASSESSMENT

The New Zealand Institute of Landscape Architects (NZILA) best practise recommends using a robust and consistent rating scale for assessing the magnitude and importance of conditions, change or effects, such as the following seven point scale:

Very Low	Low	Moderate - Low	Moderate	Moderate - High	High	Very High

This scale has been used for the Eastern Bays landscape and visual assessment, with '*Moderate-Low'* considered being equivalent to '*minor'* effects in RMA terminology.

Effects can be positive, have no discernible change or be adverse. They can be assessed at difference scales with different levels of significance. For this proposal, effects at the local (bay) scale may differ from effects at the wider Eastern Bays / Eastbourne scale.

Magnitude of Effect	**Description/ use**
Very Low	Very slight or barely distinguishable/discernible change to key elements/ features/ characteristics of the landscape baseline or views, i.e. effectively a 'no change' situation.
Low	Slight changes to elements or patterns without changing coherence of overall landscape and/or the viewing context.
Moderate - Low	Minor change to elements, key attributes and/or patterns lessens coherence of landscape but sense of place remains. Low level of effect on the perceived amenity.
Moderate	Alteration to one key feature or pattern, or small changes to a number of key elements and/or the visual context within which it is seen changes landscape coherence and identity with a moderate effect on the perceived amenity derived from it.
Moderate – High	Alteration to several key features or attributes and/or the visual context within which it is seen; has an obvious change to overall landscape coherence and/or effect on the perceived amenity.
High	Considerable change to the characteristics or key attributes of the receiving environment and/or proposal significantly affects perceived amenity of the visual context and sense of place.
Very High	Fundamental loss or alteration to the key features or attributes of the wider landscape and /or visual context amounting to a major change to landscape character.

Figure 16: Description of significance of landscape and visual effects.

7.1 BIOPHYSICAL (LANDSCAPE) EFFECTS

Biophysical effects relate to changes to landform, vegetation cover and waterways. For this project the assessment is focussed largely on changes to landform and the encroachment of the proposed seawall onto the foreshore, given that there is little vegetation to be disturbed and all natural waterways have been channelled under the road to the sea.

The shared path is aligned with the road, which in turn responds to the bay landform. The path width is reduced at localised pinch points to avoid damage to rock outcrops, built structures and trees and minimise coastal encroachment. At the same time, construction of the shared path along the coastal edge requires replacing and extending existing seawalls to provide structures that are resilient to storm surges and future sea level rise.

The outcome is that existing revetments that occur in the more exposed coastal areas near the headlands have been replaced by larger revetment structures but that in most other areas, the shared path is supported by a curved concrete wall to minimise loss of beach and rocky foreshore landform.

Encroachment into the rocky foreshore is greater where there are revetments including: Point Howard 8m; Lowry Bay 5.6m; Mahina Bay 4.2 and 1.7m; and Sunshine Bay 6.1m.

Encroachment over the beach varies from bay to bay including: Point Howard 1.0m; Sorrento Bay 1.0m; North Lowry Bay 0.8m; South Lowry Bay 1.5m; York Bay 0.5m; Mahina Bay 0.9m; and Sunshine Bay 1.5m. Beaches at Point Howard, Lowry Bay and York Bay will be ‘reinstated’ with beach nourishment.

At a local scale, adverse effects in Point Howard north of the beach are considered Moderate, mitigated in part by the proximity of the revetment and path to the Point Howard wharf entry and carparks, and its location over an existing rock structure. In Sunshine Bay, the proposed revetment sits within the bay rather than near the headland. While it does replace an existing structure, the new, larger revetment has no relationship to the landform scale and context. Effects are localised but considered Moderate.

It is proposed to replace beaches at Point Howard, Lowry Bay and York Bay with like for like, using nourishment with local material of a similar colour and texture. Effects at a local scale are Moderate – Low and adverse.

Considered over the length of the Eastern Bays, there is a small loss of local landform and the overall adverse biophysical effects are Low.

7.2 EFFECTS ON NATURAL CHARACTER

Overview

Appendix 12.2 of this report evaluates the landscape attributes of the shared path elements and *Appendix 12.3* of this report contains a detailed assessment of effects of the proposal on the Eastern Bays and the project site experiential coastal natural character. The assessment is summarised in 7.2.1 – 7.2.6 below.

7.2.1 Effects on Legibility (geomorphology)

At a local scale, relatively consistent use of the curved seawall within each bay and along the beaches provides a clear delineation between the modified road and the unmodified coastal edge that highlights the 'naturalness' of the beach and rocky foreshore against the more vertical, engineered wall and its curved 's' profile. In contrast the revetments around the headlands mask the underlying rocky foreshore and reduce legibility.

There is some loss of local landform due to encroachment. However the variable path width responds to the local landscape and mitigates the impact of the shared path on the legibility of the wider bay landform. Adverse effects on natural character are Low. Effects in bays with beach nourishment have the potential to be greater and are Moderate - Low if replacement material is not sourced locally and Hutt River grey sands and gravels are used.

7.2.2 Effects on Legibility (way-finding and orientation - memorability)

The impact of the proposed shared path and seawalls on the memorability of the Eastern Bays is Very Low, given the natural character attributes of the wider landscape including the strongly defined landform, the dramatic views and the changing light and movement of the water. Effects on natural character have the potential to be Very Low but at a local scale will be influenced by the detailed design in the LUDP and its response to the individual character of local landscape and land use patterns.

7.2.3 Effects on Visibility (public and private views)

Views for residents, drivers, pedestrians and cyclists focus on the shared path, which is visible but not high impact when seen within the wider landscape setting. Features /elements such as stormwater outlets, planting, street lighting, signage and path markings have the potential to introduce more high impact visual clutter into the coastal edge. The detail design of both the shared path and seawall structures will be considered in the LUDP.

Views from the beach and views across the bay focus on the seawalls. The contrast between the linear profile and smooth texture of the CSW and the blockier engineered revetment emphasizes the juxtaposition between these structures and increases their visibility. Nevertheless the seawalls will weather and darken over time which will decrease their visual dominance.

Overall the adverse effects on natural character range from Moderate – Low to Very Low. Effects will be mitigated by natural weathering and have the potential to decrease to Very Low with sensitive site specific detailing.

7.2.4 Effects on Picturesqueness

Although there is a localised reduction in scenic values with the uniformity that the shared path and seawall imposes on the road and coastal edge, this is balanced by the removal of existing unsightly structures and infrastructure along the project site and the replacement of an eroding road with a structurally stable edge and the consistent use of a family of details along the length of Marine Drive.

The wider experiential attributes of the sounds and smell of the sea, the harbour outlook and the contrasts between the open sky and enclosing landform are unchanged. At the very local scale, the CSW in particular alters water movement at the base of the wall and creates unique patterns of sound and wave actions for people using the shared path. While dissimilar to the existing patterns of water experienced along sections of Marine Drive, they are potentially no more unnatural than water hitting the solid angled surface of a concrete and rock wall, as opposed to the natural patterns created when waves dissipate through and over rock outcrops and revetments.

The shared path along Marine Drive currently is unusable during extreme stormy weather at high tides. The different wave and sound action that comes from the CSW structure provides increased amenity by enabling use of the shared path in extreme weather events. In other words, a very low decrease in natural character is balanced by increased amenity for pedestrians and cyclists.

Over the length of the project site, the adverse effect on the scenic character of the Eastern bays is considered Low. At a local scale effects have the potential to be Very Low with detailed design that reflects the unique identity and the ecology of each bay.

7.2.5 Effects on Coherence

The proposal has little impact on the attributes that gives the Eastern Bays its natural character apart from the small increase in separation between the road and the water, and a more visible structuring and consistency along the coastal edge.

Equally it may be argued that the proposal increases the natural character of the coastline by creating a clear demarcation between road edge and active beach, which heightens the contrast between the *modified* road landscape and the *natural* coast. Effects on the coherence of the wider Eastern Bays landscape are Negligible.

7.2.6 Experiential attributes

The foreshore is dynamic by nature and changes with tides, weather and water movement patterns.

As described in the Coastal Physical Processes AEE, '*most of the Eastern Bays shoreline is protected by engineered structures in the form of concrete seawalls and rock revetments. These structures have encroached onto the upper beach, and have disrupted the natural sediment transport regime within each bay, particularly during storm events. Over time, the effect of the seawalls (compared to the natural undeveloped state) on beach sediments has been to lower the elevation of the beach*

(a common beach response with seawall placement), reduce the proportion of fines within the beach material (due to increased wave reflections that winnow out any fine sediment) and subtly change the overall plan shape of the beach altered hydrodynamics and sediment processes.'[13]

The proposed seawall replacements are expected to reduce the overtopping hazard during minor to moderate storm events. In all other respects, the shared path will provide access to the beach and foreshore without diminishing the dynamic nature of the coast and the coastal experience. Adverse effects are Negligible or Very Low positive.

7.2.7 Effects on overall experiential natural character

While it is an important component of the Eastern Bays landscape, the narrow fringe of land between the road and the water has a low visual prominence. The overall coherence of the landscape derives from the wider setting including the enclosing, vegetated hillslopes, the sequence of bay and headland, the rocky outcrops and the harbour waters and the the natural processes of the beach environment including the changing sea, light and weather conditions.

The existing ad hoc seawall structures are familiar but unattractive. The visual impact of a consistent coastal edge, even a high impact 'unnatural' edge such as that formed by the curved concrete wall, will reduce over time, becoming less eye-catching as both path and seawalls weather into established/familiar features.

Overall adverse effects of the proposal on natural character are considered to be Low for the wider Eastern Bays coastal landscape. At a local 'bay' scale, the effects of the proposed shared path and seawall on overall experiential natural character attributes will depend largely on the ability of the design to respond to the local landform and land use patterns, the material used for beach nourishment and the final eco-mitigation textures within the CSW. Further design detailing will be undertaken according to the design principles described in the Design Features Report and in consultation with each bay community in the Landscape and Urban Design Plan (LUDP) with potential for additional mitigation and beneficial effects.

7.3 EFFECTS ON VISUAL AMENITY

Visual effects arise from changes to specific views that modify people's visual amenity. Views of a proposal or increased visual impacts are not necessarily negative and a change in view may not have adverse effects.

7.3.1 Visibility of the project site

The project site along the coastal edge of Marine Drive has an almost continuous edge of road shoulder, footpath and seawall structures to support the edge of the road seal.

Shared Path

[13] *NIWA.* Coastal Physical Processes. Section 4.2

The current footpath varies from non-existent or unwalkable to 2.5m wide. It is eroding in the vicinity of the beach in most bays. The proposed shared path will be a 2.5 - 3.5m wide asphalt surface, protected from the carriage way by a series of kerb blocks. The seaward side of the path is edged with a 300mm concrete trim flush with the seal. The CSWs sit below the shared path but the revetment (410m) where the seawall extends 0.3m above the path.

Visible changes in the proposed path include:

- A wider path than currently exists but varying from 2.5-3m wide. This creates a wider overall road corridor;
- The pathway is visibly delineated with a contrasting lighter trim along both the road and the coastal edge;
- The path narrows at localised pinch points. The change in width of the path is visible but the impact of the change is mitigated by the transition in path width occurring over a distance of 20m, or by the location of the transition occurring either side of a beach or features such as trees, boat sheds, bus stops and rock outcrops; and
- The path is extended at Point Howard and at Windy Point to link into an existing coastal path, and runs through Whiorau Reserve to avoid the very tight road corridor on the Lowry Bay/York Bay headland. In the case of Point Howard, an indicative link from the Point Howard shared path and seawall to the Seaview shared path is shown on the plans but the path location has yet to be confirmed.

