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Eastern Bays Shared Path

Recreation Assessment

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1 Executive Summary

1.1 Introduction

The Hutt City Council (HCC) proposes to construct a 4.4 km Shared Path along Marine Drive in two sections: between Point Howard and the northern end of Days Bay, and the southern end of Days Bay (Windy Point) to Eastbourne (Muritai Road / Marine Parade intersection). This is called the Eastern Bays Shared Path, or 'the proposal' (Figure 1). No new path is required in Days Bay. A full description of the proposal is provided in the Assessment of Environmental Effects (AEE) for the consent application for the shared path.

This assessment is based on the 'preliminary design plans' for the proposal as they appear in Appendix N to the AEE.

This report considers the positive and adverse effects of the proposal on local and regional recreation amenity. An expectation for the shared path has been expressed in numerous local and regional community strategies for a decade, and there appears to be anticipation amongst much of the local community that construction is imminent (based on the local interviews completed for this report). However, consideration needs to be given to both maximising the recreation amenity benefits of the shared path, and minimising its potential adverse effects on existing recreation values, particularly those associated with beach activities and use of the rocky coastline.

In assessing the scale of adverse effects on existing recreation amenity, this report does not rely on using the inevitable benefits of the shared path as mitigation. Adverse effects are considered in themselves. Instead, the assessment considers the ongoing processes of managing coastal values in the face of climate change and sea-level rise faced by the Greater Wellington Regional Council and the Hutt City Council. The proposal is not a solution to the inevitable adjustment of beach profiles and the accessibility of shoreline rock pools and shore-based fishing spots resulting from climate change. Some reliance is placed on the Hutt City Council's long-term work in the area of resilience planning for managing coastal values over the long-term.[1] Mitigations proposed in this report therefore target areas where the proposal will have an immediate effect on relatively high-value recreation settings. The mitigations do not attempt to propose long-term solutions to changes in access and use of the coastline in all settings.

1.2 Method

This assessment is based on:

- A site visit and review with other project members. The report author was once a Wellington resident and has worked on numerous consultancy projects in and around the Wellington Harbour;
- An analysis of the preferred path width for the proposal (section 2);
- A review of relevant national, regional and local policies and strategies (section 3);
- Literature review, including consultation completed to date (see also Appendix I to the AEE, Consultation Summary Report) (section 4);

[1] Hutt City Council is engaged in completing a regional vulnerability analysis and the design of a planning process in accord with the Ministry for the Environment's 2017 *Coastal hazards and climate change: Guidance for local government.* The *2018-2028 HCC Long Term Plan including the 2018-19 Annual Plan* identifies a $200,000 short-term commitment to "work with other councils in the region to map and identify places, communities and assets threatened by sea level rise, to develop response options and to begin engagement with Lower Hutt communities on the threat of climate change."

- Interviews with 20 users of the study area to better identify the scale and type of recreational use of the coast. A full interview summary is available separately, and all responses have been anonymised. A summary is provided in section 5, and the feedback features throughout the effects assessment summaries in this report;
- A review of effects and mitigation recommendations for each section of the study area (section 6). This report does not further detail the scale of mitigations required – beach nourishment in this case – to avoid repeating the analysis provided in Appendices E and F to the AEE (the Coastal Processes and Beach Nourishment Design Reports); and
- A review of the benefits of the shared path proposal (section 7). As stated above, this section does not form part of the mitigation analysis for adverse effects, but is a stand-alone review.

1.3 Findings

1.3.1 Path width

National and international standards indicate that a 3.5m wide path is the preferred minimum due to:

- The likely scale of use of the path;
- Its varied use by walkers (who will often walk at least two-abreast), cyclists (of various ilk, but including e-bikes), dog walkers, runners, mobility scooters, long-distance riders on the Rimutaka Trail, and its use as an extension to adjacent beach settings;
- Increasing the likelihood of its use as a commuter route for cyclists, reducing on-road risks;
- Its immediate proximity to a relatively high-speed road (50 and 70km/hr);
- Fall hazards on the coastal edge; and
- A lack of recovery space for cyclists if they wobble or need to avoid other users (which would be available if the path passed through an open reserve).

Short sections of 2.5m wide path are proposed to limit adverse effects on coastal ecological values and loss of beach width (lengths of 50m in Sorrento Bay, 140m in Mahina Bay and 150m in Sunshine Bay).

1.3.2 Recreation setting

The Eastern Bays in the study area – from Point Howard to Sunshine Bay and including Windy Point – are mostly of local recreation value. They are predominantly used by local residents for swimming, small boat launching, walking and dog walking. Some shellfishing occurs with a little set-netting by locals offshore, and some floundering in Lowry Bay. Swimming rafts are moored offshore in summer in Lowry, Days and Mahina Bays, and are mostly used by locals. All rocky areas provide snorkelling and fishing opportunities. A lack of visitor parking and poor coastal access inhibits use of most of the bays by visitors. The exceptions are:

- Point Howard Beach, which has relatively good parking and a safe, sandy beach, and a toilet and changing shed nearby. This has regional value and is used mostly by residents of the Hutt Valley and Wainuiomata. It appears that residents from further afield are more likely to keep driving to Days Bay or Eastbourne;

- The Ferry Road headland at the southern end of Sunshine Bay, which is a regionally popular coastal fishing site, along with the seawall at the western corner of Whiorau Reserve. Point Howard is also popular; and
- Some shellfish harvesting along the rocky parts of the study area and, especially, in the sands below low-tide in Lowry Bay. There is some tension about the scale of harvesting carried out by visitors to the area, and particularly the extensive removal of molluscs from the rocky shoreline.

1.3.3 Project benefits

Section 7 presents a literature review of:

- The benefits of physical activity;
- The role of activity friendly environments in encouraging activity; and
- And the value of the shared path as a domestic and international visitor asset.

The key findings are:

- Physical activity is fundamental to physical and mental health; and by providing an alternative to the use of cars, has a wide range of social and environmental benefits;
- Activity friendly environments are fundamental to enabling physical activity, and footpaths and cycleways are key elements of an activity friendly environment;
- Walking and cycling activity in the Eastern Bays is currently significantly impeded by the condition of Marine Drive;
- Walking and cycling are fundamental forms of physical activity for New Zealanders, are important features of our tourism product, and participation is growing;
- The proposed shared path has long-been identified as a strategic asset locally and regionally for connecting communities, enabling physical activity and alternative transport, and developing national and international tourism product; and
- Ample international and domestic data confirm the value of physical activity in an outdoor setting.

1.3.4 Project effects

1.3.4.1 Construction

Construction processes are described in Appendix J to the AEE (Design Features and Construction Methodology). It is noted that construction will be staged and standard traffic management processes will be applied. Avoiding adverse effects on coastal recreation adjacent to construction sites is very difficult. However, they will be temporary and result in a significant community asset. No additional mitigations are proposed to reduce the scale of adverse construction effects for recreation amenity, noting several reports appended to the AEE consider minimising effects on the natural values which underpin many of the local recreation values.

1.3.4.2 Operation

Table 1 summarises: the activities associated with the proposal; their location and scale of effect; and the proposed mitigation. Effects on beaches are scaled depending on: the time that an area of ‘dry’ beach is accessible; where there is no high-tide beach; and the scale of high-tide beach in relevant areas.

The Alternatives Assessment (Appendix G to the AEE) reviews the option of the construction of a path on the landward side of Marine Drive and concludes that the seaward side is preferred for a variety of reasons. From a recreation and tourism perspective, locating the path on the seaward side of the road is also clearly preferred; this being the more attractive setting with direct access to beaches and fishing sites. There appears to be no expectation from consultation, or from interviews for this report, that any other location than the seaward position is in contention.

Table 1: Summary of proposed activities by area, activity, scale and mitigation

	Activity	Effect and scale	Mitigation and net effect
Point Howard	Shared path constructed over road reserve, formalising roadside parking areas, tidying revetment foreshore.	Area currently used for carparking, with some use of rocky foreshore for fishing and shellfishing. No loss of amenity.	None required.
Point Howard Beach	Double curve sea wall and 3.5m path. Beach access provided at either end of beach (steps and ramp).	Loss of beach width in regionally important recreational beach which normally features a high-tide beach. More than minor effect.	Beach nourishment recommended to ensure less than minor effect.
Sorrento Bay	Double curve seawall and 3.5m path, with 2.5m (to minimise beach loss) width at beach area and access steps at either end beach area.	Small loss of beach area in area used for local swimming, with some fishing and shellfishing from rocky areas. No high tide beach. Minor effect balanced by benefits from path.	2.5m wide path proposed in beach area to minimise beach loss. No mitigations required.
Lowry Bay	Single, double and triple curved sea wall, four sets of steps, 2.5 for short section north of boat shed to avoid adverse ecological effects on subtidal areas, and 3.5m path width otherwise.	Loss of beach width in locally important recreation beach with some regional use and normally a high-tide beach. More than minor effect south of bus stop where the majority of beach recreation occurs. No effect on shellfishing or fishing.	Beach nourishment recommended south of bus stop to ensure less than minor effect.
Whiorau Reserve	Shared path constructed through reserve. Extension of riprap south of reserve to near headland and pump-station. No new construction at headland.	Path location avoids conflict with boat launching activities. No disruption of fishing at headland.	None required.
York Bay	Double and triple curved seawall and 3.5m path with access steps and boat ramp.	Beach width loss in beach area which normally has a section of high tide beach. Relatively heavy local use for swimming and boat launching.	Beach nourishment recommended to ensure less than minor effect.

Table 1: Summary of proposed activities by area, activity, scale and mitigation			
	Activity	**Effect and scale**	**Mitigation and net effect**
Mahina Bay	Double curve seawall and 2.5m (to reduce adverse ecological effects and beach loss) and 3.5m path, with boat ramp and steps at either end of beach area.	Small loss of beach area in area used for local swimming, with some fishing and shellfishing from rocky areas. Little high tide beach. Minor effect balanced by benefits from path.	2.5m wide path proposed in beach area to minimise beach loss. No mitigations required. Less than minor effect on recreation value.
Sunshine Bay	Double curve seawall and 2.5m (to reduce adverse ecological effects and beach loss) and 3.5m path, with boat ramp and steps at either end of beach area and three sets of steps in rocky coastal sections. Extension of revetment in the south.	Small loss of beach area in area used for local swimming, with some fishing and shellfishing from rocky areas, and popular fishing site at southern headland. Little high tide beach. Minor effect balanced by benefits from path.	2.5m wide path proposed in beach area to minimise beach loss. No mitigations required. Less than minor effect on recreation value.
Windy Point	Double and triple curve seawall and 3.5m path. One set of sets.	Small loss of shoreline width in little used section – some local swimming, shellfishing and fishing. Less than minor effect.	None required.

1.3.4.3 Cumulative effects

Cumulative effects include those which may exacerbate effects of already consented activities in the same environment which may not have been undertaken, or which increase the scale, intensity or rate of existing environmental changes.

Relevant consent applications include the Hutt City Council resource consent application to the GWRC for the intermittent discharge of treated wastewater from the Seaview Wastewater Treatment Plant to the Hutt River. This proposal is for a reduction in the frequency of unplanned wet-weather discharges of untreated waste water from Seaview and the relocation of the discharge pipe from the Waiwhetu Stream to the Hutt River estuary. The effect is minor and adverse for recreation – but little different to the status quo, albeit an improvement for Waiwhetu Stream (Greenaway 2017). There is no change of relevance to the shared path proposal.

Other relevant proposals are improvements to the regional cycle network, such as the Wellington to Hutt Valley Walking and Cycling Link (W2HV), the Great Harbour Way – Te Aranui o Poneke (from Red Rocks to Pencarrow) and other developments proposed by the HCC (see sections 3.4.2, 3.6 and 3.7). These reinforce the value of the shared path and will enhance its connectivity and level of use.

In terms of existing environmental changes, the beaches along the Eastern Bays have been altered significantly over time by roading and the periodic construction of seawalls, most of which follow no consistent form or style, and are in variable condition. The proposal will result in a more consistent treatment of the coastal edge, resulting in an improvement to the status quo from a visual amenity perspective (see Appendix D to the AEE – the Landscape and Visual Assessment).

For beach amenity, this report uses the status quo as the baseline for assessing effects. This baseline includes the ongoing effects of sea level rise and inevitable compromises to beach recreation if Marine Drive remains in place. That is, the size of the beaches, and the period

when 'dry' beach and rocks are available between tides, will reduce over time if the road does not retreat or beach nourishment does not occur. The latter will also have a finite period of relevance as beach material will eventually accumulate on the road.

The proposal will increase the speed with which the width of available beach is lost, due to the encroachment of path structure on previously sandy or rocky coastline. The management of effects on beaches where areas of 'dry' high tide beach normally exist and are used for sitting and sunbathing – Point Howard, the southern end of Lowry Bay and York Bay – is recommended to address the immediate effect of the proposal. As discussed above, reliance is placed on the Hutt City Council's long-term work in the area of resilience planning to address ongoing changes in recreation amenity along the Eastern Bays in accordance with the Ministry for the Environment's 2017 *Coastal hazards and climate change: Guidance for local government*. This may involve measures which are beyond the scope of this assessment.

1.3.4.4 Policy compliance

Objective 4 of the New Zealand Coastal Policy Statement (NZCPS) refers to maintaining and enhancing the public open space qualities and recreation opportunities of the coastal environment by:

- Recognising that the coastal marine area is an extensive area of public space for the public to use and enjoy;
- Maintaining and enhancing public walking access to and along the coastal marine area without charge, and where there are exceptional reasons that mean this is not practicable providing alternative linking access close to the coastal marine area; and
- Recognising the potential for coastal processes, including those likely to be affected by climate change, to restrict access to the coastal environment and the need to ensure that public access is maintained even when the coastal marine area advances inland.