Seawall structures

Existing seawall structures are made of a range of materials including rock revetment, gabions, rock walls with a mix of natural and imported rock, concrete walls with studded with stones, curved and angled concrete walls, and shotcrete. The materials and the age and condition of the seawall determine its visual impact. Old, eroding structures have rough surfaces that are more recessive than the newer York Bay CSW.

As acknowledged in the Eastern Bays Marine Drive Design Guide, the current diversity of different seawalls is a major visual problem. '*The inappropriately unsophisticated and apparently makeshift detailing, and poor construction finishing is a feature of most but not all new seawalls. These features combine to cause visual chaos, and draw attention to the walls.'*[14]

The visible changes in the proposed seawalls include:

- Removal of old seawalls and associated structures/infrastructure and replacement with a restricted palette of seawall forms and materials;
- Extended use of seawalls along Marine Drive with only the tips of the rocky promontories/headlands at Lowry Bay/York Bay (by the pumping station), York Bay/Mahina Bay, Mahina Bay/Sunshine Bay and the southern end of Windy Point seemingly unmodified;
- Seawall construction responds to the bay landform and orientation, with revetments either side of headlands and in exposed locations, and curved

[14] Eastern Bays Marine Drive Design Guide s3.1.

concrete walls alongside beaches. In all, concrete curved walls make up 86% of all seawall structures, and the remaining 14% of seawalls are revetments;

- Visual prominence of new seawalls. Refer to *Appendix 12.2 Attributes of shared path and seawall structures* of this report.
  - The CSW has the potential to have heightened visibility, due to the light/bright tones of the concrete and the dense, smooth texture. The visual impact of the walls will be mitigated over time by weathering and the proposed eco-mitigation on both horizontal and vertical wall surfaces. The CSW in York Bay constructed in 2009 has weathered and the concrete surface has acquired a darker and less uniform colour. In addition, the proposed eco-mitigation will accelerate weathering on the lower half of the CSW, with the irregular texturing and rock pools 'greening' areas of the concrete and creating a more visually recessive finish.
  - The revetment uses rock that not only is a different colour to local rock but also is lighter and more reflective.
  - While 4 of the 5 proposed revetment structures overlay existing rock/riprap/concrete structures that have naturalised over decades, the proposed uniform rock form and size will increase the seawall visual prominence.
  - The resilience and longevity of revetment rock slows the weathering process.

Beach access
The proposed steps and ramps are at grade with the shared path and have the same visibility as existing beach access structures.

Beach
Beach nourishment will be used at Point Howard, Lowry Bay and York Bay. While there may be short term change in the shape of the beach post-construction, it is anticipated that the material will disperse and reform the original beach footprint and gradient. Visible changes will be very low or negligible, providing that the material used is locally sourced and replicates the existing beach material in terms of its colour, texture and size.

7.3.2 Views for local residents

Existing
Residential development runs along the inland edge of Marine Drive, with houses orientated to exploit harbour views. Most houses are elevated above the road, or screened from the road behind walls or vegetation on the front boundary.
However there are a number of properties where the house is located close to Marine Drive, including properties at 403, 409 and 455 Marine Drive in Mahina Bay, 502 Marine Drive in Sunshine Bay, 1 and 6 Wilmore Way in Lowry Bay and the 4 storey block of apartments at 4 Gill Road in Lowry Bay.

In general, residents from these locations overlook the road to focus on the wider panoramic views over the water. The existing seawall structures opposite the house are below the road and out of sight. The footpath is clearly visible but reads as part of the road, effectively a foreground to the larger coastal landscape. The seawalls are

visible in more distant views across the bay due to the curvature of the bay, where they are backdropped by the Eastbourne hills and headland ridgelines. From these viewing distances of 200-300m the concrete walls and the revetments form only a small part of the wider views, and are perceived as a narrow line between the road and coast.

Proposed
The proposed shared path and seawalls will have increased visibility due to:

- the widening of the path, which in turn increases the scale of the road corridor; and
- vertical elements such as kerb blocks and the raised edge of the revetment, which interrupt the horizontal line of the coastal edge.

At a broad scale within the wider landscape context, the visual effects of the proposal are Very Low. Residents have expansive views out to the harbour and the hills beyond. The shared path is a small element of that view.

Within each bay and at a local scale, the level of effects on the visual amenity for individual residents will be determined by the finer grained detailed design such as the shared path signage and path markings that have potential to create additional visual clutter along the coastal edge. Providing the design principles outlined at 5.2 are adhered to, potential effects on residential visual amenity are considered to be Low.

7.3.3 Views from Marine Drive for drivers

Existing
As Marine Drive winds around the bays, drivers have views across the water to the small headlands and adjacent bays. The bays vary in size; measured between headlands, Point Howard to Sorrento Bay is 440m wide, Lowry Bay is 570m wide, York Bay is 520m wide, Mahina Bay is 440m wide, Sunshine Bay is 520m wide and Windy Point is just under 300m wide.

Drivers therefore can perceive the differences between seawall structures within each bay, but not in more distant views between headlands or to the bay ahead. For example, drivers in Point Howard have views to the south to Lowry Bay but the seawalls are not visible, and if it they could be seen, would be dominated by the built development along the coastline.

Figure 17: Panoramic view from Point Howard south to Lowry Bay

Closer views from the road focus on the road corridor and the sea. The seawall structures are screened below the road in immediate views. They are intermittently visible on the road ahead and 100-150m in the distance due to the curvature of the bay, but form a small part of the overall view.

Proposed

While the proposal does not create a single width shared path for the length of Marine Drive from Point Howard to Windy Bay, visual consistency is achieved through the use of a uniform design language for the path elements and detailing of wall transitions, steps and ramps. Where there are variations along the coastal edge, such as the raised edge of the revetments, they occur in response to the bay landform, the orientation of the coastal edge and its proximity to the headland. The visual impact of the proposal for drivers therefore arises from the widened road corridor and increased separation from the foreshore and water's edge. Effects on visual amenity are Very Low.

7.3.4 Views from Marine Drive for pedestrians and cyclists

Existing

Distant views for pedestrians and cyclists on the footpath are similar views for drivers, although pedestrians are able to focus more on the views over the water and across and around the harbour. The path is very close to the road, defined only road markings (with the odd exception of small sections of armco barrier) and 1m road marker posts. The footpath width varies and there are numerous abrupt changes where the edge has frittered away.

Figure 18: Lowry Bay

Figure 19: Mahina Bay

Figure 20: Point Howard

In short, people using the path are exposed to cars on the inland side of the path, and the sea on the coastal side of the path. The coastal edge is visible in views from the footpath, and the full range of structures and the accompanying rough and ready repairs, pipes and drains are seen at close quarters. In addition the path skirts ramps and steps, and power and lighting poles. (*Refer Appendix 12.1 of this report for a complete description of seawall structures and other built development along Marine Drive*.)

Proposed
The shared path will look different and provide a different user experience with local nuance and character replaced by a wider, more formal path and coastal edge. The vertical CSW will be visible although the widened path encourages users to keep away from the edge of the wall to avoid the drop down to the beach and foreshore. The revetment has a greater visual impact due to its horizontal form and spread. In both situations, the structures and associated ramps and steps create a more uniform built edge than the existing seawalls but will continue to provide variety with different patterns of light and shade depending on time of day, the weather and the season.

At a local scale, the significance of visual effects will be determined by the integration of features such as shared path signage and path markings, stormwater and piped stream outlets, bus shelters and street furniture into the shared path and coastal edge. Providing these features are located carefully to avoid visual clutter and maintain views down to the water's edge, adverse visual effects have the potential to be Low and in some locations where unsightly seawalls and infrastructure are removed, effects have the potential to be positive.

7.3.5 Views from the beach

Existing
Existing seawalls are most visible in views from the beach, where the walls are viewed in elevation. The top of the wall where it intersects with the road edge is particularly prominent as it marks the line of moving vehicles. However beach goers usually have their backs turned to the road and are more focussed on the water, with views of the foreshore and the harbour beyond.

Proposed
The CSW is used at all beaches. The visual impact of the seawall will be very high in views from the beach, particularly because of its reflectivity, geometric lines and the 'dashed' line of kerb blocks visible along the edge of the road. The replacement steps and ramps also will be prominent because they run at right angles to the coastal edge with the bulk of the structure more visible from the beach.

The visual impact will decrease over time as the bio-mitigation textures reduce the reflectivity of the lower curve and the concrete weathers along the upper curve(s). Although it creates a more formal, urban edge, the CSW over time will become the new norm. At the same time there are beneficial effects on visual amenity arising from the removal of the existing clutter of structures and infrastructure, and their replacement with a cohesive and integrated coastal edge.

Local residents will observe the loss of some beach areas, although the major sit and swim beaches at Point Howard, Lowry Bay and York Bay will be replaced. Visual effects will be determined by the material used for beach nourishment.

7.3.6 Views from the water

Existing

Travellers on the EastWest ferry have views to the Eastern Bays and Marine Drive, although the ferry runs from Matiu Somes Island to Days Bay, passing Sunshine Bay 400m from the southern end of the project site. Closer to shore, the coastline is seen by swimmers, boaties and kayakers.

In both instances, the views back to land are dominated by the dark green vegetated hillside backdrop, and the harbour water foreground. The most visible element in the overall view is the visual clutter/interest and lighter colour of built development directly above the road. The second most visible element is the moving traffic. Given the proximity of Marine Drive to the coast, the road and seawalls down near the water line 'read' as a narrow horizontal band, broken at intervals by rock outcrops. The sandy beach areas are also visible, especially at low tide when the irregular low edge is contrasted against the waterline. Visibility is dependent on the angle of the sun, the time of day, weather and atmospheric conditions - in optimum viewing conditions this line is visible for up to 400m from the coastal edge.

Proposed

Views from the EastWest ferry will be relatively unchanged. The CSW over 500m away will be perceptible as a narrow band of grey below the edge of the road. The new and extended revetments will more visible, particularly at low tide. However the visual impact of the structure will reduce over time as tidal immersion and the build-up of detritus and seaweed weathers the lower edges of the seawall. This is illustrated in Figure 19, where the revetment is no more prominent than Lowry Bay beach itself, even when viewed from 250m from shore.

Figure 21: Taken 250m from Lowry Bay beach. The Whiorau Bay revetment is behind the boats to the right of the photograph.

In closer views from the water, the visual impact of the proposed changes is low. At a distance of 140m from the shore, the CSW has a lighter, more reflective tone than the older seawalls and the horizontal lines of the CSW are clearly visible but they still

constitute only a small part of the overall viewing context and are always viewed against the built development on and immediately above Marine Drive.

Figure 22: Taken 140m from York Bay beach

The proposed seawalls or at least the materials of the seawalls are familiar elements in the wider harbour landscape and around the Eastern Bays. The visual impact of the new structures will decrease over time as the seawalls age and weather.

7.3.7 Summary of effects on visual amenity

Effects on visual amenity are experienced by the following people:

Residents

While the widened shared path will increase the scale of the road corridor, it is a small part of the wider landscape and does not affect the panoramic views the residents have to the west over the harbour. At a broad scale and given the wider landscape context, the visual effects of the proposal are Very Low. At a local scale and providing the design principles outlined at 5.2 are adhered to in the more fine grained detailed design, potential effects on residential visual amenity are considered to be Low.

Drivers

The immediate experience of driving along the edge of the harbour is diminished by the widened road corridor and increased separation from the water's edge, with the kerb blocks creating a low but not insignificant barrier. While the proposal changes the immediate character of Marine Drive, the Eastern Bays hills, the visual complexity of the bay and headland coastline and the wider harbour landscape continue to dominate views from the car. Effects on visual amenity for Eastern Bay drivers are Very Low.

Pedestrians and cyclists

The shared path will look different and provide a different user experience by changing the scale of the road corridor and creating a more formal coastal edge. Use of

consistent pathway elements and a limited palette of seawall materials reduce visual clutter. Effects on visual amenity across the wider Eastern Bays route are generally considered to be positive.