Policy 18 refers to public open space:

> *Recognise the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation, and provide for such public open space, including by:*
>
> *a) ensuring that the location and treatment of public open space is compatible with the natural character, natural features and landscapes, and amenity values of the coastal environment;*
>
> *b) taking account of future need for public open space within and adjacent to the coastal marine area, including in and close to cities, towns and other settlements;*
>
> *c) maintaining and enhancing walking access linkages between public open space areas in the coastal environment;*
>
> *d) considering the likely impact of coastal processes and climate change so as not to compromise the ability of future generations to have access to public open space; and*
>
> *e) recognising the important role that esplanade reserves and strips can have in contributing to meeting public open space needs.*

Policy 19 refers to walking access, including:

1. *Recognise the public expectation of and need for walking access to and along the coast that is practical, free of charge and safe for pedestrian use.*
2. *Maintain and enhance public walking access to, along and adjacent to the coastal marine area, including by:*
    a) *identifying how information on where the public have walking access will be made publicly available;*
    b) *avoiding, remedying or mitigating any loss of public walking access resulting from subdivision, use, or development; and*
    c) *identifying opportunities to enhance or restore public walking access, for example where:*
        i. *connections between existing public areas can be provided; or*
        ii. *improving access would promote outdoor recreation; or*
        iii. *physical access for people with disabilities is desirable; or*
        iv. *the long-term availability of public access is threatened by erosion or sea level rise; or*
        v. *access to areas or sites of historic or cultural significance is important; or*
        vi. *subdivision, use, or development of land adjacent to the coastal marine area has reduced public access, or has the potential to do so.*

The Regional Coastal Plan (RCP) for the Wellington Region (2000) is less specific about managing recreation amenity effects than the Proposed Natural Resources Plan for the Wellington Region, but the latter is not operative. Like the NZCPS, the relevant components of the RCP are concerned with access along and within the coastal marine area and general recreational use of the foreshore, seabed, and other related parts of the coastal marine area (RCP section 2.4.4).

There is clear congruence between the proposal and the NZCPS. The shared path proposal is an enhancement to “access to and along the coastal marine area”, and most likely quite a significant one at the local and regional levels, as well as at the national level, by linking the Eastern Bays with a Great Ride of national status (the Rimutaka Trail). Provision is made for people of all abilities, and the proposal effectively links many areas of public space, inland as well as coastal.

Beach access is provided over the proposed seawall at strategic and regular points at all beaches and at several sections of rocky coast. Sections of single seawall will be easily stepped over, and short sections of revetment similarly so. Ramps are maintained or provided anew at Point Howard Beach, Whiorau Reserve (immediately south of Lowry Bay), York Bay and Mahina Bay. Steps are proposed to be built parallel to the shared path, and will create sitting and hanging-out space off the path. They intrude further into coastal areas than the seawall, but less-so that perpendicular stairs, and are short, essential assets.

By addressing adverse effects on those beaches with ‘dry’ high tide areas used for sitting and other ‘dry’ beach activities, the proposal will maintain coastal amenity and ensure effects are no more than minor. Losses in the width of beach – where nourishment is not proposed – and at rocky areas, are minimised by relying on a narrowed path where appropriate, and may be addressed through future coastal resilience planning if they are regarded as priorities. The proposal responds to climate change, as much as it can, as a combined resilience and a transport project.

Figure 1: Main named features in the study area

2 Path width

Formal public consultation processes specific to the proposed shared path were carried in November 2016 and August 2017 (Stantec 2017).[2] The 2016 exercise relied on a community open day with 60 attendees (19 November 2016); while the 2017 engagement included meetings with local residents with approximately 95 people attending six 'bays meetings', and about 70 attending an open day in Eastbourne. Seventy-five feedback forms and emails were submitted during the engagement period (7th to 31st August 2017).

A range of path widths were discussed in 2016, from 1.5 to 3.5m. Two metres or less was considered too narrow. The feedback summary for a 2.5m path was:

> *This option is more acceptable and has support. Concerns around preserving the beaches/trees/boat ramps and the need to include the southern section of Days Bay. "This seems the most sensible option possibly even the 'Goldilocks' solution - not too narrow and not too wide."*

The feedback summary for a 3.5m path was:

> *This option is widely supported. People see this as a long-term valuable asset. The idea of 'do it once, do it properly' comes through. There are some questions about sea-level, keeping the beaches intact and the cost. "As wide as possible = safe and useable as possible."*

In 2017 responses to the feedback forms indicated a preference for a 2.5m wide path (48%), compared with 3.5m (25%); and the main motivation for a narrower path was avoiding encroachment onto beach areas.

There are various published standards for widths of shared paths.

Fowler *et al* (2010) consider 2.5m the minimum width for shared path in a relatively low use setting, and 3.0m where interactions between cyclists and walkers increase. Figure 2 shows their model based on a width required to achieve no more than 12 'delayed passing events per cyclist per hour' – where a cyclist faces a path user in their lane and an oncoming user in the opposing lane at the same time. They note that:

> *An additional 0.5 m should be added to each edge if the path is bounded continuously or has fall hazards on either side.*
>
> *An additional 0.5 m should be added if during the critical design hour the path is serving both a commuting function and has significant numbers of child cyclists, such as would occur if the path is near a school.*

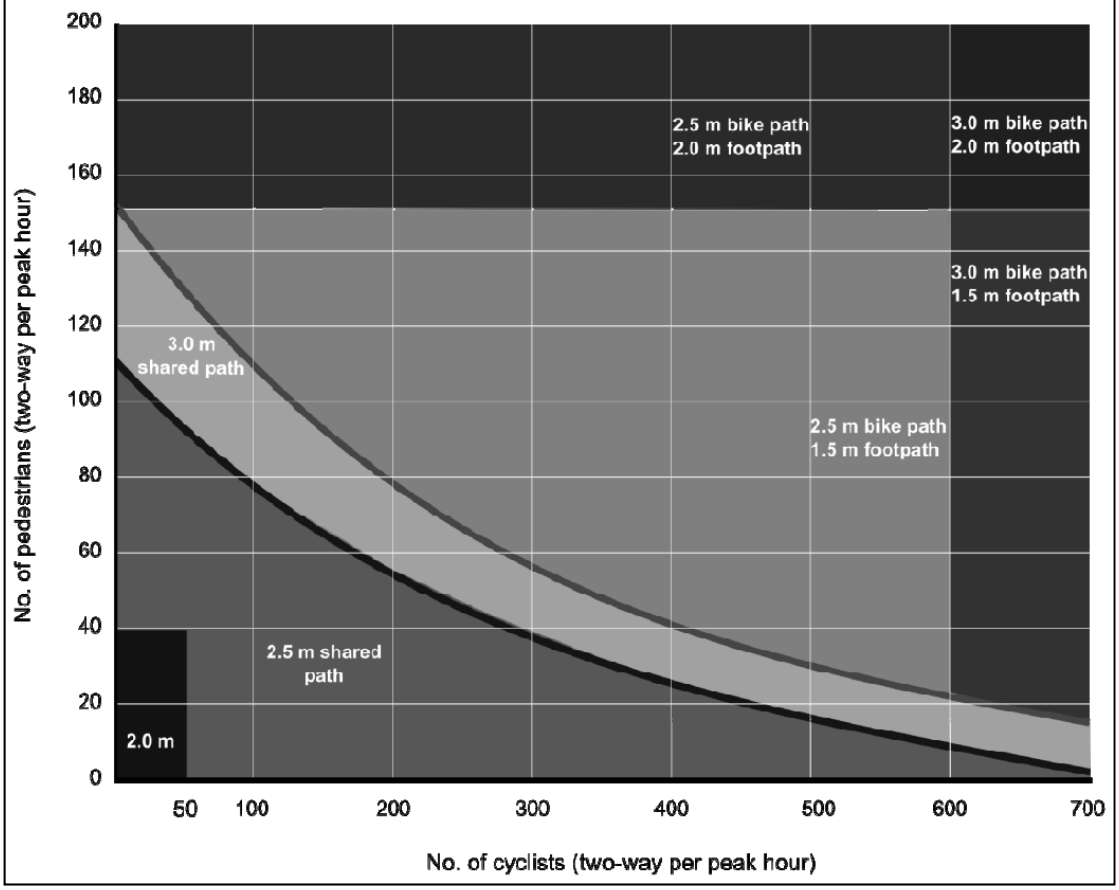
The State of Queensland's Department of Transport and Main Roads (DTMR 2014) uses the same methodology Fowler *et al* (2010) to develop its recommended width model for shared paths. Figure 3 shows the DTMR model for settings with an equal number of movements in both directions (lesser widths are required where most traffic moves in only one direction), including some Brisbane examples in the bottom left. The DTMR guide refers to the Austroad *Supplement to Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths* (2015) for further detail (discussed below).

Victoria Walks (2015) notes in reference to the DTMR standards:

> *This guidance is based on research (SKM 2010), where it was assumed that 12 delayed passings per hour represents the upper limit of cyclists' tolerance for being delayed. This is equal to 6 delayed passings for a 30 minute trip or 1 delayed*

[2] Section 3 of this report considers earlier consultation processes that identified the shared path as a priority.

Figure 2: Fowler et al (2010) – shared path width model



passing every 5 minutes. A delayed passing typically involves interaction of at least three users, such as a cyclist slowing to pass a walker because there is another walker coming from the opposite direction. Delayed passings are therefore likely to be unusual events except on busy paths.

The Queensland guidance is based on a measure of level of service to cyclists. Pedestrian amenity was not considered (Munro 2014). Where usage exceeds about 100 pedestrians (for any cyclist volume), or 1000 cyclists (for any pedestrian volume), separate/segregated facilities are recommended.

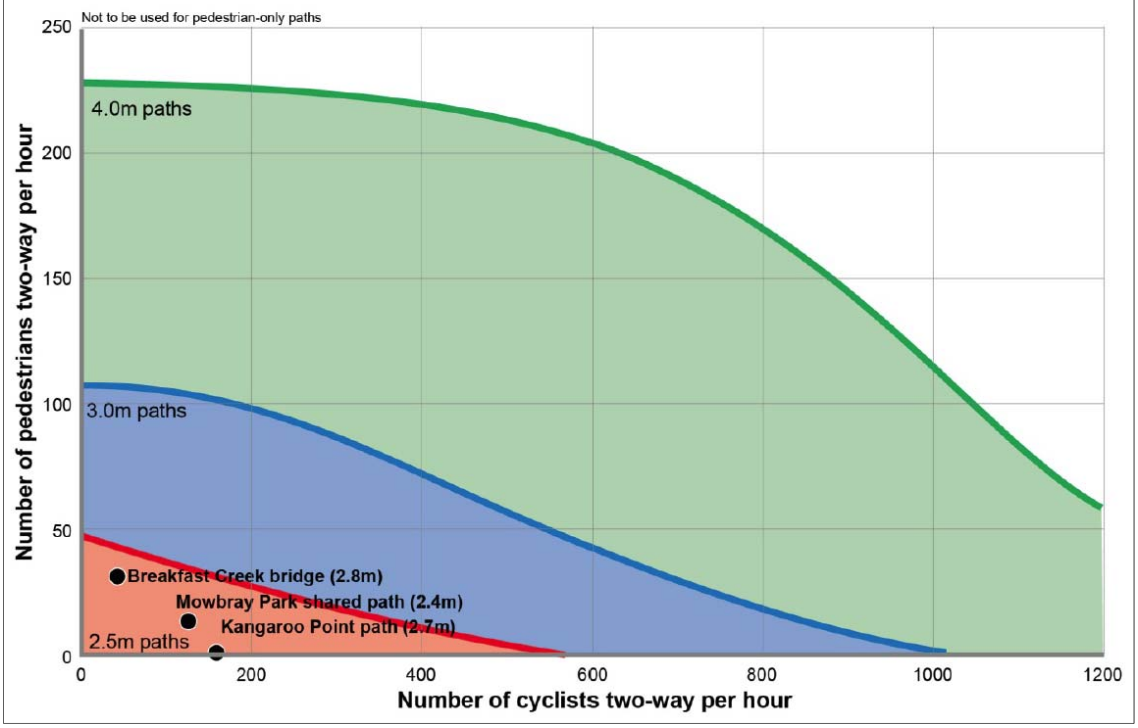
The Queensland guidelines do not appear to be consistent with the Austroads guidance …. Shared paths are anticipated for much higher numbers of users than is anticipated in Austroads.

Victoria Walks (2015) references 2012 research carried out by VicRoads into cyclists' experiences of shared paths and notes that the least preferred interactions were passing a young child on a bike, overtaking two pedestrians walking side by side, and, worst of all, passing a pedestrian with a dog.

The Austroads *Cycling Aspects of Austroads Guides* (Austroads 2017) notes that a shared use path may be appropriate where (p92):

- *demand exists for both a pedestrian path and a bicycle path but where the intensity of use is not expected to be sufficiently great to provide separate facilities,*
- *an existing low-use path can be satisfactorily modified (e.g. by appropriate width and signage) to provide for cyclists.*

Figure 3: DTMR (2014) – shared path width model for 50/50 movement split



Austroads (2017) notes (p92):

> *Separated paths are not common because they are justified only where there are large numbers of both pedestrians and cyclists desiring to use the path.*

'Large numbers' are defined by Austroads as "regular use in both directions" of "say more than 50 users per hour", noting that, "These path volumes are suggested in order to limit the incidence of conflict between users, and are significantly lower than the capacity of the principal path types."

The Austroads (2017) width recommendations for a shared path are:

> *As for bicycle paths, the upper limit of the acceptable range in the table should not discourage designers from providing a greater width where it is needed (e.g. very high demand that may also result in overtaking in both directions).*

Table 2: Austroads (2017) shared path width standards	**Shared path width (m)**		
	Local access path	Regional path	Recreational path
Desirable minimum width	2.5	3.0	3.5
Minimum width[1] – typical maximum[2]	2.5 – 3.0	2.5 – 4.0	3.0 – 4.0

1. A lesser width should only to be adopted where cyclist volumes and operational speeds will remain low.

2. A greater width may be required where the numbers of cyclists and pedestrians are very high or there is a high probability of conflict between users (e.g. people walking dogs, roller bladders and skaters etc.).

The same standards are quoted in the Vic Roads' *Traffic Engineering Manual* (2016), where, as with most of the standards referenced, shared paths are considered suitable where demand

is low (fewer than 10 users per hour in the Vic Roads example) and where bicycle speed is also low (less than 20km/hr). Otherwise segregated paths are preferred.

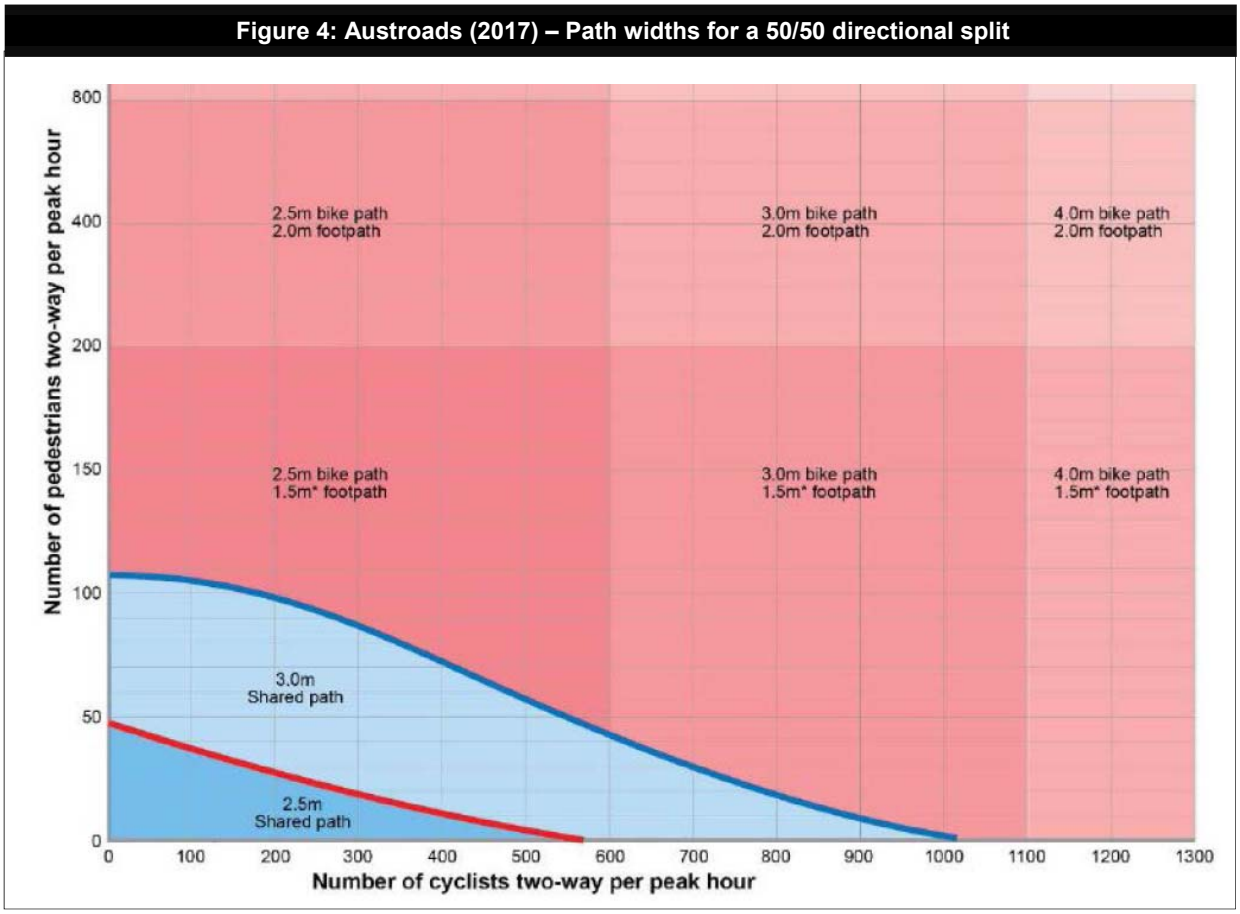
The Austroads standard is further detailed in the *Supplement to Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths* (2015), with the following guidelines:

Table 3: Austroads (2015) shared path width standards

Path Width	Type of path	Guidelines for appropriate use
2.5 m	Recreational and regional commuter paths.	Overtakings and meetings between path users are likely and bicycle speeds are between 15 km/h and 25 km/h. This width may be appropriate for commuter and recreational paths within outer suburban areas and regional cities and towns.
3.0 m	Recreational and urban commuter paths where overtakings and meetings are frequent and bicycle speeds exceed 25 km/h. Larger clearances are required between path users.	In most circumstances, the minimum standard for new shared paths should be 3.0 m wide.
3.5 m		A 3.5 m path provides increased clearance between path users and may be used by cyclists to reduce the number of delayed overtakings.
4.0 m		A 4.0 m path provides increased clearance between path users and may be used by cyclists to reduce the number of delayed overtakings.

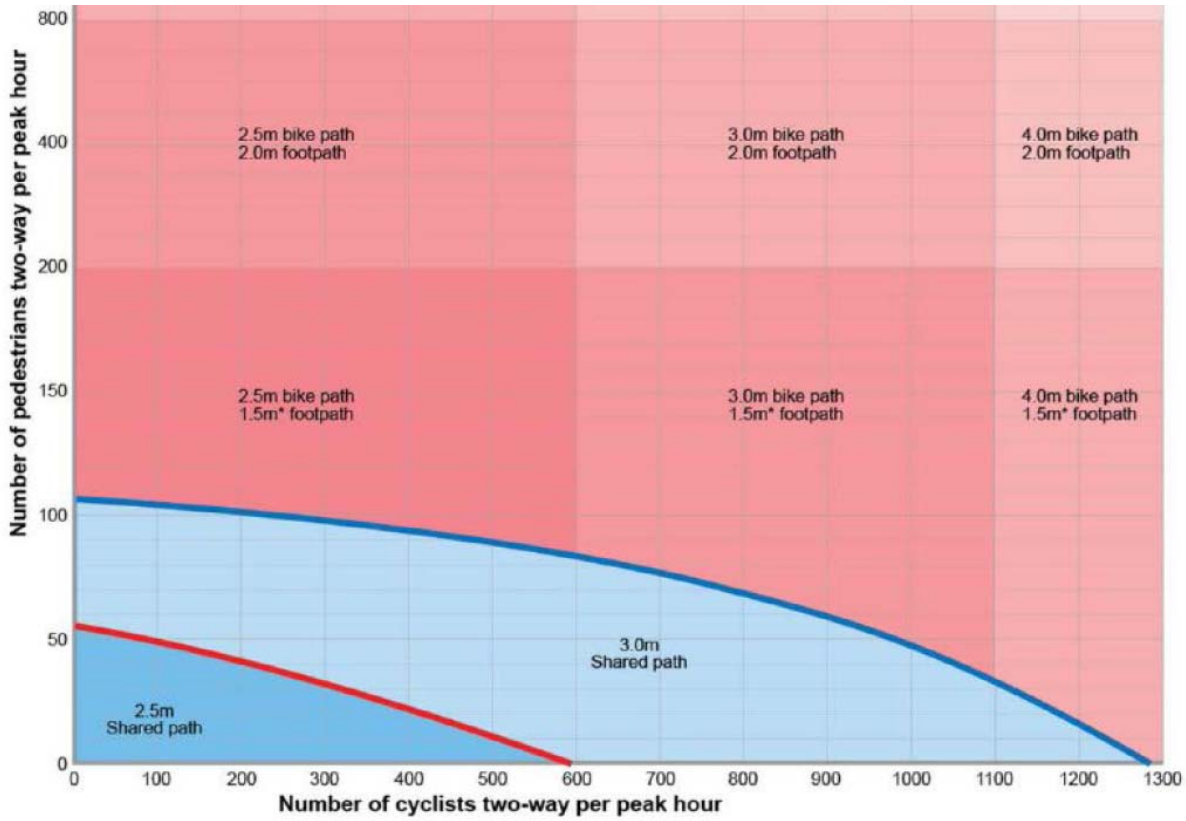
Austroads (2017) summarises its path width models within two graphs, one for a movement scenario with a 50/50 split in directional movements (the same number of users heading in both

Figure 4: Austroads (2017) – Path widths for a 50/50 directional split



directions) (Figure 4), which would be more common for a recreational route, and for a 75/25 split (Figure 5), which is a more likely scenario for a commuter route. The latter has more capacity at the same path style and width than the former. The Eastern Bays Shared Path is likely to have both roles at different times of the day and week.

Figure 5: Austroads (2017) – Path widths for a 75/25 directional split



The NZ Transport Agency *Pedestrian planning and design guide* (NZTA 2009) uses the same standards as Austroads (Table 2) and notes:

> *In both cases [segregated and unsegregated shared paths] it is important to:*
>
> - *leave a lateral clearance distance of one metre on both sides of the path to allow for recovery by cyclists after a loss of control or swerving …*
> - *ideally, keep a 1.5 m separation between the path and any adjacent roadway…*

The NZTA adds the rider to Table 2 that where the use of the path is uncertain (ie, it is unclear if it will be a local access, commuter or recreational path) the minimum width should be 3.0m; and notes:

> *Shared areas: Cyclists are often excluded from pedestrian-only areas, such as malls. There can be little justification for this, as collisions between pedestrians and cyclists are comparatively rare. Nevertheless, some pedestrians do perceive a danger from cyclists due to their speed and quietness, and may feel intimidated by them. The elderly feel especially vulnerable when encountering cyclists in their walking space.*

The Auckland Transport *Code of Practice* 2013 defines a shared path as:

> *A path provided for use by cyclists and pedestrians, either in a road corridor or elsewhere, such as in parks or alongside rail lines, motorways, rivers, coastlines or lakeshores.*

The Auckland Transport width standard is:

> *Minimum width: 3 m*
>
> *In some rare instances, a reduction of the minimum 3m width may be required due to topography, land use or other location based specific reasons. Any reduction in the minimum width will be reviewed on a case by case basis. Any such reductions should be to no less than 2.5m except in exceptional circumstances and for a short distance (e.g. 10m only).*
>
> *Where a high number of users (including pedestrians) are expected wider path widths should be considered.*

The *New Zealand Handbook for Tracks and Outdoor Visitor Structures* (Standards NZ HB 8630:2004) does not consider standards for shared paths.

The *New Zealand Cycle Trail Design Guide* (MBIE 2015) defines trail standards for NZ Cycle Trails (NZCT or 'Great Rides'). These are not necessarily shared paths, but shared use is common on Great Rides, particularly in or near urban areas. The proposed Eastern Bays Shared Path would form part of a Great Ride by linking the Hutt River Trail with the Rimutaka Cycle Trail, if access agreements around Baring Head are completed. The standards used in the Design Guide also reinforce the standards considered above but refer specifically to cycling – which will be a considerable use of the shared path.

The Guide defines trail by grade, of which there are six. The proposed shared path would be Grade 1 - 'Easiest', described as:

> *Flat, wide, smooth, trail. Trail feels safe to ride. Ideal as a first ride for non-cyclists, and those wanting an easy gradient or experience. Trail allows for cyclists to ride two abreast most of the time, and provides a social component to the ride. Cyclists will be able to ride the total distance of the trail without dismounting for obstacles.*

The recommended width for Grade 1 trail is for 'Double trail' preferred standard, which is 2.5m to 4.0m for 90% of trail, "where cyclists may ride side by side."

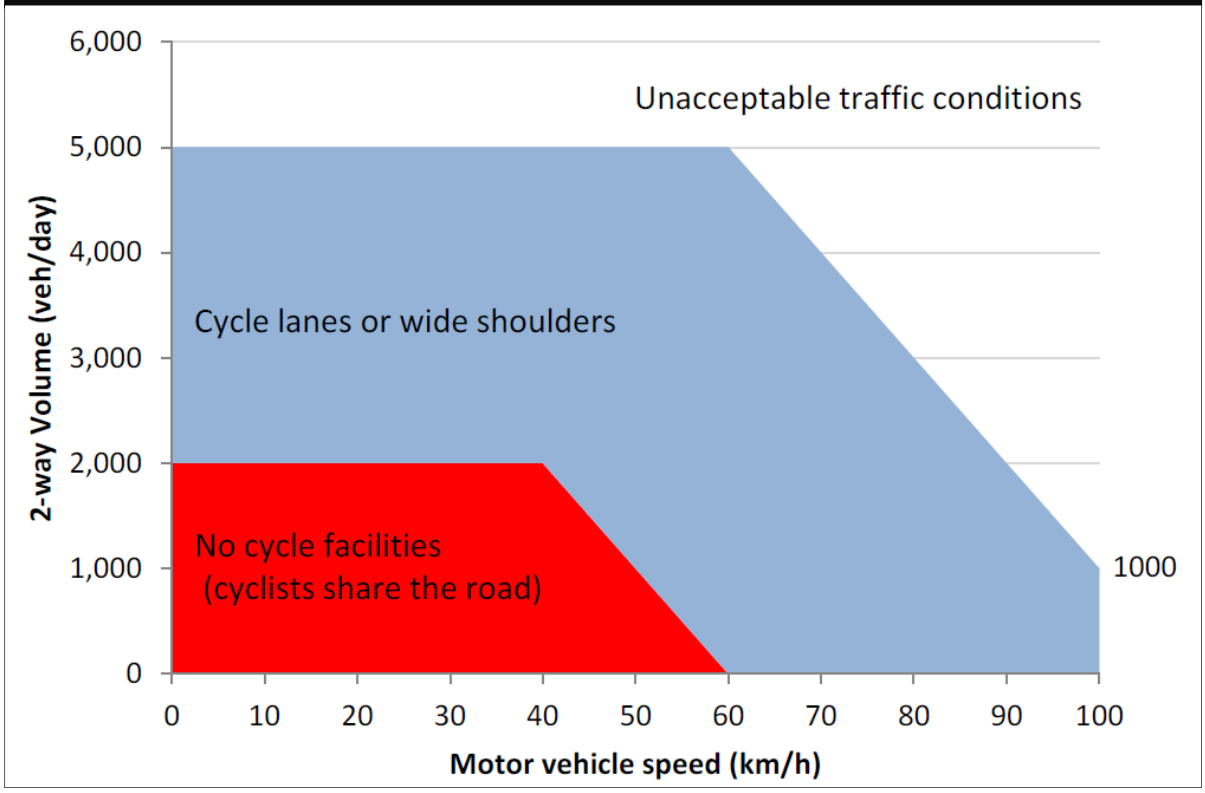
The Guide also recommends additional clearance of 1.0m where the trail is adjacent to continuous sections of steep slope, parallel drains and "lakes, rivers and coastline", amongst other items. A minimum separation of 0.5m is contemplated. The Guide notes:

> *The clearances presented … relate to each side of the path. That is, if the path is constrained on both sides, double the width prescribed … should be added to the total path width. For example, on a path with fences (i.e. continuous features) on either side the width between the fences should be the width of the path plus 1.0 m. Clearances for continuous or discrete features … should be measured at handlebar and shoulder height relative to the path edge.*

The standard also provides guidelines for cycle trail to be constructed on road shoulders. The suitability of a road for such a development depends on the volume of traffic and its speed, as shown in Figure 6 for Grade 1 and 2 (easiest and easy) on-road trails. Marine Drive has traffic volumes of between 6,000 and 8,000 vehicles per day and so would be considered unsuitable for an on-road trial.