At a local scale, adverse visual effects have the potential to be Low and in some locations where unsightly seawalls and infrastructure are removed, effects have the potential to be positive.

Beach users

Although it creates a more formal, urban edge, the CSW over time will become the new norm. At the same time there are beneficial effects on visual amenity arising from the removal of the existing clutter of structures and infrastructure, and their replacement with a cohesive and integrated coastal edge.

Providing beach nourishment is undertaken using locally sourced material, visual effects are Moderate - Low but decrease over time to Very Low.

Views from the water

The proposed seawalls or at least the materials of the seawalls are familiar elements in the wider harbour landscape and around the Eastern Bays. The visual impact of the new structures will decrease over time as the seawalls age and weather. Given the expected viewing distances, effects on visual amenity are Very Low.

Overall

While it is an important component of the Eastern Bays landscape, the narrow fringe of land between the road and the water has a low visual prominence. The existing collection of road shoulder, paths and structures along Marine Drive will be replaced by the shared path, concrete curved wall and revetments. The shared path will look different and provide a different user experience by changing the scale of the road corridor and creating a more consistent and formal coastal edge, but overall the adverse effects on visual amenity are considered to be Low to Very Low.

Effects at a local scale and on a bay by bay basis will be determined by the detailed design. Providing that features such as the shared path signage and path markings, stormwater and piped stream outlets, bus shelters and street furniture are designed and located carefully to avoid visual clutter and maintain views, effects on visual amenity have the potential to be adverse Very Low or may even be considered beneficial.

7.4 CONSTRUCTION EFFECTS

Construction will change the existing Eastern Bays' streetscape and coastal edge through the demolition of existing seawall structures and excavation within the coastal marine area.

Machinery largely will be based on and will operate from the road verge. Works will be staged on a bay by bay basis with the up to 20m lengths of seawall under replacement at any one time.

During construction of each 20m section of seawall, views towards the coastal edge from the street will be screened by machinery, although residents in elevated locations will retain their distant views to the hills across the harbour. Views from the foreshore and water towards the road edge will also be obscured by machinery and construction works.

On this basis, the visual impact of construction will be localised and temporary, with each bay expected to take 3-6 months to complete. Adverse effects are short term and considered to be Very Low.

8.0 ADDITIONAL MITIGATION MEASURES

8.1 Overview

A suggested condition of this consent is that a Landscape and Urban Design Plan (LUDP) be developed through detailed design in consultation with HCC, the Eastbourne Community Board, local resident organisations and the Eastern Bays community. This is supported by the landscape and visual assessment. Within each bay and at a local scale, final effects on natural character and visual amenity will be determined by finer grained detailed design.

8.2 Potential mitigation

Recommendations are made from a landscape perspective and without reference to NZTA and Hutt City requirements for road design.

8.21 Material for beach nourishment should sourced locally to match existing beach material colour, grain size (sand) and texture (gravel).

8.22 Allow natural rock outcrops to maintain their integrity when they meet the road edge. The detailing on new sections of CSW along York Bay has extended the pathway surface onto the adjacent rock landform. The end result is unsightly and unnatural.


Figure 23: localised detailing

This should be avoided either by:

i) Continuing the 300mm trim along edge of footpath across the rock outcrop interface; or

ii) Stopping the wall either side of the rock outcrop and allowing the rock to extend into the pathway by an additional 300mm past the edge trim.

8.23 Avoid the use of plant beds along on the coastal edge, particularly beds with kerbs or stone edges. This is an exposed, marine environment and amenity horticulture degrades the existing natural character.

8.24 Any relocation of power and light poles to the inland side of the road would be supported.

9.0 ANALYSIS AGAINST STATUTORY PROVISIONS

9.1 New Zealand Coastal Policy Statement 2010

A full analysis of the proposal is undertaken in Appendix 12.4 of this report.

9.11 *Policy 13 Preservation of natural character*

The effects on natural character are caused by the proposed changes to the coastal edge along the road corridor, beaches and foreshore. At the wider Eastern Bays scale, effects are Very Low, particularly as the narrow fringe of land between the road and the water has a low visual prominence. At a local bay and beach scale there will be a loss of local landform, both natural and modified. Adverse effects are more pronounced and are considered to be Low, but with potential for additional mitigation through the detailed design to be delivered in the LUDP.

9.12 *Policy 14 Restoration of natural character*

While the overall path width and seawall locations respond to the Eastern Bays landform, the functional requirements of the project constrain opportunities for landscape and visual rehabilitation or restoration of natural character. Rehabilitation and restoration is focussed on improving visual and physical links between the road/path and the water, detailing the coastal interface of the seawall structures to facilitate eco mitigation and restoration of local landscape character through detailed design in the LUDP.

9.13 *Policy 15 Natural features and natural landscapes*

There are no outstanding natural features and outstanding natural landscapes in this coastal environment. Adverse effects of the project on natural features and natural landscapes in the Eastern Bays coastal environment occur within a narrow band of development along the coastal edge. Effects are mitigated through a seawall design that responds to the bay landform and minimises loss of beach and rocky foreshore landform, and are Low. It is proposed to replace beaches at Point Howard, Lowry Bay and York Bay with like for like, using nourishment with local material of a similar colour and texture. Local effects on these natural features are Moderate – Low and adverse.

9.14 Conclusion

The proposal is consistent with Policies 13, 14 and 15 of the NZCPS. Overall experiential effects on natural character are Very Low. Within the constraints of designing structures that are resilient to storm surges and future sea level rise, the

shared path and seawall layout responds to the bay and headland landform. Effects are mitigated through the use of consistent path and seawall detailing to reduce the visual impact of new structures and the use of a landscape and urban design management plan to provide a detailed design that responds to local landscape, history and land use.

9.2 Greater Wellington's Proposed Natural Resources Plan

The PNRP has relevant objectives in sections 3.4 *Natural character, form and function and 3.13 Coastal Management,* with a focus on natural character and visual amenity. Refer **Appendix 12.5** of this report for full analysis of the proposal with regard to the PNRP Objectives and Policies.

9.21 Policy P25

The proposed shared path provides safe, all weather pedestrian and cyclist access around the Eastern Bays. At the same time it creates wider benefits by maintaining the integrity of the Marine Drive road for residents and visitors, and access to East Harbour Regional Park. Within the wider Eastern Bays landscape, the particular elements, features and experiential values that contribute significantly to the natural character value of the area remain unchanged. At a local scale, the proposal will modify the existing landform, encroaching up to 9m onto the foreshore. While this is not insignificant, the consequent impact on experiential natural character is less pronounced, due largely to the presence of the road and its existing modifications to the coastal edge.

9.22 Policy P134

The proposal has no impact on visual linkages to the Eastern Hills. The proposal has an insignificant impact on visual linkages to the harbour. While there is encroachment into beaches and into Lowry Bay Beach in particular, access to the coast is improved by the provision of a consistent shared path along Marine Drive and the maintenance of step and ramp access to the beach and foreshore.

9.23 The proposed shared path and seawall design is considered to be an appropriate response to the requirement to maintain the functioning of Marine Drive and is consistent with the PNRP Objectives and Policies.

9.3 **Greater Wellington's Regional Policy Statement (RPS)**

The RPS relevant policies focus on preserving the natural character of the coastal environment and managing effects on natural character. Refer **Appendix 12.6** of this report for an analysis of the proposal with regard to the RPS Objectives and Policies.

9.31 As detailed in Appendices 12.3, 12.4 and 12.5 of this report, the adverse effects of the project on natural features and natural landscapes in the Eastern Bays coastal environment occur within a narrow band of development along the coastal edge. Effects will be managed through the path design and mitigated through the use of consistent path and seawall detailing to reduce the visual impact of new structures and the LUDP to provide a detailed design that responds to local landscape, history and land use.

10 CONCLUSIONS

10.1 The most important landscape issue is the potential effect on natural character of the coastal environment. Overall the adverse effects on (experiential) natural character of the proposal are considered to be Low for the wider Eastern Bays coastal landscape. Effects are mitigated through the use of consistent path and seawall detailing to reduce visual impact of new structures.

10.2 The proposed Eastern Bays shared path and seawall structure is an appropriate development in this location for the following reasons:

- The existing coastal edge has been modified by the road and historic seawall structures that have disrupted natural ecological processes.

- Within the wider Eastern Bays landscape, the particular elements, features and experiential values that contribute significantly to the experiential natural character value of the area remain unchanged.

- Works are confined to narrow fringe of land between the road and the water. While it is an important component of the Eastern Bays landscape, this coastal edge has a low visual prominence.

- The shared path and seawall will look different and provide a different user experience with local nuance and character replaced by a wider, more formal path and coastal edge. The proposed LUDP is seen as the primary mitigation measure for the potential loss of local landscape character and identity.

11 REFERENCES

- Boffa Miskell for the Great Harbour Way Coalition. *The Great Harbour Way - Te Aranui o Poneke Issues and Opportunities Analysis.* November 2009

- Boffa Miskell for Greater Wellington Regional Council. April 2012. *Hutt Landscape Study 2012. Landscape Character Description*.

- Boffa Miskell for Greater Wellington Regional Council and Hutt City Council. *Wellington City and Hutt City Coastal Natural Character Assessment*. May 2016.

- Boffa Miskell for Hutt City Council. Landscape Evaluation Draft Technical Assessment. December 2016.

- *Census QuickStats* 2013

- Cochran & Murray, Michael Kelly and Andy Dodd. 31 October 2014.| *Coastal Historic Heritage of the Wellington Region*

- Graeme McIndoe and Hutt City Council 1998. *Eastern Bays Marine Drive Design Guide.*

- GW Regional Council. *GW Regional Coastal Plan Appendix 4: Features and Buildings of Historic Merit;*

- Survey for the Coastal Plan Review Hutt City2016-2026. D*raft Reserves Strategic Directions.*

12 APPENDICES

12.1 SITE DESCRIPTION BY BAY

12.1.1 Point Howard and Sorrento Bay

Point Howard and Sorrento Bay is a long, gently curved S shaped bay with a narrow rocky beach enclosed by bush clad hills, and with very little flat land either side of the road. Marine Drive runs around the base of the hills, cutting into the landform in a number of places where small spurs run down to the coast. There is moderate built development at road level including public toilets, residential garages, bus shelters and gravelled layby/carpark areas. Otherwise all houses sit up on the hillside, on small spurs and knolls, and embedded in a framework of native and exotic vegetation.

Vegetation on the hillslopes dominates the immediate road environment and even the cut faces beside the road have a well-established green cover (apart from a large exposed batter on Howard Road).

Marine Drive
The inland side of the road extends almost to the base of the hill with no shoulder or footpath. On the seaward side the edge of the carriageway road is well defined with edge marker posts and a small section of armco barrier on a tight corner.

Beyond the marker posts is a shared path that runs the length of the bay and is at grade with the carriageway. The path varies in width but is a comfortable width for single file walkers and cyclists.

Street lights are sited along the inland side of the road.

Coastal edge beyond road
The bay sits between two well defined headlands: at the northern end the road cuts through a small spur, leaving a remnant rock outcrop on the headland that screens the carpark and entry to the Point Howard wharf. As well as self-sown vegetation on the top of the outcrop, the base has been more formally planted out with pohutukawa trees in beds of coastal shrubs and grasses. The south headland is a flat, gravelled layby with a seat, rubbish bin and remnant drainage outlets, softened by several specimen pohutukawa.

Between the headlands a rocky shoreline extends with a small sandy beach in the middle of the bay.

The seawall structures include:

- revetment consisting of rock outcrops with loosely covered with imported riprap material;
- concrete wall with studded with stones, directly interfacing the eroding asphalt road/path edge;
- recent rock wall with a 300mm concrete edge to road;
- old rock wall with a mix of natural and imported rock

- 300mm wide concrete edge to footpath at top of wall, curved wall with the beginnings of a ledge 1-1.2m protruding from the base of the wall.
- sloping and subtly curved concrete wall and apron, crudely finished so that the lower edge changes in height and varies with rocks on beach
- concrete wall randomly studded with rock and with a variable slope
- almost vertical rock wall with a semi-flush face and no concrete edge to road

Other built development includes:

- narrow steps down to beach
- small ramp to beach
- bus shelter
- seat outside bus shelter
- remnant of bus stop/shelter base
- drainage outlets, pipes, manholes

Vegetation
Aside from the headlands, there is minimal rocky shore vegetation on the coastal edge including a single self-sown taupata where a rock outcrop meets the road and seaweeds on the rocks below the high-tide mark.

Access to the beach
It is possible but difficult to jump directly from the path onto the beach.
Point Howard: There is a low angled seawall with steps to a sandy, shallow beach.
Sorrento Bay: steps down to beach but no accessible beach at high tide.

Overall

- Settled but hillslopes and road edge are well vegetated and have high natural values
- Steep hill slopes extend to the coastal edge
- Inland edge of road varies in width and composition creating an informal edge
- Modified and structured coastal edge, seawalls visible in places
- Beaches set down below road
- Rock outcrops at the road edge and off shore

12.1.2 Lowry Bay

Prior to 1855 Lowry Bay was a huge swamp, the remains of a former tidal lagoon. The earthquake lifted Lowry Bay 2m. As a consequence Lowry Bay has a large area of flat land between the East Harbour hills and the coast and Marine Drive now runs along the former shingle bar. Lowry Bay was one of the earliest settled bays with residential development extending across the flats, up to the lower hill slopes and out to Marine Drive.

Today Lowry Bay is a wide, curved bay, somewhat distorted by the reclamation at the southern end, now Whiorau Reserve. There is limited building on the hills, with houses generally fitted into the landform on the lower slopes and with low impact design and

finishes. The mid and upper slopes of the East Harbour hills remain undeveloped, and enclose the bay, providing a strong, green vegetated backdrop particularly when viewed from the water.

Properties along the beach front have been progressively subdivided, built over and screened from the road. While there are street trees on the side streets, increased site coverage has resulted in a loss of vegetation within properties fronting onto Marine Drive. The combination of large houses, medium density development and substantial walls and the 4 storey block of apartments (4 Gill Road) at the south end of the bay create a very urban Marine Drive streetscape.

Marine Drive
On the inland side of the road, a footpath runs from Wilmore Way at the north end of the bay to Gill Road to the south. The footpath is 1m at its widest, and sits directly against the residential boundary, sandwiched between wall and fence structures and the kerb.

The shared path along the coastal edge has been partially washed away. It currently extends from the Sorrento/Lowry Bay headland to the Skerrett boatshed at grade with road and about 1.2m wide, and resumes south of Cheviot Road, eroded to 0.5-1m wide, widening to 1m at Gill Road then progressively increasing along the stretch of Marine Drive between Gill Road and Whiorau Reserve.

Overall there is pedestrian access for the length of the bay but it is not continuous. The variable width, particularly on the inland edge, provides an uncomfortable walking experience. The intermittent nature of the path on the coastal edge makes it impractical and unsafe for cyclists.

Street lighting varies: there are street lights on seaward side of road around the Sorrento/Lowry headland and then from Cheviot Road to Whiorau Reserve, otherwise lights are located along the inland residential edge.

Coastal edge beyond the road
Lowry Bay is contained to the north by the cluster of pohutukawa on the Sorrento/Lowry headland, with rock outcrops extending around the headland and into the bay. The larger outcrops are colonised by low vegetation and shags.

The southern end of the bay is less defined as the Whiorau Reserve reclamation, bunds and vegetation have distorted the natural form of the bay and the headland. From a landform and visual perspective, Whiorau Reserve denotes the end of Lowry Bay and the beginning of the headland. The steep cut batters on the inland side of the road and the planted bunds on the coastal reserve side of the road create distinct separation between Lowry Bay and York Bay.

Lowry Bay has several small, pebbly beaches at low tide, and an extended sandy beach in the middle of the bay, between Cheviot Road and Taumaru Avenue. The beach comes up to the edge of the road and walkway.
The seawall structures include:

- 300mm concrete edge and sloping concrete wall/apron, patched with shotcrete
- 300mm concrete edge, curved wall and ledge, of varying ages and dimensions
- old stone wall, steep and with high proportion of stone to concrete
- angled concrete wall with grouting/patching, very rough and crude, eroding at base where it merges into beach and a crust of concrete flush with asphalt road surface
- stone gabions
- revetment of imported rock riprap at Whiorau Reserve

Other built development includes:

- 2 boat sheds, one being the heritage Skerrett Boatshed, opposite 219 Marine Drive, and accompanying boat ramps
- 5 sets of steps in a range of materials including concrete, timber and stone
- concrete ramp
- bus shelter plus a substantial deck with seating, timber paling fence and bollards at the road edge
- infrastructure in the form of pipes, drainage structures

Vegetation

Aside from the headlands, and Whiorau Reserve which is atypical of the bay landscape, there is little visible vegetation on the coastal edge. There are a few plants of pingau and taupata at the interface of the beach and the road, and seaweed species growing in and below the seawall.

Access to the beach

There are two beaches in Lowry Bay including one north of the bus stop and another to the south.

North beach: minimal high tide beach, area more gravel than sand.

South beach: consistent area of sandy beach at high tide. There is direct access to beach from the road (although no footpath on road as it has been eroded away) from the bus shelter opposite Cheviot Road to Taumaru Road) beach sloping down to sand.

Overall

- bay enclosed by vegetated hills
- residential development on floor of the bay and extends onto lower hill slopes
- dense development along Marine Drive creates an almost urban streetscape along inland edge of road
- modified coastal edge, visible seawall structures and beach landscape complete with boardwalk, decking and boat sheds
- beach at road level, gently sloping surface

12.1.3 York Bay

York Bay is a classic curved bay, enclosed by steep hills at the headlands but more gentle slopes within the bay that provide access to the valley floor and screen the bulk of the settlement from the road.
The landform allows for intermittent residential development along Marine Drive, including some houses at road level and others sited in smaller gullies above the road.

The inland edge of the bay is well vegetated, including beech and pine on the upper slopes, bush cover on the mid slopes and native and exotic amenity planting around the houses. The bush cover is sparser towards the southern end of bay on the more exposed slopes above the headland. Development is low impact; there is an occasional low fence or retaining wall at the residential boundary but otherwise the most prominent feature is the cluster houses and the large bus shelter at the Taungata Road intersection.

Marine Drive
There is a shared path on coastal edge of Marine Drive but no footpath on the inland side of the road. The path is about 1.2m m wide at the north end of the bay, narrowing in the middle of the bay south of Tangata Road and opposite the bus shelter, then gradually widening back to a more generous 3m width where new CSW begins opposite 320 Marine Drive.

Street lights are located on coastal edge at the headlands, and on the inland side of the road for most of the length of the bay.

Coastal edge beyond road
York Bay is contained to the north by a pumping station on the headland, with the building set back from the road, backed by a remnant rock outcrop and framed by several specimen pohutukawa each 5-6m high. Immediately south of the pumping station is a gravelled layby with 2 specimen pohutukawa and a planting of coastal grasses.

The headland to the south has also been excavated to form the road. All that remains is a large rock outcrop 6-7m high. In front of the outcrop is an extended road shoulder with a bus shelter and an area of taupata, flax and coastal grass plantings.

York Bay has a small beach by the pumping station and another two beaches in the centre of the bay, narrow and only just above the foreshore. Both beaches collect driftwood and detritus. Otherwise the coastline is typical of the Eastern Bays with rock outcrops either side of the headlands. These are more prominent at the south end of the bay below the new CSW, particularly where they intersect with wall structure as this provides a site for colonising vegetation such as taupata.

The seawall structures include:

- Remnant revetment adjacent to new Whiorau Reserve revetment
- Concrete trim and seawall with curved apron of varying depth
- Concrete wall sparsely studded with stone, angled down to beach
- Shotcreted wall up to edge of road
- Curved concrete seawall (CSW) as per proposed detail

Other built development includes:

- Stone steps to beach
- Steps including set with a galvanised pipe handrail
- Concrete ramp
- Rubbish bins
- Bus shelter
- Kerb blocks

Vegetation
Apart from the headlands, the only vegetation along the York Bay coast is the 'Atkinson' pohutukawa growing in the beach in the middle of the bay.

Access to the beach
There are three beaches at York Bay
North of Whiorau Reserve is an area with a narrow stony beach at high tide. It has a low concrete wall with driftwood and detritus washing up against wall, almost to road level close to the pumping station.
North of the bus stop is a stoney shoreline with no beach at high tide.
South of the bus stop is a 60m section of narrow high tide beach.
There is a low angled seawall with steps and ramp to main beach. It is possible to jump onto beach from the footpath but difficult.

Overall

- Established residential development set into a matrix of vegetation
- Steep hillslopes at the headlands, easing to gentle slopes in the middle of the bay
- Informal edge to inland side of the road, with vegetation screening views of built development
- Modified coastal edge, wide range of visible seawall structures
- Low drop from road to moderately sloping beach

12.1.4 Mahina Bay

Mahina Bay is a small, gently curved bay where the hills come down to the water, leaving only a narrow rim of flat land along the coastal edge. Houses are built along the coastal edge with some built right up to and on the front boundary and others set into a matrix of bush, just above the road. All other residential development has been limited by the steepness of the slopes and lack of access and is concentrated in the valley accessed by Mahina Road. This is a well-established settlement with built edge of larger houses along the road, interspersed with established native and exotic vegetation and backdropped by the bush clad hillside.

Marine Drive
Marine Drive is sealed up to the residential boundary where there a mix of road shoulder, driveway access, bus stop and parking bays but no formal footpath. The

inland edge of the road is managed, with a mix of amenity plantings, hedges, fences, walls on the residential boundary as well as sections of kerb and channel. The road has clearly been widened in places with a low rock batter or retaining structures such as crib walls at the edge of the road. All street lights are on the inland side of road.
A shared path runs the length of the bay along the seaward side of the road. It varies in width, with sections that have eroded and been repaired. The path is very narrow where runs inside a length of armco barrier immediately south of Mahina Road and where there are power poles located in the middle of the path. There is a short section of path at the north end of the bay separated from the carriageway by kerb and channel.

Coastal edge beyond road

The northern headland between York and Mahina Bays has a large rock outcrop beyond the road, and a flat platform, part gravelled and part sealed with a bus shelter, bus stopping bay and a layby on it. There is a plant bed to one side of the bus shelter but otherwise little vegetation apart from low shrubs and herbaceous plants colonising the remnant rock outcrop.

The south headland between Sunshine and Mahina Bays is minimal, a small gravelled area, low rocks below road level and a single pohutukawa tree.

Within the bay are two smaller layby areas, each big enough for a car or a boat and trailer and planted with pohutukawa. Otherwise the coastal edge consists of the usual small sandy beach in the middle of the bay, and narrow gravel/pebble beaches above rocky outcrops towards each headland. The beach is accessible from the path.

The seawall structures include:

- Revetment of loose riprap wall with sections of concrete ‘glue’ on top at the road edge
- curved concrete wall with apron
- angled shallow concrete wall to beach (which is also angled)
- concrete wall studded with stones
- concrete shotcrete wall

Other built development includes:

- Bus shelter
- Concrete steps
- Concrete ramp
- White plastic pipes coming out of the seawall into the water
- Small area paved with gobi block and used to park boat trailer
- Power poles, which sit directly in on the foreshore

Vegetation

Vegetation is limited to the 3 pohutukawa planted in the layby areas, all of which have been severely pruned to allow for the overhead lines, and the planted bed in the northern headland

Access to the beach
Mahina Bay has a small area of stony beach, with localised areas exposed at high tide. There is a low angled seawall with steps and ramp to beach. It is possible to jump onto the foreshore from the footpath but would be difficult. There is direct access onto the little beach at the north end of the bay beside the headland.