Boffa Miskell (2009) in *The Great Harbour Way Issues and Options Analysis* (see section 3.5 of this report) defines the following criteria for design specifications for the route:

Figure 6: NZ Cycle Design Guide for on-road cycle trail for Grade 1 and 2 trials (MBIE 2015)



- *A path for exclusive use of cyclists and pedestrians and separate to carriageway used by vehicles;*
- *A path on the coastal side of the road to optimise access to the coast and for safety;*
- *A path a minimum of 3.0m wide to allow for the free flow of two-way multi-use traffic. Paths will need to be wider than 3.0m in high use areas such as promenades;*
- *At an absolute minimum, a path width of 2.6 m would allow for two cyclists to pass comfortably or two pedestrians and one cyclist to pass;*
- *Single lane minimum 1.8m.*

2.1.1 Summary and recommendation for Eastern Bays path width

The planning process for the Eastern Bays Shared Path has considered a minimum path width of 2.5m where the path could impinge on beach areas and 3.5m otherwise. The literature reviewed above indicate that 3.0m and 3.5m widths for recreational shared paths are preferred minimums, noting that Victoria Walks (2015) states that the standards used for shared paths do not account for pedestrian preferences, and segregated paths are preferred in high use areas.

Notably, Fowler *et al* (2010) recommend that an additional 0.5 m be added to each edge if the path is, "bounded continuously or has fall hazards on either side", and an additional 0.5 m should be added, "if during the critical design hour the path is serving both a commuting function and has significant numbers of child cyclists, such as would occur if the path is near a school." The NZTA (2009) notes, "it is important to leave a lateral clearance distance of one metre on both sides of the path to allow for recovery by cyclists after a loss of control or swerving [and] ideally, keep a 1.5 m separation between the path and any adjacent roadway."

The proposed shared path has, to the west, sections of fall to rocks, sand and gravel (the latter not necessarily a soft option for falling cyclists or pedestrians), and a 50 to 70km/hr roadway to the east, with minimal protection and no separation.

Proposed narrow sections of path (2.5m) have been suggested for areas adjacent to beaches, but these areas are likely to feature congregating groups, the laying down of beach equipment and the use of the path as a beach extension at high tide. The shared path is also likely to have high levels of shared peak use by walkers, dog walkers and cyclists. The bikeable speed of the shared path will limit its use by experienced commuting cyclists when recreational use is high, and high-speed commuting will be unlikely on a 2.5m wide shared path at any time.

A 3.5m width path is recommended as the minimum standard for the Eastern Bays Shared Path, to reflect:

- Compliance with established guidelines,
- The recreational status of the proposed path, with a very high likelihood of walkers in groups and two to three abreast,
- The lack of recovery space on the side of the path for cyclists, and proximity to either a fall or a busy roadway,
- A likely high level of use by dog walkers and by children using a range of devices, such as scooters,
- Congregation and stationary use of the path at beach areas,
- The potential for its use as a cycling commute route,
- The advent of e-bikes enabling access by an older age group, and
- The continuing development of pathways throughout the Wellington Region, likely leading to demand growth.

In addition, in response to sea level rise, the path has the potential to be partly occupied by an extra level of curved seawall, which would render a 2.5m path no better than the status quo in many locations.

However, compared with a 2.5m path, a 3.5m width has the potential for greater adverse effects on beach and rocky coast amenity – by reducing accessible coastal area – and beach nourishment in selected areas is therefore considered a necessary mitigation in this assessment (although it also may have been necessary with a 2.5m path in some locations). Effects on coastal habitat are considered in the ecological assessments (Appendices A and C to the AEE), and the final design of the path is a compromise between a preference for a 3.5m standard width and 2.5m where there is the potential for more than minor effects on beach amenity (without nourishment) and/or ecological values.

3 Policy and strategy

This section considers local, regional and national policy which gives direction to resource management for recreation, public access and open space values. These provide a framework against which some of the potential effects of the Project can be assessed. More detailed analysis of the policy referred to here is included in the main AEE.

3.1 NZ Coastal Policy Statement 2010

The NZ Coastal Policy Statement (NZCPS, DOC 2010) guides local authorities in their day-to-day management of the coastal environment. Objective 4 of the NZCPS refers to maintaining and enhancing the public open space qualities and recreation opportunities of the coastal environment by:

- recognising that the coastal marine area is an extensive area of public space for the public to use and enjoy;
- maintaining and enhancing public walking access to and along the coastal marine area without charge, and where there are exceptional reasons that mean this is not practicable providing alternative linking access close to the coastal marine area; and
- recognising the potential for coastal processes, including those likely to be affected by climate change, to restrict access to the coastal environment and the need to ensure that public access is maintained even when the coastal marine area advances inland.

The coastal marine area is defined by the Resource Management Act 1991 (section 2) as the foreshore, seabed, coastal water and air space above the water between Mean High Water Springs (MHWS) and 12 nautical miles offshore, and is considered to include all areas affected by the Project.

Policy 16 of the NZCPS refers to the need to protect surf breaks of national significance. None is located in the Wellington Region.

Policy 18 refers to public open space:

> *Recognise the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation, and provide for such public open space, including by:*
>
> *a) ensuring that the location and treatment of public open space is compatible with the natural character, natural features and landscapes, and amenity values of the coastal environment;*
>
> *b) taking account of future need for public open space within and adjacent to the coastal marine area, including in and close to cities, towns and other settlements;*
>
> *c) maintaining and enhancing walking access linkages between public open space areas in the coastal environment;*
>
> *d) considering the likely impact of coastal processes and climate change so as not to compromise the ability of future generations to have access to public open space; and*
>
> *e) recognising the important role that esplanade reserves and strips can have in contributing to meeting public open space needs.*

Policy 19 refers to walking access, including:

1. *Recognise the public expectation of and need for walking access to and along the coast that is practical, free of charge and safe for pedestrian use.*
2. *Maintain and enhance public walking access to, along and adjacent to the coastal marine area, including by:*
    a) *identifying how information on where the public have walking access will be made publicly available;*
    b) *avoiding, remedying or mitigating any loss of public walking access resulting from subdivision, use, or development; and*
    c) *identifying opportunities to enhance or restore public walking access, for example where:*
        i. *connections between existing public areas can be provided; or*
        ii. *improving access would promote outdoor recreation; or*
        iii. *physical access for people with disabilities is desirable; or*
        iv. *the long-term availability of public access is threatened by erosion or sea level rise; or*
        v. *access to areas or sites of historic or cultural significance is important; or*
        vi. *subdivision, use, or development of land adjacent to the coastal marine area has reduced public access, or has the potential to do so.*

There is high congruence between the NZCPS and the proposal, considering its ability to deliver safe and practical walking access in a coastal setting suited to a wide range of abilities, connecting many open space settings, both coastal and inland.

3.2 Department of Conservation

Coastal reserve areas in the Harbour identified in the operative *Department of Conservation's Conservation Management Strategy* (CMS) *for Wellington 1996 – 2005* (DOC 1996) include Makaro/Ward and Matiu/Somes Islands, Pencarrow Head Recreation Reserve and Turakirae Scenic Reserve. The CMS is generally silent about recreation values and issues in the Harbour, noting (p16, 18 and 125, Vol 1):

> *The diverse landscape in Wellington Conservancy – from rugged coastal cliffs to wide sandy beaches; remote mountains to rural and urban parks; sheltered waters to exposed ocean – offers a great range of recreational opportunities. The Department has a major role in managing remote and back country recreational opportunities and a smaller role in rural urban fringe sites….*
>
> *The shore around Wellington Peninsula and Wellington Harbour includes a narrow, rocky wavecut platform, raised last century by earthquakes. Faulting is a major feature of the Wellington region, creating conspicuous scarps, dislocated streambeds, drained swamps and raised terraces…*
>
> *Commercial and recreational fishery resources, and recreational activities in the marine environment, are an important component of recreational activity in the Conservancy.*

And in describing the Recreation Opportunity Spectrum Class for the Wellington and Porirua Harbours (p242 Vol 1):

The URBAN COAST areas are characterised by the relatively protected beaches and bays of Wellington and Porirua Harbours and the coastal towns of Paekakariki, Paraparaumu and Waikanae. These areas are considered to be the most important recreation opportunities in the conservancy, attracting extremely high use from both local residents and visitors.

3.3 Greater Wellington Regional Council

3.3.1 Regional Policy Statement for the Wellington Region

The operative Regional Policy Statement for the Wellington Region (GWRC 2013) (RPS) identifies that (p21) 'the coastal environment is important to the regional community for recreation and general enjoyment' and aims to support the implementation of the NZCPS particularly with regard to the maintenance and enhancement of public access to and along the coastal marine area (p22). Regionally significant issues for recreation for iwi identified in the RPS include the suitability of coastal water for recreation and shellfish gathering (p23).

Recreation values are identified as being managed via, predominantly, providing for access to and along the coastal marine area (Objective 8, p31). Amenity values, more generally, are considered via policies to manage effects on natural character, coastal water quality and ecosystems, and natural coastal processes (p23). While the RPS identifies rivers and lakes with 'significant amenity and recreational values' (its Appendix 1), the same data are not provided for any coastal areas.

3.3.2 Regional Coastal Plan for the Wellington Region

The Regional Coastal Plan for the Wellington Region (WRC 2000) (RCP) identifies coastal areas to be managed for shellfish gathering purposes and contact recreation. These are reviewed in section 4.2 of this report.

The RCP notes that (section 2.4.4):

Disturbance of the foreshore or seabed may affect:

- *water turbidity and hence amenity values;*
- *commercial and recreational fishing;*
- *access along and within the coastal marine area;*
- *other recreational use of the foreshore, seabed, and other related parts of the coastal marine area.*

Section 2.4.6 also notes the potential to liberate contaminants through seabed disturbance, which could pollute shellfish beds, with associated risks to human health.

The RCP identifies (section 2.5) that the 'deposition of substances on foreshore or seabed' may affect, amongst other things, recreational fisheries, fish spawning and nursery grounds, public health through consumption of contaminated shellfish, wave energy, water circulation, sediment transport and shoreline stability (and therefore amenity values) and marine navigation. Section 7.1 of the RCP sets out objectives to manage these potential adverse effects.

The RCP seeks to ensure that as a general objective (4.1.9) 'Amenity values in the coastal marine area are maintained and enhanced'.

3.3.3 Proposed Natural Resources Plan for the Wellington Region

The Proposed Natural Resources Plan for the Wellington Region (GWRC 2015) (PNRP) identifies several relevant high-level objectives for the management of recreation values in the region, including:

> ***Objective O5***
>
> *Fresh water bodies and the coastal marine area, as a minimum, are managed to:*
>
> *(a) safeguard aquatic ecosystem health and mahinga kai, and*
>
> *(b) provide for contact recreation and Māori customary use…*
>
> ***Objective O9***
>
> *The recreational values of the coastal marine area, rivers and lakes and their margins and natural wetlands are maintained and enhanced.*
>
> ***Objective O10***
>
> *Public access to and along the coastal marine area and rivers and lakes is maintained and enhanced.*
>
> ***Objective O37***
>
> *Significant surf breaks are protected from inappropriate use and development.*
>
> ***Objective O55***
>
> *The need for public open space in the coastal marine area is recognised.*

'Primary coastal policies' for coastal management include the need to consider amenity values:

> ***Policy P133: Recreational values***
>
> *The adverse effects of use and development in the coastal marine area on recreational values shall be managed by providing for a diverse range of recreational opportunities while avoiding conflicts and safety issues.*
>
> ***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.*

Once hearings have been held, decisions made and any appeals have been resolved the PNRP will replace the existing Regional Coastal Plan (GWRC 2000).

3.4 Hutt City Council

3.4.1 Hutt City Council District Plan

Anticipated Environmental Results for the four areas of coastal land zoned General Recreation under the Hutt City Council District Plan (March 2006) which are potentially affected by the proposed shared path are identified in section 4.3.1 of this report on page 45 (Figure 22). The General Recreation Activity Areas are described (1.10.2):

> *The character and amenity values of this activity area do vary with specific locations. The factors influencing this generally include vastly different scales from small neighbourhood reserves to regional parks, generally close proximity to residential activity areas, the presence of built facilities including children's play equipment, sports facilities and halls, proximity to natural features such as rivers, the extent of vegetation, and the sense of enclosure depending on street frontage.*

3.4.2 Hutt City Council strategies

Hutt City has published numerous strategies which support the development of recreation amenity such as the proposed shared path – either directly or indirectly. These indicate a long period of consultation and set expectations for the development of the shared path.

An Integrated Vision for Hutt City (HCC 2014) was published to define a collective vision for the City, aiming to make it "a great place to live, work and play." The vision was based on a four-year process of consolidating "existing visions, projects and plans" and community consultation. Community areas were categorised under one of five headings: destinations, residential villages, gateways and destinations, sports destinations and employment hubs. Eastbourne and Days Bay were identified as 'destinations' and the Eastern Bays was identified as a 'residential village'.

Eastbourne and Days Bay were also described as a 'gateway to Eastern Bays, Pencarrow and Baring Head coasts'. Ten desired infrastructure developments were identified, including:

- Developing walking opportunities,
- Improve transport/roading and pedestrian flows,
- Eastern Bays cycle and walkway development.

Eleven 'proposed opportunities' were listed, including, "Link Eastern Bays pathway to Great Harbour Way /Hutt River Trail / Belmont Regional Park / Baring Head."

Although the Eastern Bays were identified as a 'residential village' there is no corresponding analysis for this area in the Vision document.