Overall

- Slightly convoluted bay at coastline
- Intermittent clusters of houses along the inland side of the road, interspersed with vegetation
- Houses backdropped by steep, vegetated landform
- Modified coastal edge, limited range of seawall structures
- Rock outcrops at the road edge and off shore
- Gently sloping beach, just below road

12.1.5 Sunshine Bay

Sunshine Bay is shallow bay, angled rather than curved, with a narrow beach at the base of a steep coastal escarpment. The landscape is wilder than the other bays, more exposed and with distinctly coastal vegetation.

The bay is sparsely populated with few houses tucked into the base of the landform, concentrated at the north and south ends of the bay. Development is more prominent at the south end of the bay with a cluster of buildings around the Sunshine Service Station along Marine Drive and houses on Ferry Road in Days Bay visible along the top of the escarpment.

Marine Drive
Marine Drive is sealed to the residential boundary apart from a few gravelled parking bays. There is a strong residential character to the edge of the road, with garages, driveways, low retaining walls and a mix of amenity planting interspersed with pohutukawa and native coastal revegetation.

The only path runs along the coastal edge. The path width varies from 0.5 to 2m, generally being wider towards the headlands and narrower in the middle of the bay where the seal has eroded and the beach runs up to almost the edge of the road. Towards the north end of the bay the edge has been retained and possibly built up to form a small layby with 2 pohutukawa, scarcely big enough for a single car to park.

Street lights are located on the inland side of the road, and power poles on the coastal edge or even on the beach.

Coastal edge beyond road
The northern headland between Sunshine and Mahina Bays is minimal, a small gravelled area, low rocks below road level and a single pohutukawa tree.

The southern headland is larger. It has a pumping station on it, well set back from the road and surrounded by planting and a timber fence. The rock outcrops and landform extend further to the south heading into Days Bay (and just out of sight of Sunshine Bay) where there is a cluster of houses on the seaward edge of Marine Drive.

The seawall structures with a number of different profiles stitched together including:

- Curved concrete wall with ledge – old and big rocky shore
- Angled concrete wall
- Revetment of imported rock riprap
- Vertical concrete wall

Other built development includes:

- Bus shelter
- New timber steps down to beach
- Power poles

Vegetation

As well as the two specimen pohutukawa at the north end of the bay, there are clusters of low adventive plants such as taupata established just below the edge of the road. It is likely that this vegetation regularly washes away in large storm events but re-establishes once a suitable organic base has built up along the coastal edge.

Access to the beach

The beach is narrow, wild and exposed, mainly gravelly pebble with a fringe of driftwood and larger rocks. A small fringe of beach is exposed at high tide. At the north end of the beach, the edge of the path is retained by a 150-200mm timber edge. This is replaced by a low concrete wall, eroded in places and reinforced with loose riprap, and demolition concrete along the edge of the beach. A step of timber steps has been recently built but it is also possible to pick a route through the riprap down to the beach.

Overall

- A more wild, exposed landscape
- A more random settlement pattern, appears less developed
- Road contained between coastal escarpment and coastline
- A visibly eroding road edge
- Long stretches of rock outcrop along coastline
- A moderately sloping beach just below the road

12.1.6 Windy Point

Windy Point or at least the Windy Point section of the shared path connects Days Bay to Eastbourne village. It includes Windy Point, Russo Point and the bay that lies between them. The landform is very steep and there is very little flat land between the

toe of the hill and the road, so that only a single row of houses lines the road. The bay is shallow and with minimal enclosure from the headlands, is exposed to the prevailing northwester. Consequently there is a strong contrast between the urban built streetscape with managed garden vegetation to soften and screen views from the street, the wild, coastal hill backdrop and the exposed coastal edge.

Marine Drive
The road is narrow, confined between the hillside and coastal edge. A sealed footpath, complete with kerb and channel runs along the residential boundary for the length of Windy Point. Lighting and power poles are located on the inland side of the road. Due to the topography, houses have been sited close to the road with many built on or near the front boundary.

Coastal edge beyond road
There is a formal parking bay just south of Russo Point and informal pull off/parking areas for 2-3 vehicles at each headland. Elsewhere the road shoulder varies from 0.5-1.5m.
The seawall structures include:

- Steeply angled/ vertical concrete wall with a small apron/ledge at the base

Other built development includes:

- Concrete steps down to rocky beach
- Timber bollards

Vegetation
Council planting around the parking area on the corner of Muritai Road and Marine Drive extends to Russo Point. Otherwise vegetation is sparse, mainly individual taupata bushes that have established between the road seal and the seawall.

Access to the beach
There is no beach as such, with only small areas of gravel and rock exposed at low tide, and water to the seawall at high tide. Access to the rocky beach is via steep concrete steps in the middle of the bay.

Overall

- Includes Windy Point, Russo Point and the shallow bay that lies between them
- Multi-storey residential development forms a built edge to road
- Urban character reinforced by kerb and footpath on inland side of road
- Steep drop between road and foreshore at southern end of bay
- Stretches of rock outcrop along coastline
- Large drop from road down to rock outcrops.

12.1.7 Overall defining characteristics

Considered as a whole, the project site has a number of consistent and defining characteristics although Lowry Bay can be considered as atypical in terms of its urban character of it streetscape, particularly along the inland side of the road.

Inland from the road

- Proximity of the Eastbourne hills;
- Established residential development, set in a matrix of vegetation and located low on the landform;
- Dense forest backdrop; and
- Informal interface with road edge.

The road - Marine Drive

- Well defined road with a consistent width carriageway, painted pavement markings and marker posts along the coastal edge;
- Road follows a sequence of bays and headlands;
- Pedestrian access runs along the coastal side of road, with a variable width shared path (between 0.3m to 3m);
- Proximity of the road to the water's edge;
- Views out over the harbour and western skyline; and
- Views to the north to Pt Howard wharf and Korokoro and to south towards Baring Head while travelling along Marine Drive.

The coastal edge

- Headlands are exposed to the north and more sheltered to the south, with sand and gravel accreting to form small beaches on the south side of the headland;
- Within each bay there is a narrow beach, rocky foreshore and rock outcrops extending out into the harbour;
- Moderately steep beaches;
- Modified but informal coastal edge where the road forms the edge to the beach. The edge includes a wide range of seawall and retaining structures, designs and materials;
- Few sites within the bays have at grade, direct access from the road/shared path edge to the water. Most access between the road and the active beach is via ramps and steps.
- Minimal coastal vegetation apart from specimen pohutukawa[15] planted in small layby areas and a few opportunistic, colonising plants that establish above the hightide line between major storm events;
- Lack of built development within the bay apart from bus shelters and the 2 boatsheds in Lowry Bay; and
- Visible infrastructure in the form of exposed pipes and drainage structures, both current and defunct.

12.2 ATTRIBUTES OF SHARED PATH & SEAWALL STRUCTURES

Shared path elements	Biophysical attributes	Visual attributes	Natural character attributes
Variable 2.5-3.5m width			
Positive attributes	Variability of path width provides	Path detailing in the form of the path surface, 300mm	Provides visible & legible route.

[15] Referred to as 'specimen' pohutukawa because trees have been grown as single trunk trees rather the naturally occurring multi-trunked spreading trees.

	opportunity to respond to landform and minimize encroachment	coastal edge trim and kerb separators along road edge provides consistent and cohesive edge to road, which reduces its visual impact within the wider Eastern Bay landscape.	Opportunities to respond to local landform and land use patterns. Variable width potentially provides a more picturesque journey for shared path user.
Negative attributes	Increased encroachment into CMA.	Increases scale of transport corridor. Increased distance (vertical difference) from foreshore and water's edge. Potential for higher impact route with more visual clutter depending on how detailing will deal with changes in path width in terms of signage and path markings.	Increased separation from coastal landscape and processes. Variable width path provides a less consistent and cohesive journey for shared path user.
Revetment			
Positive attributes	Generally located in association with rocky landform including existing revetment or rock structures and next to headlands. Provides opportunities for colonising plants along top of structure, although likely to be weed species rather than local endemic species.	Has a less monolithic surface than concrete with variable patterns of light and shade. Revetment can respond to underlying rocky foreshore landform with minor undulations across the surface. Revetment may be perceived as an extension of headland landform and rocky foreshore edge.	Riprap rock is perceived by much of the public as a more natural material than concrete, and revetment viewed as an extension of headland landform and rocky foreshore edge. Opportunities for colonising plants, even if only for short periods between major weather events. Beach/ foreshore can be accessed by scrambling across revetment.
Negative attributes	Imported rock material that is a different colour and texture from local rock. Composition of revetment is unnatural: the face of the revetment uses consistent size, large scale rocks rather than a more natural range of rock size.	Rock lighter and more reflective than local rock. It will take time to weather due to the hardness of the rock (a structural requirement). Revetment is a large scale structure that extends across and masks natural rocky foreshore. Revetment constructed with an engineered, geometric form, particularly the level top of the revetment where it meets the shared path.	Rock material is a foreign element. Physically separates path user from the natural foreshore, both horizontally and vertically (with raised riprap edge to path). Revetment structure extends across the foreshore and masks the coastal edge.
Curved sea wall (CSW)			

Positive attributes	Vertical structure minimises encroachment onto foreshore/beach.	Existing element in Eastern Bays landscape – provides visual continuity and reduces the visual impact of the structure. Strong shadow lines mitigate visual impact when viewed from the water. The proposed eco-mitigation measures such as the textures embedded into the surface of the seawalls will 'green' the face of the lower curve over time to make the structure more recessive.	Recognised/ familiar element in Eastern Bays landscape and provides continuity. Fluid form and in situ construction allows wall to follow the bay landform. The proposed eco-mitigation will texture the face of the lower curve and the horizontal 'step' to provide biota habitat, which in turn accelerates the weathering of the concrete and naturalises the material.
Negative attributes		Appears taller than older, existing walls due to the more vertical face of wall. Dense, bright, glaring surface of untextured concrete slow to weather over time.	Geometric/formal man-made structure cuts through natural edge of foreshore.

12.3 NATURAL CHARACTER ASSESSMENT

Extent of the Coastal Environment

The coastal environment is a dynamic system where the inland influence of coastal elements and processes on the environment gradually decreases with distance. It includes the coastal marine area plus the active coastal interface. In the Eastern Bays landscape, the zone where coastal processes are significant is the area within the Coastal Marine Area (CMA) that extends up to the ridgeline of the Eastbourne hills.

Coastal Natural Character

Although natural character is an important concept in the New Zealand Coastal Policy Statement (NZCPS), and Policy 13 in particular, neither the NZCPS nor the RMA for that matter define the term 'natural character'. Based on the DOC Policy 13 Guidance Note definition (refer Appendix 1) natural character is a measure of both:

i) ecological naturalness (indigenous nature); and

ii) landscape naturalness (perceptions of nature).

It is also generally accepted that an assessment of natural character:

- Requires the input of terrestrial, freshwater and marine ecologists and other natural scientists (e.g. geomorphologists), as well as the input of landscape architects and planners;
- Occurs on a continuum from highly modified to pristine;
- Is scale dependant (i.e. natural character can occur at a range of scales);
- Is context-dependent and can change over time.

Outstanding natural character combines both terrestrial and marine components so that important sequences of ecological naturalness across the coastal environment (such as from the top of the coastal escarpment ridge to the bottom of the adjacent sea and interconnected systems) are considered.

Preferred Methodology: Coastal Natural Character

Methodology for this assessment is based on current best practice, methodology developed by Boffa Miskell for use in the Marlborough Sounds.[16]

The three broad natural character attributes include:

- Abiotic (non-living)
- Biotic (living)
- Experiential (perceptual)

In this assessment, natural character is assessed on the following 7-point scale.

very low	low	moderate-low	mod	moderate-high	high	very high

[16] Natural Character of the Marlborough Coast: Defining and Mapping the Marlborough Coastal Environment. Boffa Miskell, DoC, Lucas Associates and Landscape Research for Marlborough District Council. June 2014

Existing Eastern Bays (Point Howard to Windy Point) experiential attributes		
Legibility (geomorphology)	The project site is located within a landscape context where the Eastbourne hills, ridgelines, the bays, headlands and rocky foreshore are clearly legible, as is the wider receiving environment of Wellington harbour. Landscape expresses the underlying geomorphic processes although the progressive widening of the road into the coastal edge has masked the upper extent of the intertidal zone. Wider Eastern Bays landscape Marine Drive landscape	 High Mod - Low
Legibility (way-finding and orientation)	The Point Howard to Windy Point landscape and its coastline in particular are memorable as part of the wider Eastern Bays landscape rather than necessarily being distinctive in their own right. However the project site 'borrows' natural character due in part to: • Location between the industrial Seaview landscape and suburban Eastbourne and the consequent perceived contrast in natural character values; • The Eastbourne hills backdrop; • Proximity to the coastline and the water's edge; and • Sequence of bays and headlands.	 High
Visibility (public and private views)	• Visibility of road edge and foreshore for residents although generally houses are built to exploit views over the road and towards the harbour. • Visibility of seawall structures for residents. • Visibility of footpath and road edge for views from the road. • Visibility of the existing seawall for views from the road. Walls lie below the road and have a lower visual prominence. They are visible in views across the bay and the visual impact of the structures increases where there is a break in the wall or a change in the structure. • Visibility from the existing coastal path • Visibility from the beach and shallows. • Visibility from the ferry or boats – impact lowered due to viewing distance and dominant backdrop.	High Low Moderate Very low-–low Very high Very high Very low
Picturesqueness	An attractive landscape, with high scenic values including the bush-clad hills, panoramic views, established residential development set in a matrix of vegetation. These values are heightened by the proximity of the sea edge to the road. Drama comes not from the landform but from the interaction of the road and the water, particularly at high tide and heavy seas.	High

	At a local scale and seen from the shared path or the beach, the existing road edge is distinctly makeshift: seawalls have created '*untidy and abrupt juxtapositions'*[17]; there are numerous pipes and drains protruding into the water; and there are any number of rough and ready repairs along the coastal edge using materials that are inappropriate in the local context.	Moderate to Moderate-Low
Coherence (heavily influenced by visual perception)	There is extensive vegetation cover on the inland side of the road, from the beech forest on the steeper hillslopes to the mixed broadleaf on the lower slopes and the early revegetation/scrub towards the top of the headlands. All bays apart from Lowry Bay have a well-established mix of native and exotic plantings within properties and along the road edge, including (and visually prominent) mature pohutukawa, due in part to the Hill Residential and Special Residential zoning that places a heavy emphasis on the retention of vegetation. However natural vegetation patterns are largely absent on the lower slopes and road edge. There is little evidence of natural coastal or rocky shore vegetation along the coastal edge, apart from small areas of recently planted pingao. While there are individual plants of taupata and other colonising coastal vegetation on some of the large rock outcrops and on the headlands, much of the vegetation along the seaward side of the road (by pumping stations, bus shelters etc) has been planted for amenity rather than ecological values. The coastal edge landform has been progressively modified over time to allow for road widening, particularly at the headlands where there are steep, rocky cut faces on the inland edge of the road and excavation into the rock outcrops on the seaward side of the road to create building platforms and layby areas. Headlands aside, the beach and foreshore landscapes interface directly with the structured road edge or with a seawall or riprap. The coherence is decreased when seen from the beach and foreshore where the extent of the road retention and seawall structures can be fully appreciated.	High Low Moderate to Low Moderate to Low
Experiential attributes, including the sounds and smell of the sea; and the context or setting	The dynamic nature of the coast in terms of semi-diurnal tidal changes, changes during and after storms and the changes of light and noise depending on the weather are experienced by road and path users (where there is a path). The sea is next to the road and at times lies over the road. For users of the existing path the sea can be	High

[17] *3.1 Seawall*. Eastern Bays Design Guide Booklet

	heard and seen and felt directly – not always a positive experience but one with very high natural values.	
Overall experiential natural character	While it is an important component of the Eastern Bays landscape, the narrow fringe of land between the road and the water has a low visual prominence. The overall coherence of the landscape derives from the wider setting including the enclosing, vegetated hillslopes, the sequence of bay and headland, the rocky outcrops and the harbour waters and the the natural processes of the beach environment including the changing sea, light and weather conditions.	Moderate

Effects of Proposal on Point Howard to Windy Point experiential attributes		
Attributes	**Assessment**	**Change in Effects**
Legibility (geomorphology)	The shared path follows the road and accentuates the bay landform and in particular the headlands that extend beyond the path and define individual bays. The variable path width responds to local landform, features and land use, which mitigates the impact of the shared path on the legibility of the wider bay landform. At a local scale, relatively consistent use of the CSW within each bay and along the beaches provides a clear delineation between the modified road and the unmodified coastal edge that highlights the 'naturalness' of the beach and rocky foreshore against the more vertical, engineered wall and its curved 's' profile. There is some loss of local landform due to encroachment. The revetments are large structures of imported rock that mask the underlying greywacke foreshore. In most locations the revetment extends existing revetment riprap cover, apart from in Mahina Bay where there is a new 42m section of revetment. Adverse effects in bays with beach nourishment have the potential to increase if replacement material is not sourced locally and Hutt River grey sands and gravels are used. Overall adverse effects on natural character are considered Low but could increase to Moderate-Low if beach nourishment is undertaken with imported material.	Low Adverse
Legibility (way-finding and orientation)	There is a loss of identity and character with the replacement of local paths and seawalls with a more homogeneous coastal edge. However the impact of the proposed shared path and wall on the memorability of the Eastern Bays has the potential to be Very Low, given the natural character attributes of the wider receiving landscape, the nuanced response to the width of the shared path and the opportunities for local variation/reinforcement of local identity in the form of access points from the path to the foreshore and in the future, bus shelters, street furniture and signage.	Potential to be Very Low adverse effects, with opportunity for the community to have input into detailing in the LUDP.
Visibility (public and private views)	Views for residents, drivers, pedestrians and cyclists focus on the shared path, which changes the scale of the road corridor, particularly where the wider 3.5m shared path is used. The shared path is defined by consistent detailing along the coastal edge (300mm flush concrete trim) and road edge (kerb separators). It is visible but not high impact when seen within the wider landscape and road corridor setting.	Potential for Low – Very Low adverse effects with sensitive design detailing.

	Features/elements such as stormwater outlets, planting, street lighting, signage and path markings have the potential to introduce more high impact visual clutter into the coastal edge. The detail design of both the shared path and seawall structures will be considered in the LUDP. Views from the beach and views across the bay focus on the seawalls. The contrast between the linear profile and smooth texture of the CSW and the blockier engineered revetment emphasizes the juxtaposition between these structures and increases their visibility. While the revetment rock is unlikely to weather or age as readily as natural rock, it has a visually recessive texture when seen in distant views. In contrast the CSW has a brighter, more reflective surface. On sunny days the wall will have strong shadow lines from mid-day to afternoon. However the visual impact of the wall, particularly the taller double and triple curve sections will be reduced by the incorpor`ation of eco-mitigation surface textures consistently applied along the lower curve and 'step' of the wall. Even the untextured upper curve will weather and darken over time so that the linear patterns of light and shade on the wall will become less prominent.	Moderate-Low adverse, decreasing to Very Low over time
Picturesqueness	Adverse effects are mitigated by the wider landscape context and the responsiveness of the design to the local landscape. The proposed path responds to the local landform and land use patterns and this can be reinforced with sensitive detailing on a bay by bay basis that responds to community identity and sense of place. Although there will be a localised reduction in scenic values with the uniformity that the shared path imposes on the road and coastal edge, this is balanced by the removal of existing unsightly structures and infrastructure along the project site and the replacement of an eroding road with a consistent structurally stable edge. Within each bay, the CSW changes water movement at the base of the wall, and creates unique patterns of sound and wave actions for people using the shared path. While dissimilar to the existing patterns of water experienced along sections of Marine Drive, they are potentially no more unnatural than water hitting the solid angled surface of a concrete and rock wall, as opposed to the natural patterns created when waves dissipate through and over rock outcrops and revetments. The shared path along Marine Drive currently is unusable during extreme stormy weather at high tides. The assessment notes that the different wave and sound action that comes from the CSW structure	Potential for Low adverse

	provides increased amenity by enabling use of the shared path in extreme weather events. In other words, a very low decrease in natural character is balanced by increased amenity for pedestrians and cyclists.	
Coherence	The CSW increases the natural character of the coastline by creating a clear demarcation between road edge and active beach, which heightens the contrast between the *modified* road landscape and the *natural* coast. In contrast the revetment blurs the distinction between beach and foreshore, and masks the coastal edge. Looking at the wider landscape context, the proposal has little impact on the attributes that gives the Eastern Bays its natural character apart from the increased distance between the edge of the road and the coastal edge.	Negligible or Very Low positive
Experiential attributes, including the sounds and smell of the sea; and the context or setting	The 2.5-3.5m wide shared path provides some separation between the coastal edge and the road, although the sea will still move onto the road in more extreme storm surges. In all other respects, the path provides access to the coastline without diminishing the dynamic nature of the coast and the coastal experience.	Negligible or Very Low positive
Overall experiential natural character	Broad scale While it is an important component of the Eastern Bays landscape, the narrow fringe of land between the road and the water has a low visual prominence. The overall coherence of the landscape derives from the wider setting including the enclosing, vegetated hillslopes, the sequence of bay and headland, the rocky outcrops and the harbour waters and the the natural processes of the beach environment including the changing sea, light and weather conditions. The existing ad hoc seawall structures are familiar but unattractive. The visual impact of a consistent seawall edge, even a high impact 'unnatural' edge such as that formed by the curved concrete wall, will reduce over time, becoming less eye-catching as both path and seawalls weather and become an established/familiar feature. The proposed shared path and seawall will have a low impact on the overall experiential natural character attributes, which derive largely from the wider landscape setting and which are moderate despite the existing residential settlement and modifications to the coastline created by the construction and progressive improvements of the Marine Drive road corridor. Bay by Bay There will be design continuity across the collective Eastern Bays in terms of the path detailing, the seawall elements and the design of the steps and ramps. While	Low adverse Low Adverse with potential for future positive

	the new path will replace the existing idiosyncratic coastal edge with a more homogenous structure, there will be further opportunities to retain and reinforce local identity with the site specific design to be detailed in the LUDP. The shared path will encroach into beaches and over the foreshore with the loss of a number of rock outcrops and small sandy/pebbly areas that are exposed only at low tide. Even though the three most used beaches will be replaced with new sand nourishment, there will be a loss of local features and landmarks and heritage. However at a local 'bay' scale, the proposed shared path and seawall responds to the local landform and land use patterns in terms of: – Rocky promontory encroachment/beach transition; – Retention of local rock outcrops along path; – The location of access points that connect the shared path to the beach and rock foreshore; – Location of bus stops; and – Treatment of stormwater outlets, particularly with regard to penguin and fish passage. Further design detailing in response to local nuance will be undertaken in consultation with each bay community in the Landscape and Urban Design Plan (LUDP). This will consider features/elements such as: – Path markings; – Signage and 'story boards'; – Location of street lighting and power poles: – Bus shelter design; – Street furniture and structures such as decking at Lowry Bay; – Inclusion of eco-features such as rock pools to provide intertidal habitat; and – Other acknowledgement of individual bay landscape character and community.	effects through the development of the LUDP.