The HCC *Leisure and Wellbeing Strategy* 2012–2032 is one of four strategies which emerged from the *Integrated Vision.* The vision for the Strategy is, "To make a better city everyday by providing integrated community services which make a world class difference to the people of our city." The Strategy does not define the need for the Eastern Bays Shared Path specifically, but defers to a subsequent plan, 'Walk and Cycle the Hutt 2014-2019', which:

> *will build on our work since 2006 and improve cycling and walking experiences in the city. The implementation programme, which will be developed in partnership with a working group of stakeholders, will detail the actions, priorities and timelines for delivering the plan's aims and objectives.*
>
> *Our principal aim is to encourage more people to cycle and walk more often and further, for commuting and recreational purposes. Achieving this aim requires a paradigm shift in thinking about and resourcing walking and cycling in order to create*

a network that is safe, easy, convenient, attractive and pleasurable, both for leisure and as transport to workplaces, schools, and other key destinations. In terms of cycling in particular, the design and delivery of routes both on and off-road will need to cater for a range of user needs, including commuter and leisure cyclists.

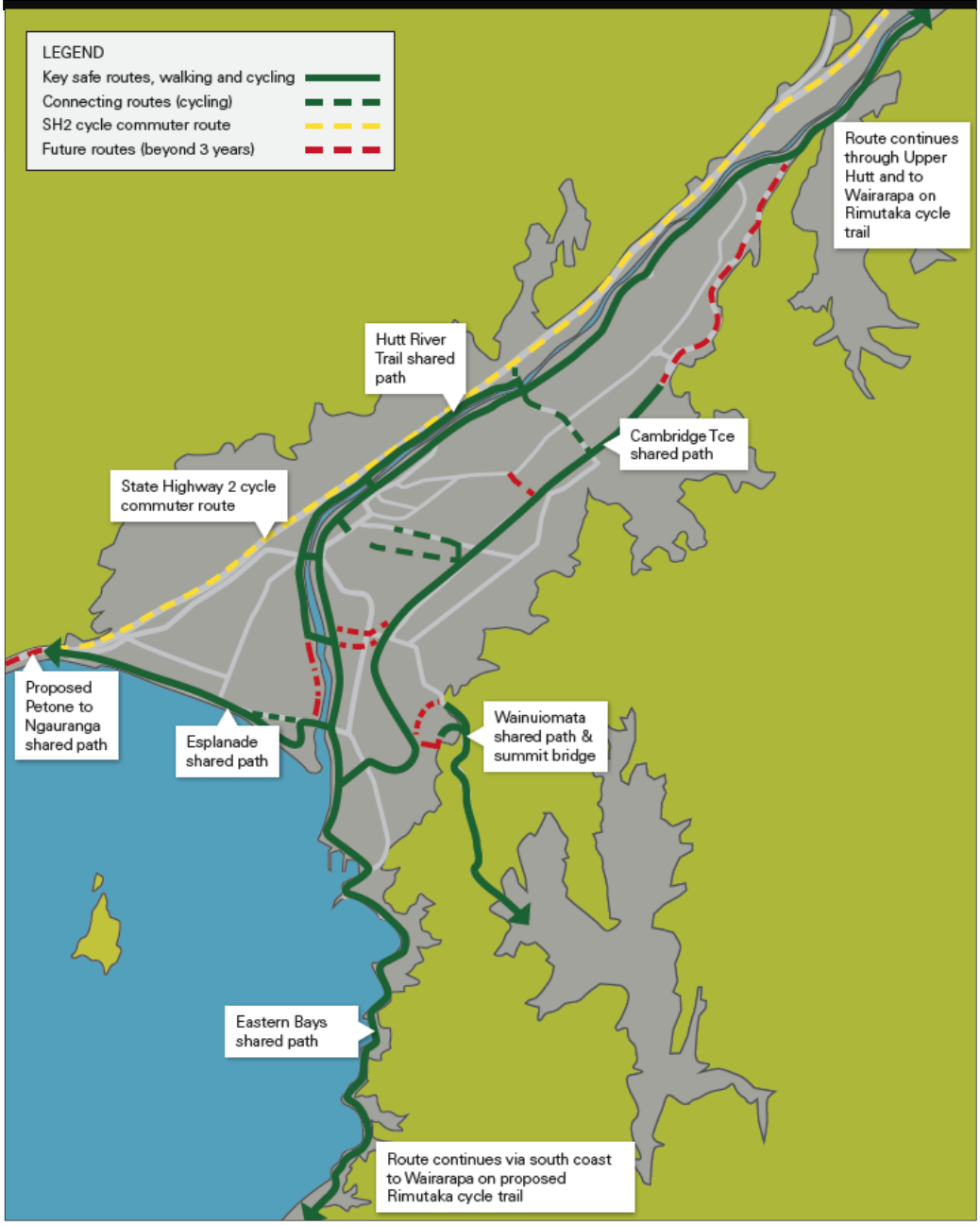
Walk and Cycle the Hutt 2014-2019 identified the Eastern Bays Shared Path as one of several 'key safe routes for walking and cycling' (Figure 7) and specified funding commitments for the period of the report. The principal aim of 'Walk and Cycle the Hutt' is that:

- *More people in the city will cycle and walk more often and further, for commuting and recreational purposes.*

Related aims are:

- *High quality level of service for pedestrians and cyclists;*
- *Improved safety for pedestrians and cyclists.*

Figure 7: Key Routes Map, Walk and Cycle the Hutt 2014-2019



Hutt City Council's *Infrastructure Strategy 2018-2048* identifies the commitment to funding the construction of the shared path, identifying it as one of several 'significant projects' and a 'key projects incorporated into the long term plan':

> *Eastern Bays Shared Path: $14.3m budgeted for increasing the accessibility of alternative means of transport in Eastern Bays by providing a safe shared path for pedestrians and cyclists (2018-24). This project is considered to be responding to changes in demand and the increased uptake of alternative modes of transportation.*

3.5 Great Harbour Way

Boffa Miskell (2009) describe the concept of, and background to, the Great Harbour Way proposal:

> *The Great Harbour Way -Te Aranui o Poneke (GHW) is the name adopted to describe an exciting recreation, active transport and tourism initiative for the Wellington area. The GHW concept involves the development and marketing of a continuous shared cycle and pedestrian route around the coastline of Wellington Harbour. The 67km route stretches from Pariwhero/Red Rocks to Pencarrow Head and the aim is for it to be located immediately beside the harbour edge as far as is practicable.* [Figure 8]
>
> *While several groups have separately promulgated this concept in various forms over several years, in 2008 the groups decided to combine their efforts into the Great Harbour Way Coalition. The Coalition proposes to develop the concept further and to seek support from the various agencies and organisations that control and administer the harbour edge and the immediate environs, and to chart a direction to move the GHW from a concept into reality.*

The 2009 Boffa Miskell report is an issues and options review for the GHW. Objectives include:

- Provide a safe continuous walking and cycling route for both transport and recreation movement around the perimeter of the harbour between Pencarrow Head and Red Rocks;
- Be predominantly designed to accommodate a continuous 2-way path;
- Provide a safe cycling commuter route between the communities along the route (such as between Petone and Wellington CBD);
- Be located immediately beside the harbour edge as far as is practicable;
- Be planned and designed in such a way as to avoid adverse effects on environmentally sensitive areas;
- Highlight Maori cultural history and values and other historical values;
- Recognise the opportunities of this route to act as a catalyst for new ancillary or development opportunities within the corridor of land it traverses;
- Enhance knowledge and awareness of the Wellington Harbour environment and immediate environs through interpretation, storytelling and art;
- Become a nationally recognised cycleway/walkway, and a key part of the National Cycleway project promoted by the Government….

The Issues and Options assessment identifies the need to upgrade most of the route from Seaview to Eastbourne. The Great Harbour Way Trust has been active in making presentations and submissions on relevant central and local government planning exercises to help maintain a focus on the project.[3]

Figure 8: Great Harbour Way, Boffa Miskell 2009

3.6 Wellington to Hutt Valley Walking and Cycling Link

The latest NZ Transport Agency (NZTA) public engagement report on the Wellington to Hutt Valley Walking and Cycling Link (W2HV) (NZTA 2017) defines the concept:

> *The NZ Transport Agency is partnering with Wellington City Council, Greater Wellington Regional Council and Hutt City Council to provide a safe and efficient 12-kilometre walking and cycling route between the Wellington CBD and Melling. The Wellington to Hutt Valley Walking and Cycling Link (W2HV Link) will also connect with other walking and cycling facilities such as the Petone Esplanade and the Hutt River Trail.*
>
> *The project has three sections:*
>
> *1. Wellington CBD to Ngauranga section – a Wellington City Council project. This cycling facility will run from Bunny Street along Thorndon Quay and Hutt Road to the Ngauranga interchange. This section is jointly funded by the Urban Cycleways Fund, the National Land Transport Fund and the Wellington City Council.*

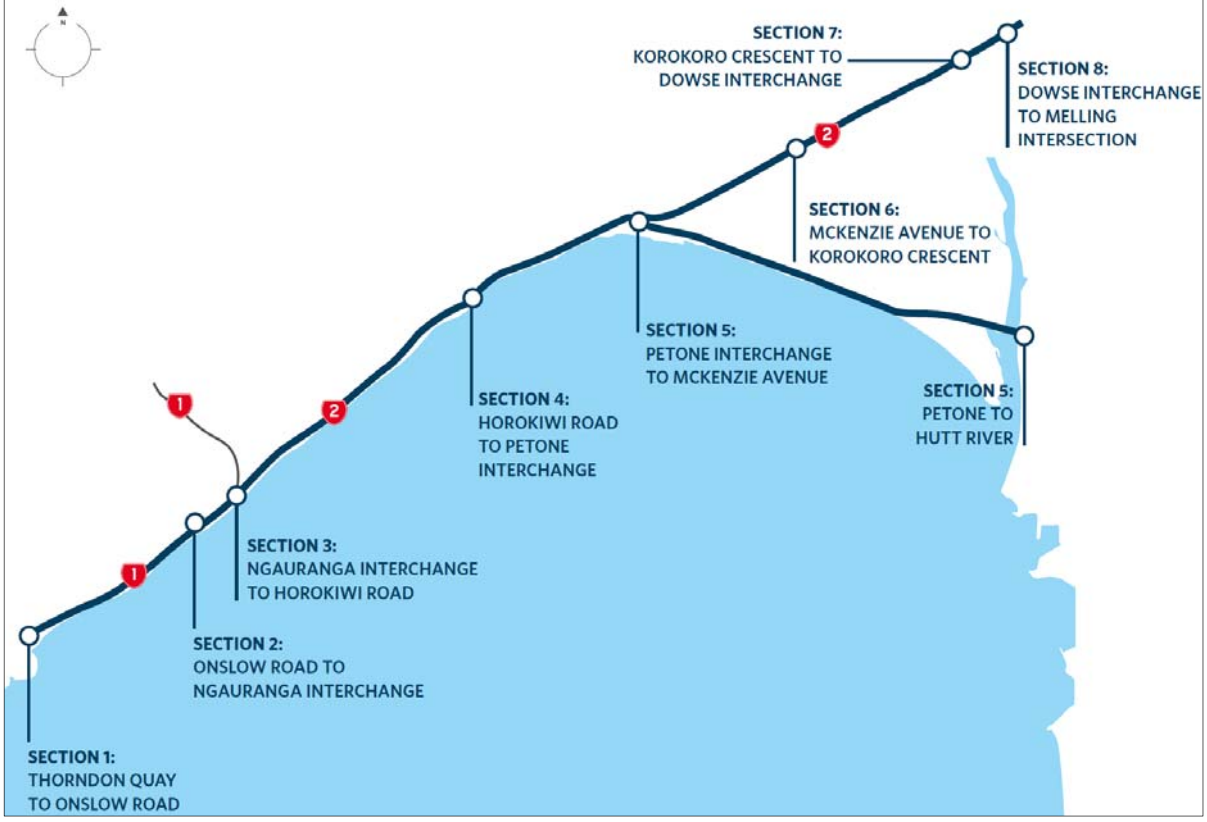
[3] http://www.greatharbourway.org.nz/

2. Ngauranga to Petone section – an NZ Transport Agency project. This is a shared off-road path from the Ngauranga interchange to the Petone interchange. This section is jointly funded by the NZ Transport Agency, the Wellington City Council and the Greater Wellington Regional Council.

3. Petone to Melling section – an NZ Transport Agency project. This is an off-road cycle path with shared path connections linking the Petone railway station to the Hutt River Trail. This section is jointly funded by the Urban Cycleways Fund, the NZ Transport Agency and the Hutt City Council.

Figure 9 shows the route from a previous NZTA publication (NZTA 2014) which uses a different section description, but usefully shows the Petone to Hutt River section which is largely complete.

Figure 9: Wellington to Hutt Valley Walking and Cycling Link (NZTA 2014)



3.7 Wellington Regional Trails for the Future

The Wellington Regional Trails for the Future (TRC Tourism 2017) presents a 'strategic framework for trails in the Wellington Region' and is a combined vision for the nine district and regional councils,[4] and the Department of Conservation, in the Wellington Region. What is a trail is not defined in the Strategy, but they include the Hutt River Trail and the Rimutaka Cycle Trail, both of which would link with the Eastern Bays Shared Path. The strategy notes:

The Wellington region has an outstanding opportunity to become a world-class trails-based destination offering outstanding experiences to a variety of markets. Importantly, improving the level of products aligned to trails will not only help achieve

[4] Kapiti Coast District Council, Porirua City Council, Wellington City Council, Hutt City Council, Upper Hutt City Council, Carterton District Council, Masterton City Council, South Wairarapa District Council, Greater Wellington Regional Council.

the world class experiences, it adds significant value for the residents of the region who are strongly connected to their trails and who see them as a vital part of the infrastructure to support a healthy and vibrant region…..

At the core of attracting trail visitors is the environment and setting, the quality and quantity of trails, their accessibility and the interest and challenge offered….

The trail's location and design should enhance the user's overall experience – whether it is a short walk showcasing a special feature, a long journey through different landscapes, a remote nature experience, a challenging mountain bike ride or an event. Trails and associated infrastructure (trailheads, signage, amenities) need to be designed and constructed to be fit for purpose and level of use, to be compatible with surrounding natural and cultural features, and to minimise environmental and social impacts.