12.4 NEW ZEALAND COASTAL POLICY STATEMENT 2010 (NZCPS)

Relevant polices include:

- Policy 13 Preservation of natural character
- Policy 14 Restoration of natural character
- Policy 15 Natural features and natural landscapes

12.41 **Policy 13 Preservation of natural character**

(1) To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development:

a) avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character; and

b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment; including by:

c) assessing the natural character of the coastal environment of the region or district, by mapping or otherwise identifying at least areas of high natural character; and

d) ensuring that regional policy statements, and plans, identify areas where preserving natural character requires objectives, policies and rules, and include those provisions.

(2) Recognise that natural character is not the same as natural features and landscapes or amenity values and may include matters such as:

a) natural elements, processes and patterns;

b) biophysical, ecological, geological and geomorphological aspects;

c) natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;

d) the natural movement of water and sediment;

e) the natural darkness of the night sky;

f) places or areas that are wild or scenic;

g) a range of natural character from pristine to modified; and

h) experiential attributes, including the sounds and smell of the sea; and their context or setting.

	Natural character attributes	Eastern Bays project site natural character	Effects of proposal on natural character
a)	natural elements, processes and patterns;	Natural landform, vegetation and water processes exist in the wider Eastern Bays landscape. However the sequences of biophysical, ecological, geological and geomorphological naturalness across the coastal environment disrupted by residential settlement and the construction of the road over the coastline.	Overall natural elements, processes and patterns unchanged, although some loss in dynamic change at the coastal interface due to stabilisation of the edge of the road corridor. Localised loss of intertidal habitat and geomorphology due encroachment into the CMA.
b)	biophysical, ecological, geological and geomorphological aspects;		

			Replacement of existing beach with nourishment in 3 bays. Effects mitigated by replacement of 'like for like' in terms of sand colour and grain size (yet to be determined). Some mitigation provided by proposed 'ecofeatures' for CSW and revetment structures to provide for biota and avifauna.
c)	natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;	Wider landscape demonstrates the outline of original landforms (backdrop hills, curved bay) but at a local scale, headlands, beaches and rock outcrops have been highly modified by the construction of the road, progressive widening of the corridor and the structures built on the coastal edge to raise and retain the road.	Increased encroachment over headlands and foreshore but minimal changes to the wider receiving environment.
d)	the natural movement of water and sediment;	Natural movement of water disrupted by the existing range of seawalls and retaining structures the length of Marine Drive.	CSW replaces existing seawall structures. Revetments (apart from Mahina Bay south) extend existing revetment/riprap structures. There will be localised disruption to the movement of water and sediment patterns.
e)	the natural darkness of the night sky;	Street lighting the length of the project site, plus typical residential lighting in the properties beside the road and on the lower hill slopes opposite the site. Wellington city lights visible in the distance, including line of lights along Hutt Road & SH2	There is potential to move light poles to inland side of the road but that is outside the scope of this proposal. Effects are neutral.
f)	places or areas that are wild or scenic;	Eastern Bays and the road around the Eastern Bays is picturesque, and dramatic in places and at various times (storms, high tides) rather than wild.	Picturesque qualities in terms of the wider harbour character unchanged. Some loss of local drama for traffic and pedestrians with the provision of the shared path and seawalls.
g)	a range of natural character from pristine to modified; and	While not entirely pristine, the upper and lower ends of the coastal environment are undeveloped and exhibit (or appear to exhibit) ecological naturalness. The environment on the lower slopes of the Eastbourne hills and around the road corridor in particular is modified in terms of the landform,	Encroachment into the CMA by up to 8m (Pt Howard) but within the wider landscape context, loss of natural character is localised.

		hydrological processes, and landcover.	
h)	experiential attributes, including the sounds and smell of the sea; and their context or setting.	Experiential attributes have high natural qualities, due to the proximity of the road to the water, the exposure to the wider harbour, and the contrast between the enclosing landform and the open water that is magnified by the movement through the landscape and the sequence of bays and headlands. At the same time it is acknowledged that the roads are moderately busy and traffic movement and noise are part of the existing coastal experience.	Very low adverse effects with reduced proximity of road to water. Very low positive effects for pedestrians and cyclists with increased proximity of shared path to water and reduced water splash. Other attributes unchanged.

Conclusion:
The overall coherence of the Eastern Bays landscape derives from the wider setting including the enclosing, vegetated hillslopes, the sequence of bay and headland, the rocky outcrops and the harbour waters and the the natural processes of the beach environment including the changing sea, light and weather conditions.

The effects on natural character are caused by the proposed changes to the coastal edge including the road corridor, beaches and foreshore. At the wider Eastern Bays scale, effects are Low, particularly as the narrow fringe of land between the road and the water has a low visual prominence. At a local bay and beach scale there will be a loss of local landform, both natural and modified. Effects of the proposed shared path and seawall on overall experiential natural character attributes will depend largely on the ability of the design to respond to the local landform and land use patterns. With an appropriate Landscape and Urban Design Plan in place, effects on natural character will be Low.'

12.42 Policy 14 Restoration of natural character

Promote restoration or rehabilitation of the natural character of the coastal environment, including by:

a) identifying areas and opportunities for restoration or rehabilitation;
b) providing policies, rules and other methods directed at restoration or rehabilitation in regional policy statements, and plans;
c) where practicable, imposing or reviewing restoration or rehabilitation conditions on resource consents and designations, including for the continuation of activities; and recognising that where degraded areas of the coastal environment require restoration or rehabilitation, possible approaches include:
(i) restoring indigenous habitats and ecosystems, using local genetic stock where practicable; or
(ii) encouraging natural regeneration of indigenous species, recognising the need for effective weed and animal pest management; or
(iii) creating or enhancing habitat for indigenous species; or

(iv) rehabilitating dunes and other natural coastal features or processes, including saline wetlands and intertidal saltmarsh; or
(v) restoring and protecting riparian and intertidal margins; or
(vi) reducing or eliminating discharges of contaminants; or
(vii) removing redundant structures and materials that have been assessed to have minimal heritage or amenity values and when the removal is authorised by required permits, including an archaeological authority under the Historic Places Act 1993; or
(viii) restoring cultural landscape features; or
(ix) redesign of structures that interfere with ecosystem processes; or
(x) decommissioning or restoring historic landfill and other contaminated sites which are, or have the potential to, leach material into the coastal marine area.

	Restoration of Natural Character Landscape attributes	Natural character Restoration Landscape mitigation
c)		
(iii)	creating or enhancing habitat for indigenous species; or	- Eco-mitigation textures on CSW; - Potential ecomitigation measures on revetments; - Retention of local rock for reuse at base of CSW; and - Design of outfalls to allow for fish and penguin passage.
(iv)	rehabilitating dunes and other natural coastal features or processes	- Existing beach retained where possible using CSW structure with minimal encroachment over beach and rocky foreshore; and - Revetment structures used where required on exposed locations and usually overlaying existing revetments/riprap. - Beach nourishment to replace beaches with ‘like for like’.
(v)	restoring and protecting riparian and intertidal margins; or	- Intertidal margins retained where possible using CSW structure with minimal encroachment into foreshore.
(vi)	reducing or eliminating discharges of contaminants; or	- Existing outfalls reconstructed along the coastal interface. Defunct outfalls removed.
(vii)	removing redundant structures and materials that have been assessed to have minimal heritage or amenity	- Old seawalls and other structures removed. - Redundant infrastructure removed - Clean fill removed
(viii)	restoring cultural landscape features; or	- Skerrett boatshed retained. - Atkinson tree removed from beach but replaced with a cluster of trees in green space on the inland side of the road at Taungata Road - Reconstruction of steps and ramps to access the CMA. - Beach nourishment to replace swimming beaches with ‘like for like’.
(ix)	redesign of structures that interfere with ecosystem processes; or	- Existing outfalls reconstructed to allow for fish and penguin passage. - Eco-mitigation on seawall surfaces to provide habitat for biota.

Conclusion:

While the overall path width and seawall locations respond to the Eastern Bays landform, the functional requirements of the project constrain opportunities for landscape and visual rehabilitation or restoration of natural character. Rehabilitation and restoration is focussed on improving visual and physical links between the road/path and the water, detailing coastal interface of the seawall structures to facilitate eco mitigation and restoration of local landscape character through detailed design in the LUDP.

12.43 Policy 15 Natural features and natural landscapes

To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:

a) avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and

b) avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment; including by:

c) identifying and assessing the natural features and natural landscapes of the coastal environment of the region or district, at minimum by land typing, soil characterisation and landscape characterisation and having regard to:

(i) natural science factors, including geological, topographical, ecological and dynamic components;

(ii) the presence of water including in seas, lakes, rivers and streams;

(iii) legibility or expressiveness—how obviously the feature or landscape demonstrates its formative processes;

(iv) aesthetic values including memorability and naturalness;

(v) vegetation (native and exotic);

(vi) transient values, including presence of wildlife or other values at certain times of the day or year;

(vii) whether the values are shared and recognised;

(viii) cultural and spiritual values for tangata whenua, identified by working, as far as practicable, in accordance with tikanga Māori; including their expression as cultural landscapes and features;

(ix) historical and heritage associations; and

(x) wild or scenic values;

d) ensuring that regional policy statements, and plans, map or otherwise identify areas where the protection of natural features and natural landscapes requires objectives, policies and rules; and

e) including the objectives, policies and rules required by (d) in plans.

	Natural features and landscapes attributes	Mechanisms to avoid, remedy, or mitigate adverse effects of activities on natural features and natural landscapes
(i)	natural science factors, including geological, topographical, ecological and dynamic components;	- All effects on CMA occur within a 8m maximum band of development over the foreshore and water for the length of the Eastern Bays.
(ii)	the presence of water including in seas, lakes, rivers and streams;	- Limited encroachment beyond the low tide mark.

(iii)	legibility or expressiveness—how obviously the feature or landscape demonstrates its formative processes;	- Use of CSW to limit encroachment into CMA where feasible.
(iv)	aesthetic values including memorability and naturalness;	- Mitigation through the use of: o consistent path and seawall detailing to reduce visual impact of new structures; and o - use of LUDP to facilitate detailed design that responds to local landscape and land use.
(v)	vegetation (native and exotic);	- Minimal loss of native vegetation. - Existing pohutukawa relocated.
(vi)	transient values, including presence of wildlife or other values at certain times of the day or year;	- No effect.
(vii)	whether the values are shared and recognised;	- Community input into shared path and seawall design; - LUDP allows for community consultation throughout the detailed design process; and - LUDP process promotes design at an appropriate local scale.
(viii)	cultural and spiritual values for tangata whenua, identified by working, as far as practicable, in accordance with tikanga Māori; including their expression as cultural landscapes and features;	- Opportunities for iwi to be consulted on content of local storyboards
(ix)	historical and heritage associations; and	- Local structures and features to be replaced in consultation with local community in LUDP after LUDP process.
(x)	wild or scenic values;	- No effect on wider landscape

Conclusion:
There are no outstanding natural features and outstanding natural landscapes in this coastal environment. Adverse effects of the project on natural features and natural landscapes in the Eastern Bays coastal environment occur within a narrow band of development along the coastal edge. Effects are mitigated through a seawall design that responds to the bay landform and minimises loss of beach and rocky foreshore landform, and are Low.

It is proposed to replace beaches at Point Howard, Lowry Bay and York Bay with like for like, using nourishment with local material of a similar colour and texture. Local effects on these natural features are Moderate – Low and adverse.