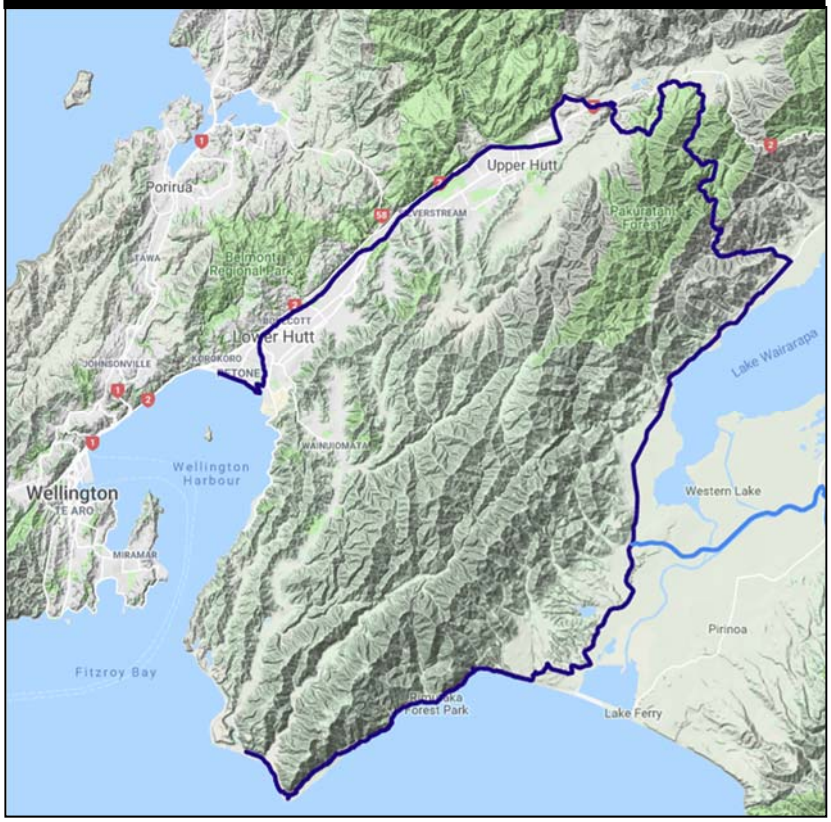
Trails and infrastructure should be designed and managed to be safe for the proposed uses, including shared use trails. There should be clear, accessible information (on signs and online sources) on orientation and wayfinding, trail standards, difficulty ratings, appropriate user behaviour and journey length.

The Strategy proposed defining trails according to three labels:

- Signature Trails: A small number of outstanding trails that attract visitors and achieve recognition for the region as a trail destination, and provide a focal point for regional residents.
- Regional Trails: Significant trails that form the core of the trail network and provide quality experiences for residents and visitors and attract users more familiar with the area or wanting less popular experiences.
- Local Trails: Trails that primarily service local communities. Local trails are important for everyday health, wellbeing, connectivity and amenity.

Trails in the 'Eastern Hutt Hills' – largely those in the Regional Park and along the coast to Pencarrow Head and beyond – are classed as 'Regional Trails', with the note: "Completing planned separation of riders/walkers and cars on the Eastbourne road [Marine Drive] would provide further access to many of the trails and linkages to the Rimutaka Cycle Trail and lighthouse walks."

Figure 10: Rimutaka Cycle Trail (nzcycletrail.com)



The Rimutaka Cycle Trail (Figure 10) is classed as a Signature Trail, with the note: "Missing links exist on the southern end of the

trail that ideally would be resolved and create a loop track back to the Wellington Great Harbour Trail proposal through Petone."

The reason the Trail meets the Signature Criteria are:

- A 115 km 'Great Ride' in the New Zealand Cycle Trail that offers outstanding diversity including scenic riversides, forested hills, historic tunnels, Maori and European heritage, railway relics, wineries, rural landscapes, wetlands, unique geological formations, superb rugged coastal scenery with fur seals at Turakirae Head and a Lord of the Rings film location. Provides links to various clusters of trails in the region.
- Governance is growing through collaboration between trail management partners.
- Easily accessible from Wellington City.
- Information is strong due to its national status.
- Named by Lonely Planet as 'one of the world's hottest travel experiences' for 2015.

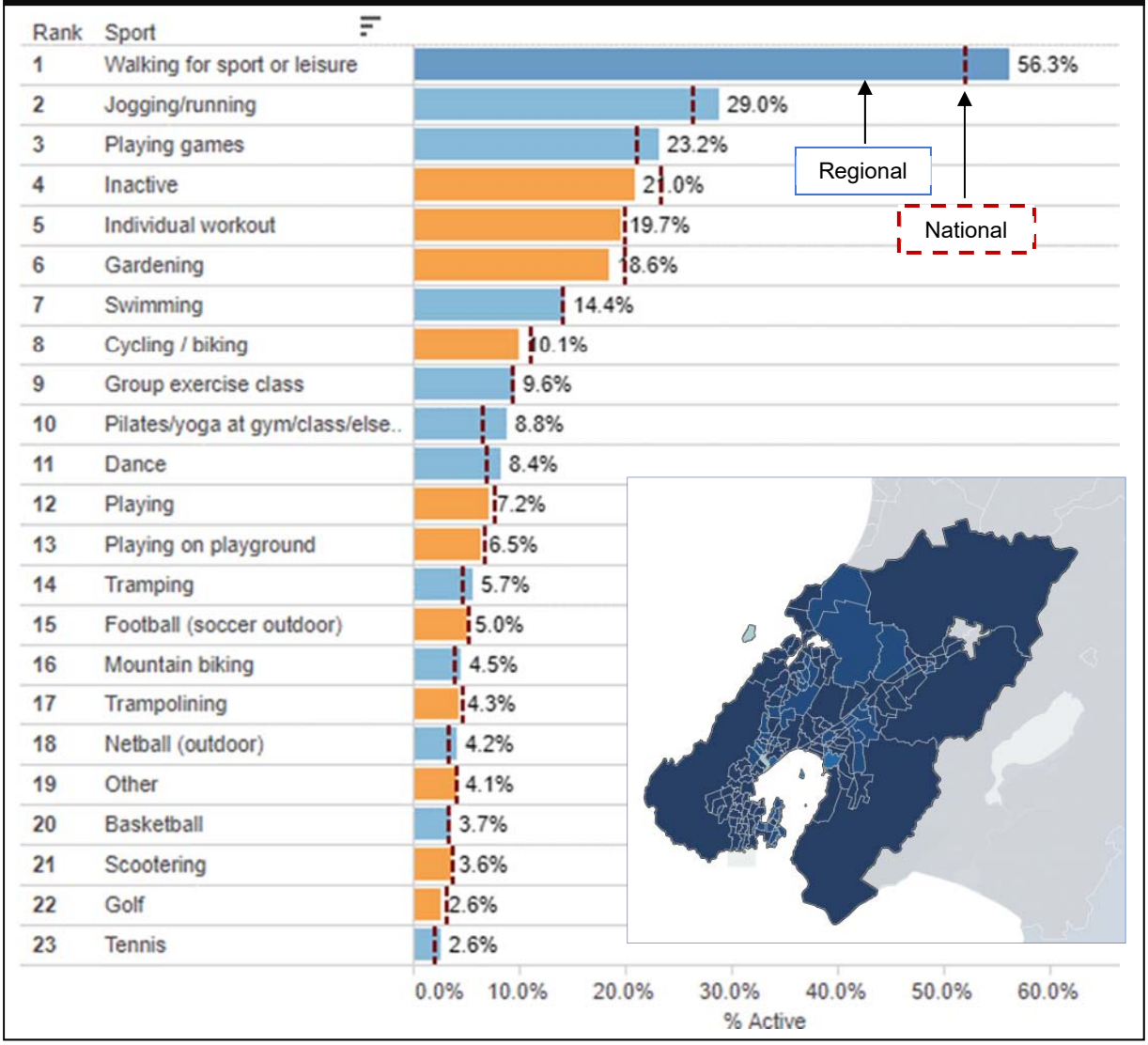
4 Existing recreation values – literature review

This section reviews national and regional recreation patterns, relying on national recreation participation research

4.1 National and regional recreation participation

At the national level, reliable sport and recreation participation data (relative if not absolute) are provided by the Active NZ Surveys carried out by Sport New Zealand. The latest results are based surveys completed between 5 January 2017 and 4 January 2018 among 6,004 young people (aged 5–17) and 27,038 adults (aged 18+). Data are presented for both participation in an activity over the 7 days prior to the questionnaire and for the preceding 12 months.[5] Figure 11 shows the 7-day participation rates for recreation and sport activities for the selection of

Figure 11: Sport and recreation activities with the highest participation levels for the Wellington sub-region shown, regional 7-day participation compared with national (Sport NZ 2017)



[5] These are modelled data based on the Active NZ survey results. For areas with a smaller population base – such as the Eastern Bays meshblock only, the survey sample size becomes to small and the errors too great. See: https://sportnz.org.nz/managing-sport/search-for-a-resource/research/active-nz-survey-2017. This modelled participation data differs from that presented in the national and regional data from the same survey (see Sport NZ 2018).

Census meshblocks shown, for all ages. Walking and jogging or running are by far the most popular forms of physical activity, and the sample area (a subset of the Wellington Region) appears to have higher participation rates than the national average.[6]

Over the 12 month period preceding completing the Active NZ questionnaire, 85% of New Zealand adults (18+) walked for recreation, 38% ran or jogged, 33% swam (in a pool or natural area), 20% road cycled, 14% mountain biked, and 15% went marine fishing – compared with 11% who played golf and 7% who played football.

For adults (18+, 7-day participation), 42% described roads or footpaths as a location for recreation (the most popular setting of all), 25% named walkways, and 15% 'on, in or beside the coast' and 6% on a 'cycleway or cycle lane specifically set aside for cyclists' – compared with 32% for 'private property, home, garden or pool', 20% for 'public park, field, playground, skate park or BMX track', 18% for a gym or fitness centre and 10% for 'outdoor sports facility or purpose-built environment'.

For young people (5-17, 7-day participation), 52% of activity was at 'other outdoor locations (e.g, beach, lake, bush, footpath)' compared with 71% for 'at school or in the school grounds' and 52% at 'indoor facilities (e.g. gym, community hall, church, marae or indoor pool)'. Their three most popular activities (7-day) were running, jogging or cross-country (52%), playing (41%) and swimming (36%). Walking for fitness was enjoyed by 29%, cycling or biking by 29%, scootering by 20% and football, soccer or futsal by 19%.

Sport NZ (2015) reported on locations where respondents undertook their activities in natural settings in the Wellington Region. Table 4 shows that beaches and other locations by the sea where the second-most preferred setting for outdoor recreation (at 51.3% for all Wellington Region adults), while being in or on the sea was relatively less popular at 25.4%, but more popular that recreation on or in a river or lake.

Table 4: Participation locations in natural settings, Wellington (Sport NZ 2015)

	All adults	Men	Women	All NZ
Natural settings	%	%	%	%
Outdoors at a park in a town or city	63.8	65.7	61.3	50.3
At a beach or by the sea	51.3	49.3	54.0	35.9
On an off-road bike trail or walking track	46.5	53.2	37.8	25.0
In the bush or a forest	42.6	48.1	35.4	28.3
In the countryside or over farmland	33.5	39.7	25.4	24.0
By a river	28.7	26.5	31.7	17.6
In or on the sea	25.4	33.6	14.7	28.8
By a lake	22.7	24.3	20.6	13.0
On or in a river	12.8	18.8	5.1	11.2
On or in a lake	10.3	13.8	5.7	9.8

Kalafatelis & Magill (2013) completed a national survey of recreational boating activity for Maritime NZ with 1500 respondents. The results do not appear to have been filtered for marine activity only. This indicated, at the national level, that 24% of New Zealanders aged over 18 owned or used a vessel for recreation boating purposes (57% male and 43% female):

[6] In the opinion of the author of this report, these apparent differences need to be treated cautiously due to the data analysis and modelling methods used, especially since the data presentation tool does not illustrate the margins of error at the regional or national level – which may overlap (ie, the differences may lie within overlapping margins of error).

- 15% owned or used a canoe or kayak,
- 9% owned or used a power boat under 6m,
- 9% owned or used a dinghy,
- 5% owned or used a power boat over 6m,
- 3% owned or used a sail boat under 6m,
- 2% owned or used a sail boat over 6m,
- 2% owned or used a jet ski.

During periods when boaties are 'most active', such as over summer, 24% of users of power boats under 6 m went at least weekly, and another 25% went out once every couple of weeks. Similar levels of activity were evident for other vessels, but power boats under 6m were the most frequently used.

Kalafatelis & Magill (2013) reported the ownership of types of vessel by region, but the levels of response by subgroup was not high and there is limited reliability in the data.

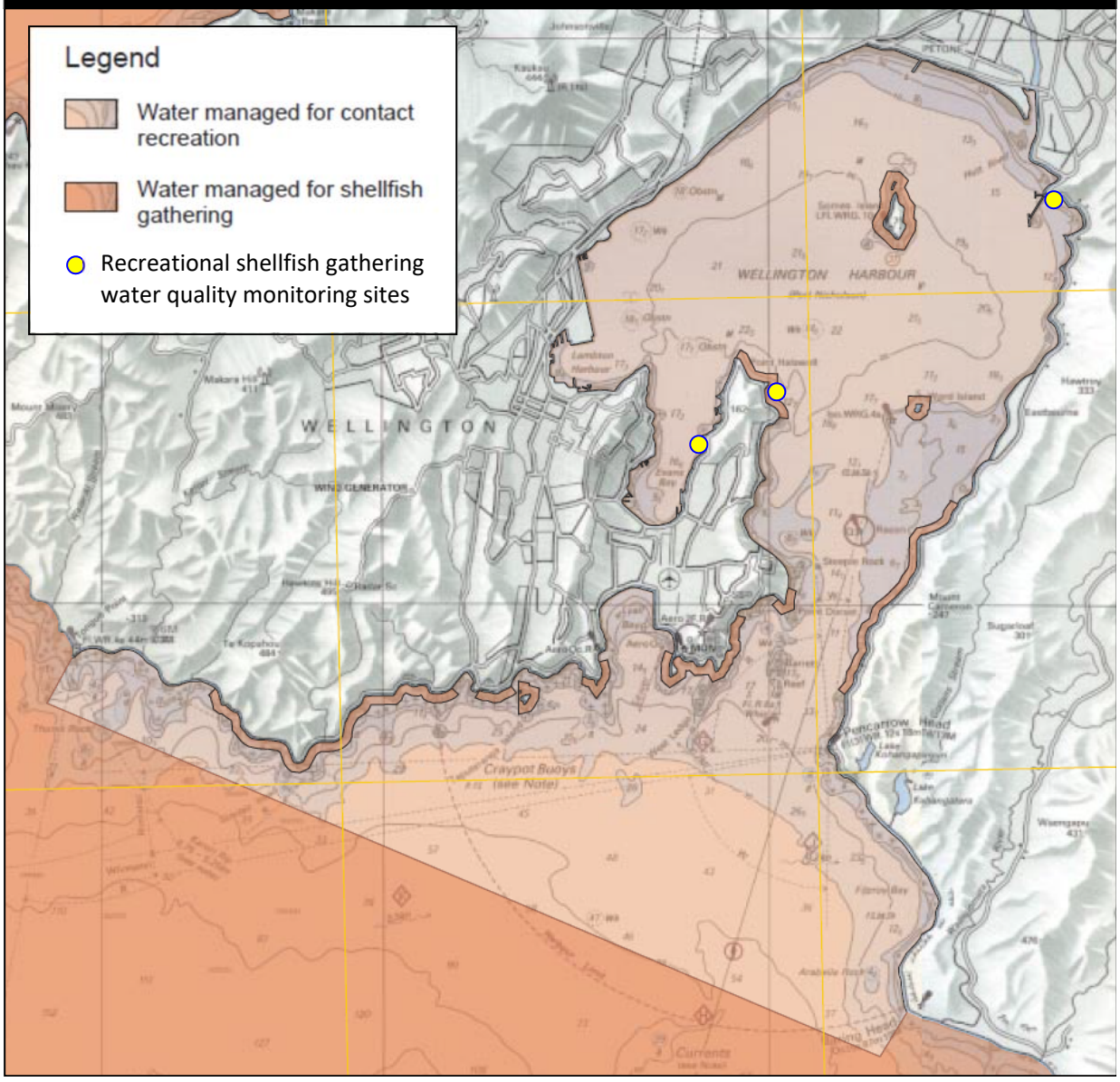
4.2 Regional marine recreation activity distribution

4.2.1 Shellfish gathering and swimming

The *Regional Coastal Plan for the Wellington Region* (WRC 2000) states that parts of the waters of Wellington Harbour are to be managed for shellfish gathering purposes (10.2.1, p126), and that all of the harbour is to be managed for contact recreation purposes (10.2.2, p127). These areas are defined in Planning Map 8D, much of which is shown in Figure 12. This shows shellfish gathering sites around, for example, Mātiu/Somes Island and for much of the coast north of Pencarrow Head, and coastal waters east of Baring Head.

Recreational shellfish gathering water quality monitoring was carried out over the 2016/17 season in the Harbour by the Greater Wellington Regional Council (GWRC) at Shark Bay, Mahanga Bay and Sorrento Bay (Figure 12). The basis for assessing compliance with MoH/MfE guidelines for assessing microbiological contamination in shellfish-gathering waters are (Brasell & Morar 2017):

Figure 12: GWRC Regional Coastal Plan Coastal Water Classes for Wellington Harbour



- The median faecal coliform content of samples taken over a shellfish-gathering season shall not exceed 14 cfu[7]/100mL; and
- Not more than 10% of samples collected over a shellfish gathering season should exceed 43 cfu/100mL.

In 2016/17 only Shark and Mahanga Bays were compliant with a median cfu/100ml of 4 and 8 respectively, and at both sites, only 3 of 17 samples exceeding 43 cfu/100mL. Sorrento Bay was non-compliant with a median cfu/100ml of 36, and 8 of 17 samples exceeding 43 cfu/100mL (Brasell & Morar 2017).

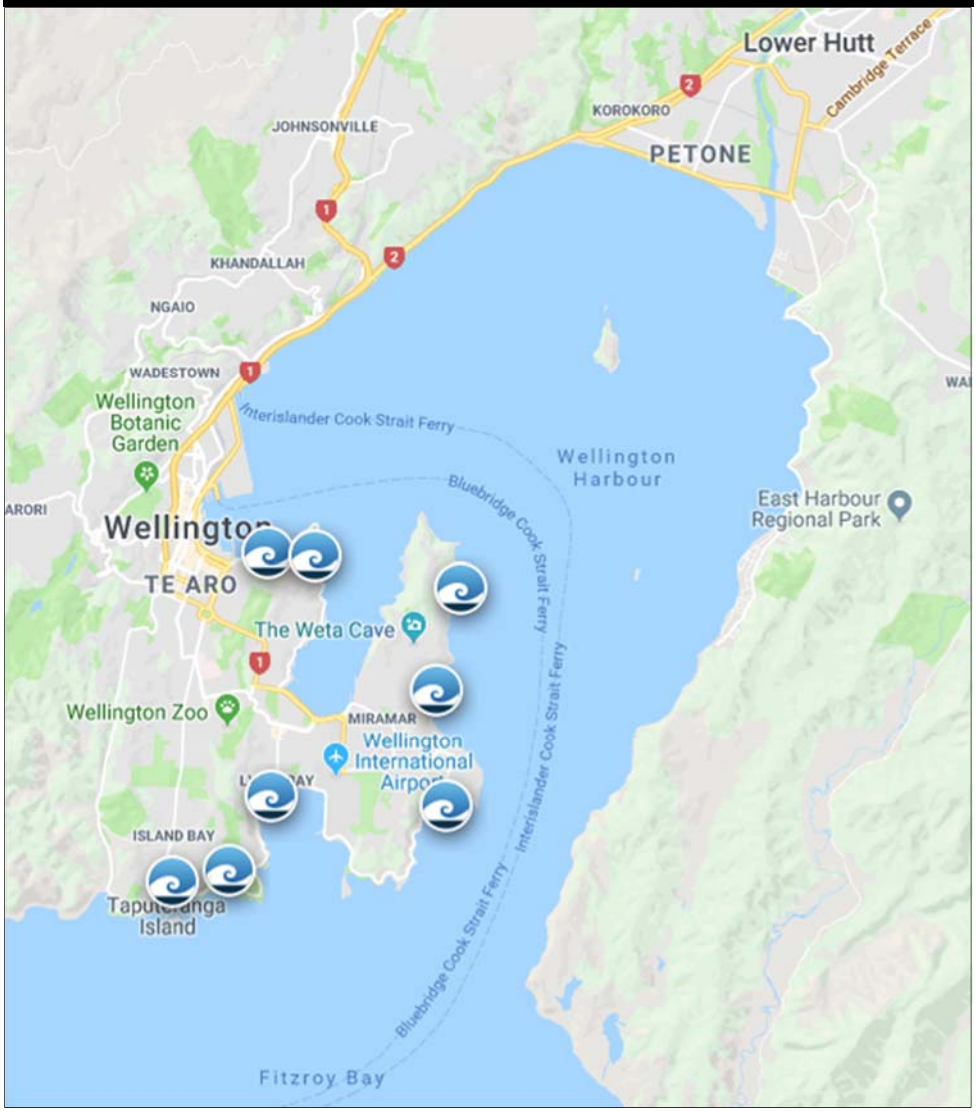
The GWRC monitors recreational water quality at 36 sites in and near Wellington Harbour (Figure 13). These are considered to be 'popular' swimming sites[8], although swimming can occur at many sites throughout the Harbour. For example, water contact recreation is likely to be associated with all shellfish gathering sites indicated on Figure 12, although these are not shown in Figure 13. Suitability For Recreation Grades for the 13 sites in the Hutt City Council area ranged from ‘fair’ to ‘good’, at the end of the 2016/17 swimming season (Brasell & Morar, 2017).

Figure 13: GWRC monitored marine bathing sites in and around Wellington Harbour

[7] Colony forming units of faecal coliforms
[8] http://mapping.gw.govt.nz/GW/RecWaterQualityMap/RecWaterQualityMap.htm retrieved 17/11/2015

Surf Lifesaving New Zealand identifies eight swimming beaches in and around Wellington Harbour (Figure 14). None are in the Eastern Bays.

Figure 14: SLNZ recommended swimming beaches



4.2.2 Fishing and diving

The Spot X national surfcasting (Draper & Airey 2012) and boat fishing (Airey 2012) guides identify many fishing opportunities in and around Wellington Harbour, although no boat fishing sites in Airey (2012) are near the study area (or north of Point Halswell).

Enderby and Enderby (2007) (a national Spot X diving and snorkelling guide indicate the nearest site to the study area is Ward Island ((beginner crayfish snorkel and dive).

Figure 15 (over page) shows 12 recommended shore-based fishing sites in and around the Harbour from Draper & Airey (2012). Only one site is identified on the Eastern Bays at Point Howard (28), with the following description:

Target species: Kahawai

Other species: Barracouta, gurnard, red cod, snapper, trevally

Method: Wharf or jetty, floating rig

Bait: Live herring, pilchards. Use berley

All tides, all year.

Best time: all day. Best wind: NE, E

Experience: Beginner, all fitness levels

Access: Cross the Hutt River Bridge and take Seaview Road to Point Howard. Park at the base of the wharf and walk out.

Fishing tips: Put frozen berley or a tin of catfood in an onion sack, or wire basket, and hang it in the water where you intend to fish. Fish off the wharf as you would around the rocks with strayline and floats. Keep your baits in the vicinity of where your berley is drifting. Small livebaits are also worth using. It can be worth casting a bait well out from the wharf. Kids will be happy with a sabiki, or small baits and hooks.

Steve's Fishing Shop notes online: [9]

Figure 15: Surfcasting guide recommendation, Draper & Airey (2012)

[9] https://stevesfishingshop.co.nz/pages/tips-n-info August 2018

Wellington Harbour offers all year round surf casting, with as large a variety of fish to be caught, as there are many and varied places to fish. Kahawai, snapper, tarakihi, cod and gurnard are the most commonly caught fish, though there is also a wide variety of the more unusual species such as elephant fish, skate, leather jackets and kingfish.

Like all fishing spots, wind plays a large part in your decision of where and how to fish. If conditions are windy try and find a sheltered spot so that your rod doesn't shake all over the place as this makes it hard to detect the bites….

Most local anglers have heard the stories about the big / huge fish being caught at the likes of Miramar wharf, the Overseas Passenger Terminal or Petone wharf etc, only because these places are fished twenty four hours a day, seven days a week. There is no spot in the Harbour that is the best spot, such is the diverse and successful nature of fishing in Wellington Harbour. Every little bay, jetty, beach or wharf offers potentially great fishing.

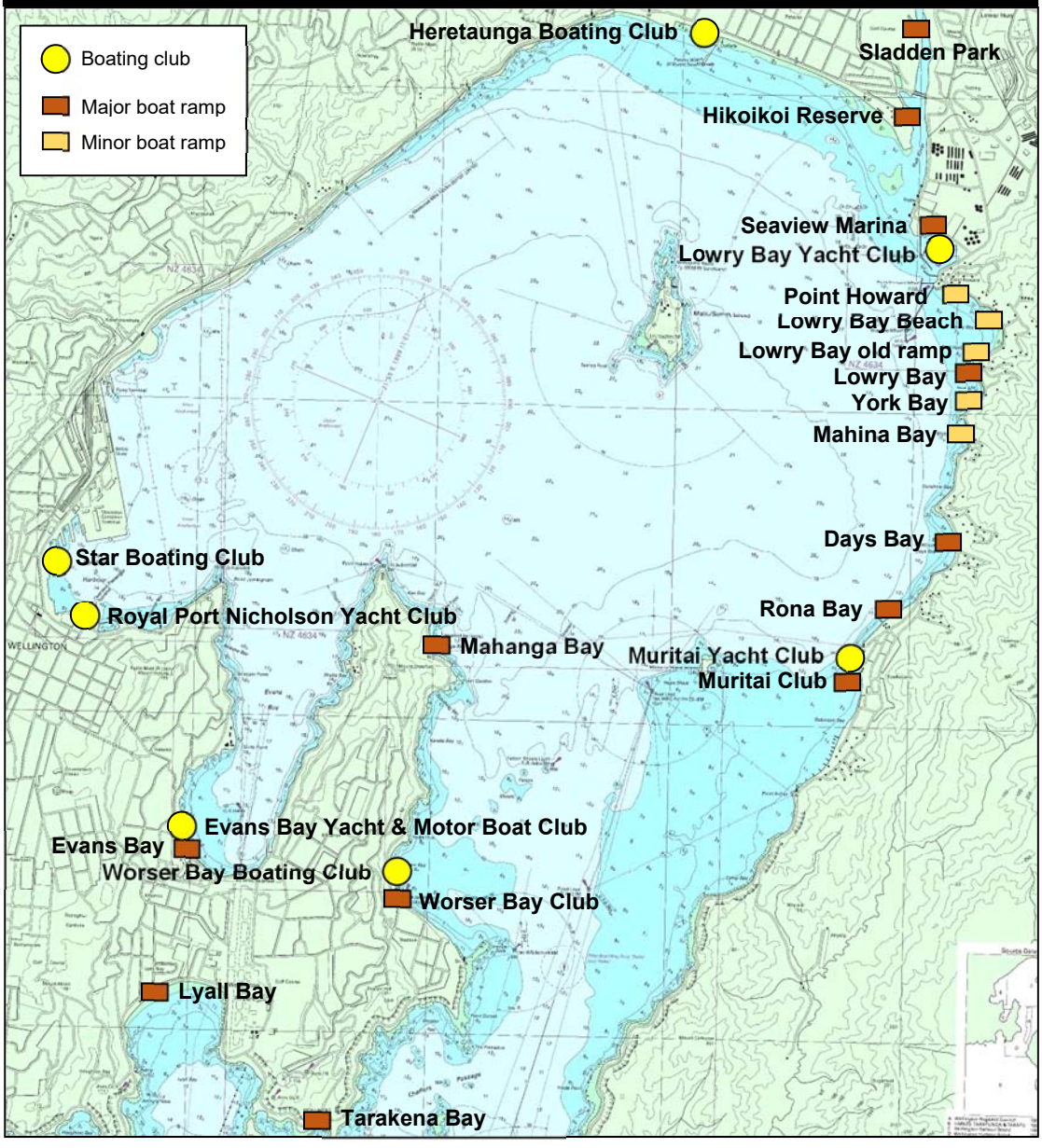
4.2.3 Boating and sailing

The *New Zealand Cruising Guide Central Area* (Murray and Von Kohorn 2002) does not identify any easy casual anchorages in Wellington Harbour. The marinas and moorings at Chaffer's Marina, the Royal Port Nicholson Yacht Club, Evans Bay Yacht and Motor Club, Seaview Marina and Lowry Bay are discussed, although berthage for visiting craft is described as limited. The commercial wharves are suggested for larger craft. The Cruising Guide states (p26):