12.5 ASSESSMENT AGAINST GREATER WELLINGTON PROPOSED NATURAL RESOURCES PLAN (PNRP)

12.51 Objectives

Relevant objectives include:

Objective O17
The natural character of the coastal marine area, rivers, lakes and their margins and natural wetlands is preserved and protected from inappropriate use and development.

Objective O31
Outstanding water bodies and their significant values are protected.

Objective O38
Identified special amenity landscape values are maintained or enhanced.

Objective O56
New development in the coastal marine area is of a scale, density and design that is compatible with its location in the coastal environment.

12.52 Policies

Relevant policies include:

Policy P25: Natural character
Use and development shall avoid significant adverse effects on natural character in the coastal marine area (including high natural character in the coastal marine area) and in the beds of lakes and rivers, and avoid, remedy or mitigate other adverse effects of activities, taking into account:

- *(a) the extent of human-made changes to landforms, vegetation, biophysical elements, **natural processes** and patterns, and the movement of water, and*
- *(b) the presence or absence of structures and buildings, and*
- *(c) the particular elements, features and experiential values that contribute significantly to the natural character value of the area, and the extent to which they are affected, and*
- *(d) whether it is practicable to protect natural character from inappropriate use and development through:*
  - *(i) using an alternative location, or form of development that would be more appropriate to that location, and*
  - *(ii) considering the extent to which **functional need** or existing use limits location and development options.*

Policy P48: Protection of outstanding natural features and landscapes
*The natural features and landscapes (including seascapes) of the coastal marine area, rivers, lakes and their margins and **natural wetlands** shall be protected from inappropriate use and development by:*

- *(a) avoiding adverse effects of activities on outstanding natural features and landscapes, and*
- *(b) avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects of activities on natural features and landscapes.*

Policy P49: Use and development adjacent to outstanding natural features and landscapes and special amenity landscapes

Use and development in the coastal marine area on sites adjacent to an outstanding natural feature or landscape or special amenity landscape identified in a district plan shall be managed by:

(a) protecting visual and biophysical linkages between the site and the outstanding natural feature or landscape, and

(b) avoiding adverse cumulative effects on the values of an outstanding natural feature or landscape.

Policy P134: Public open space values and visual amenity

The adverse effects of new use and development on public open space and visual amenity viewed within, to and from the coastal marine area shall be minimised by:

a) having particular regard to any relevant provisions contained in any bordering territorial authorities' proposed and/or operative district plan, and

b) managing use and development to be of a scale, location, density and design which is compatible with the natural character, natural features and landscapes and amenity values of the coastal environment, and

c) taking account of the future need for public open space in the coastal marine area.

12.54 Analysis

Policy P25: Natural character	
Elements to take into account	**Assessment**
The extent of human-made changes to landforms, vegetation, biophysical elements, natural processes and patterns, and the movement of water.	The coastal environment along the Eastern Bays as a whole and within the project site has been modified: • The rocky interface between the hillslopes and the water, uplifted in the 1855 earthquake, has been modified to widen the road and improve access to the bays; the road cuts through headlands, the coastal edge has been extended, retained and reinforced, and rocky outcrops have had additional imported riprap and concrete placed over them in areas above the low tide mark. • It is difficult to ascertain where the post-earthquake shoreline would have been but there has clearly been progressive modification to natural processes and patterns and the movement of water across the beach and foreshore areas; • There is beech forest on the upper hill slopes above the residential zoned land, and some recent broadleaf revegetation extending down into areas of residential development and onto the steeper unbuilt slopes. Otherwise vegetation alongside and above the road on the upper lower hill slopes within residential zoned land is well established but a mix of exotic and native species. There is little evidence of natural sequences of coastal or rocky shore vegetation along the coastal edge.

	• Development along the coastal edge in the form of housing and the road construction has disrupted natural catchment and drainage patterns. Stormwater and natural run-off from the hill slopes is channelled and flows into the harbour via a number of drains and outlets. With no kerb and channel, run-off from the road flows over the seawall and into the beach and foreshore. Changes in natural character The proposal will modify the existing landform, encroaching onto beaches by up to 1.9m (Lowry Bay) and over the rocky foreshore adjacent to the headlands by up to 8m (Pt Howard). Users of the shared path will increased separation from the coastal edge and water, but this is balanced against increased access to the coast with the provision of a consistent shared path around the Eastern Bays. The loss of natural character will be most evident for local residents with the reduction of the beach in some bays.

Items to take into account	**Assessment**
The presence or absence of structures and buildings. There are a number of buildings along Marine Drive including 2 boatsheds, 2 pumping stations and a number of bus shelters, including the Lowry Bay shelter with an attached deck and seating area. Structures include a wide range of seawalls, seats, litterbins, bollards, infrastructure in the form of drains, pipes and manholes and power poles. Each bay has at least 1 ramp and/or steps down to the beach. Lowry Bay alone has 5 sets of steps. While few of these elements are visually intrusive in their own right, cumulatively they form a managed, structured edge along the Eastern Bays.	In the main the proposal replaces existing seawall structures with new, larger seawalls and existing revetment/ gabion structures with larger, more geometric revetments. The exception is a new revetment structure over a rock platform in Mahina Bay south. Historic structures and random decommissioned infrastructure that currently litter the coastal edge will be removed. While it is intended to replace and/ or relocate existing bus shelters, decks, steps and ramps, it is not anticipated that any significant new buildings or structures will be introduced to the Eastern Bays.
The particular elements, features and experiential values that contribute significantly to the natural character value of the area, and the extent to which they are affected. In summary, they include: - The proximity of the road and footpath to the water;	The shared path and seawalls will affect existing experiential values including : • The shared path changes the scale of the road and distances the coastal edge/foreshore from local residents; • Road users experience increased separation from the coastal edge, in terms of distance and changes in level from the road/shared path to the coast; • Conversely pedestrian and cyclists will be able to safely access the coastal edge via the shared path from Point Howard to Windy Point;

- Exposure to the wider coastal environment including the changing sea, light and weather conditions;	• The experiential attributes of the bay landforms are reinforced by the different patterns of water and wave action water around the revetments at the headlands and the CSW within the bays and along the beaches; and • Users of the shared path will be able to access the coastal edge in all weather.
- Vegetated Eastbourne hills backdrop; - Sequence of bays and headlands;	• No change. • The continuous line of the shared path accentuates the curvature of the bay landform; and • The variable width path and seawall locations respond to localised bay features and landform.
- Panoramic views across the harbour to Matiu Somes and Makaro Ward Islands, Wellington, the Western Hutt hills and Baring Head.	• No changes apart from the ability to view across the harbour from the coastal edge without intervening traffic.
Whether it is practicable to protect natural character from inappropriate use and development through: • *using an alternative location, or form of development that would be more appropriate to that location* • *considering the extent to which **functional need** or existing use limits location and development options.*	Marine Drive provides the only road access to Eastbourne and the Eastern Bays. The proposed seawall is a response to an eroding road edge in an exposed coastal environment and its location is fixed. At the same time it creates wider benefits by maintaining the integrity of the road for residents and visitors, and access to East Harbour Regional Park. Although they are larger in scale and rock size, the proposed revetments are not entirely new elements: there are revetments at Point Howard, Lowry Bay south/Whiorau Reserve, York Bay north, Mahina Bay and Sunshine Bay that use imported rock with a different colour, texture and form from the existing rock outcrops. The CSW is present in York Bay plus there are number of other curved/ledged walls with a similar geometry along the Eastern Bays. The proposal will modify the existing landform, extending the road/shared path edge by up to 2.5m in places and encroaching onto the foreshore. However the shared path provides safe, all weather access for pedestrians and cyclists and additional resilience for the road edge.

Conclusion:
The proposed shared path provides safe, all weather pedestrian and cyclist access around the Eastern Bays. At the same time it creates wider benefits by maintaining the integrity of the Marine Drive road for residents and visitors, and access to East Harbour Regional Park.

Within the wider Eastern Bays landscape, the particular elements, features and experiential values that contribute significantly to the natural character value of the area remain unchanged. At a local scale, the proposal will modify the existing landform, encroaching up to 8.0m onto the foreshore. While this is not insignificant, the consequent impact on experiential natural character is less pronounced, due largely to the presence of the road and its existing modifications to the coastal edge.

Policy P48: Protection of outstanding natural features and landscapes	Hutt City currently does not identify ONFs, ONLs, or SALs in its district plan. An evaluation of ONFs, ONLs and SALs has been undertaken but has not yet made public.

Policy P49: Use and development adjacent to outstanding natural features and landscapes and special amenity landscapes	It is possible that either the west facing hills in East Harbour Regional Park or Wellington Harbour may be assessed as ONF or ONL, or as SAL in Hutt City district plan updates.
Items to take into account	**Assessment**
Use and development in the coastal marine area on sites adjacent to an outstanding natural feature or landscape or special amenity landscape identified in a district plan shall be managed by: *(a) protecting visual and biophysical linkages between the site and the outstanding natural feature or landscape, and* *(b) avoiding adverse cumulative effects on the values of an outstanding natural feature or landscape.*	The proposal has no impact on visual linkages to the Eastern Hills. The proposal has insignificant effects on visual linkages to the harbour. Close views from the road are slightly decreased, due to the width of the shared path. Close views from the shared path to the water's edge within the bays are improved by the increased functionality of the path, and the proximity of the path edge to beaches. Close views to the water's edge from the shared path closer to some headland are diminished by the size of the revetment or by the change in level between the path and the foreshore. In all circumstances, more distant views to the wider harbour are unchanged. Effects are considered neutral.

Policy P134: Public open space values and visual amenity	
Items to take into account	**Assessment**
Having particular regard to any relevant provisions contained in any bordering territorial authorities' proposed and/or operative district plan.	NA
Managing use and development to be of a scale, location, density and design which is compatible with the natural character, natural features and landscapes and amenity values of the coastal environment.	Refer to Appendix 12.3 assessment Visual amenity values have been assessed in detailed within Section 8 of this report. Other amenity values have been assessed in the Recreation and Urban Design reports.
Taking account of the future need for public open space in the coastal marine area.	The use of CSW structures within the bay minimises encroachment into local beaches. Access to the CMA for foot traffic and small boats/kayaks is maintained. Beach loss at the 3 most popular recreational beaches is mitigated by beach nourishment to replace sand lost through encroachment. Beach loss at other beaches is mitigated by use of a 2.5 rather than 3.5 shared path width.

Conclusion:

The proposal has no impact on visual linkages to the Eastern Hills. The proposal has an insignificant impact on visual linkages to the harbour. While there is encroachment into beaches, Lowry Bay Beach in particular, access to the coast is improved by the provision of a consistent shared path along Marine Drive and the maintenance of step and ramp access to the beach and foreshore.

12.6 REGIONAL POLICY STATEMENT FOR THE WELLINGTON REGION (RPS)

The Coastal Environment section within the RPS has focuses on the provisions relating to the coastal environment and public access. The resource management issue for this landscape and visual assessment concerns adverse effects on the natural character of the coastal environment.

12.61 The following objectives and policies are relevant

Objective 3

Habitats and features in the coastal environment that have recreational, cultural, historical or landscape values that are significant are protected from inappropriate subdivision, use and development.

Policy 35: Preserving the natural character of the coastal environment – consideration

Objective 4

The natural character of the coastal environment is protected from the adverse effects of inappropriate subdivision, use and development.

Policy 35: Preserving the natural character of the coastal environment – consideration

Policy 36: Managing effects on natural character in the coastal environment – consideration

12.62 Assessment

As detailed in Appendices 12.3, 12.4 and 12.5, the adverse effects of the project on natural features and natural landscapes in the Eastern Bays coastal environment occur within a narrow band of development along the coastal edge. Effects are managed through the path design and mitigated through the use of consistent path and seawall detailing to reduce visual impact of new structures and the use of a landscape and urban design management plan to provide a detailed design that responds to local landscape, history and land use.