> *The remainder of the harbour is not recommended for anchorage as it is open and exposed to wind and sea conditions. Shelter can of course be found by anchoring next to windward shores but there is considerable commercial traffic thought the area and these are best used only as picnic spots.*

Figure 16 shows the locations of boating clubs and boat launching ramps in Wellington Harbour. Other boat launching opportunities for small craft are available from many beaches. Each club hosts training and racing activities in their immediate areas within the Harbour. Keeler races

Figure 16: Boat club and ramp locations, Wellington Harbour



and learn-to-sail programmes can include the entire Harbour area, and rely on existing navigational marks or permanent or temporary sailing marks maintained by either the Royal Port Nicholson Yacht Club or the Lowry Bay Yacht Club. Two sailing marks are off Lowry Bay and Days Bay, but are some distance offshore.[10]

Windsurfing New Zealand identifies six launching sites in the Harbour (Figure 17).[11] Advice about the use of these sites indicates that the entire harbour is used for the activity. Site 4 is Seaview Marina, south of the study area, and Site 5 is at Eastbourne. For the latter, the site advises:

Figure 17: Windsurf launch sites

> *Keep going around to Eastbourne, DON'T stop at Days Bay unless you want to show off/ look stupid/ get frustrated or hire a catamaran. (There are boards for hire here sometimes too). After Days Bay there are innumerable locations to sail, starting at Windy Point and heading south past the yacht club, wharf and down to the rugby club. Heaps of grassed areas, usually sheltered. Best sailed in a northwesterly (prevailing wind) but usable in anything from northerly to southerly that doesn't have an easterly component. In light winds is slalom territory, chop hopping etc as it gets stronger, bigger waves in 40+ Knots. Lots of local facilities for other recreation, playgrounds, walks, shops, tennis courts, coastal walk/bike ride. Eastbourne is a good launch spot for harbour blast/cruise to Ward Island, Seatoun, Oriental Bay/ Evans Bay or up the harbour towards Petone. You may have to swim in/out of some places (i.e. Days Bay). Watch out for ferries if crossing the shipping lanes! I sail here most of the time because it's convenient but also reliable - if there's wind then Eastbourne is probably OK.*

Wellington Harbour is readily accessible for sea kayaking. The closest rental venue for kayaks and SUPs (stand-up paddle boards) is The Boatshed in Days Bay (which also hires bikes).

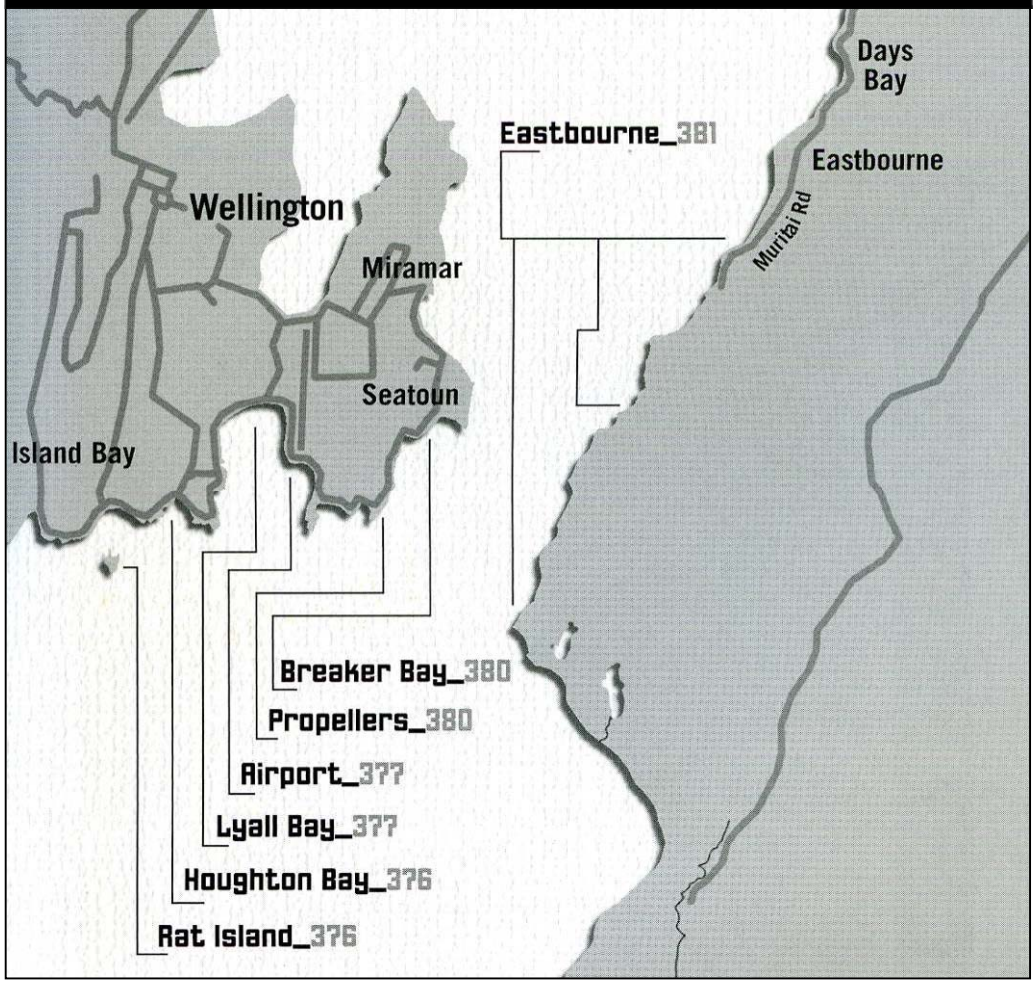
[10] https://rpnyc.org.nz/club/wp-content/uploads/2016/05/2016-SI-2H_Winter-Series.pdf
[11] http://www.winzurf.co.nz/windsurf/wgtnz/wgtnz29.htm retrieved 13 Aug 2018

4.2.4 Surfing

The NZ Coastal Policy Statement (DOC 2010) does not identify any surf breaks of national significance in the Wellington Region. Lyall Bay and Titahi Bay are commonly identified as the top regional sites,[12] as well as a number of breaks along the Wairarapa Coast (such as Ning Nongs, The Spit and Tora).[13]

The *Wavetrack New Zealand Surfing Guide* (Morse & Brunskill 2004) identifies a number of surfing sites between Eastbourne and Pencarrow and near the harbour entrance (Figure 18). None is in the study area.

Figure 18: Wellington surf breaks (Morse & Brunskill 2004)



[12] For example, see: http://www.jasons.co.nz/surf-cities-in-new-zealand; http://www.surf2surf.com/reports/wellington; http://surf.co.nz/reports/north-tasman/wellington/; http://www.wellingtonnz.com/discover/things-to-do/sights-activities/beaches-and-bays/

[13] http://www.swellmap.co.nz

4.2.5 Strava water sports summary

Figure 19 shows the Strava heatmap for water sports for 2015 and 2017 (a Strava data issue meant no records for 2016 are shown). Strava data are based on GPS records from smartphones uploaded to a central database, allowing speed and time comparisons between runners, cyclists, swimmers and other water sports participants, and monitoring of individual activity or training targets. While the service is popular with professional athletes, its membership is dominated by casual recreation participants. There were more than 17 million

Figure 19: Strava heatmap for water sports 2015 and 2017

subscribers internationally in 2016. There are no public data for national for international membership, although various sources suggest membership has been growing by a million every 40 days.

Some caution needs to be applied to the use of these data as they show participation by only Strava members, and some data accumulates from users staying logged in when they are driving or are on a ferry. However, they give a good indication of, particularly, the relative levels of use of different settings (no absolute data are provided publicly by Strava).

Water sports include canoeing (such as waka ama), kayaking, rowing, wind surfing, kite surfing, SUP, surfing or swimming. Although a participant could record any activity (such as dinghy sailing recorded as kayaking), sailing is not a category that can be selected in the application.

The water sports data in Figure 19 are potentially dominated by ocean swimmers, kayakers and the occasional sailor (evidenced by the zig zag tacks). Point Howard is shown as a popular access point, and this may be associated with, for example, the Wellington Coastline Swim Series, which has legs between Point Howard and Days Bay, and York Bay and Days Bay.[14] Relatively little activity is shown near the beaches between Whiorau Reserve and Days Bay.

[14] https://www.tractionfitness.co.nz/sea-swim-registration/

4.3 Terrestrial recreation

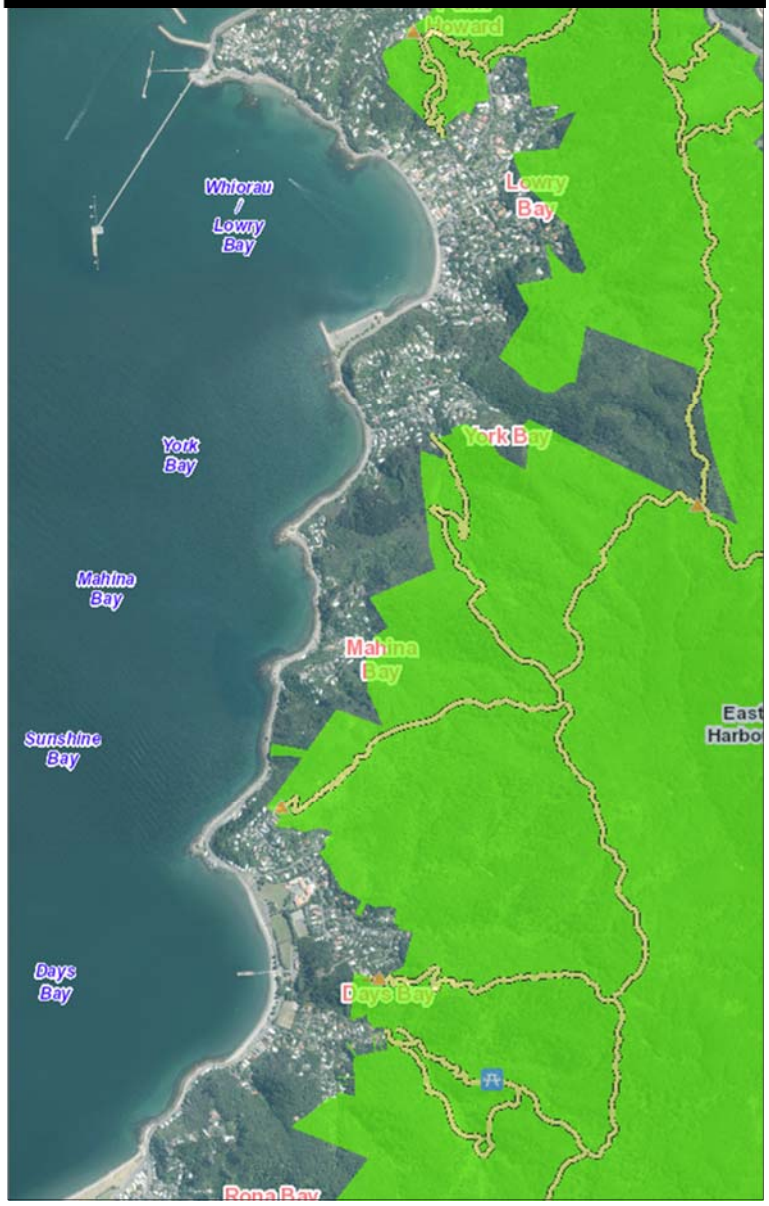
This section identifies public recreation lands which may be affected by the proposed shared path. Wider relationships with the complementary use of other recreation areas is considered in section 7.

4.3.1 Public access

It is a challenge to show public lands and access via reference to one local or central government mapping system. Figure 20 shows the extent of regional parks administered by the Greater Wellington Regional Council as shown on the GWRC online GIS reserves layer. This illustrates the location of the following GWRC walking, running and dog walking tracks:

- The Howard Road Track and Chevoit Road track leading in and out of Point Howard,
- The Kaitawa Track linking to York Bay,
- The Ferry Road Track linking to Sunshine Bay,
- The Korimako Walk and Kereru Road Track linking to Days Bay, and
- The Main Ridge Track which links them all.

Figure 20: GWRC regional parks and tracks



None of these is affected by the proposal, unless via increased use. The GWRC tracks are described as 'moderate' or 'hard', while the shared path would be 'easy', but the latter will provide links for long circuit walks and runs (1.5 to 4 hours).

Figure 21 shows the Land Information NZ (LINZ) data service layers for NZ Primary Hydro Parcels, NZ Primary Road Parcels and Protected Areas (which is clearly incomplete). There is no LINZ Managed Crown Property shown in the study area. Of note is the location of the hydro parcels – which are normally all publicly accessible – adjacent to the road reserve in almost all locations. The foreshore and seabed adjacent Point Howard is vested in the Crown in accordance with the Foreshore and Seabed Endowment Revesting Act 1991. Land west of the Marine Drive road reserve outside a hydro parcel is either administered by the Hutt City Council as public reserve or is privately held (such as the reclaimed land at Point

Howard owned by Centreport Ltd). This assessment does not consider the latter, and identifies the former in Figure 22 from the Walking Access Commission database.

Figure 21: LINZ data service layers for hydro parcels, road and protected areas

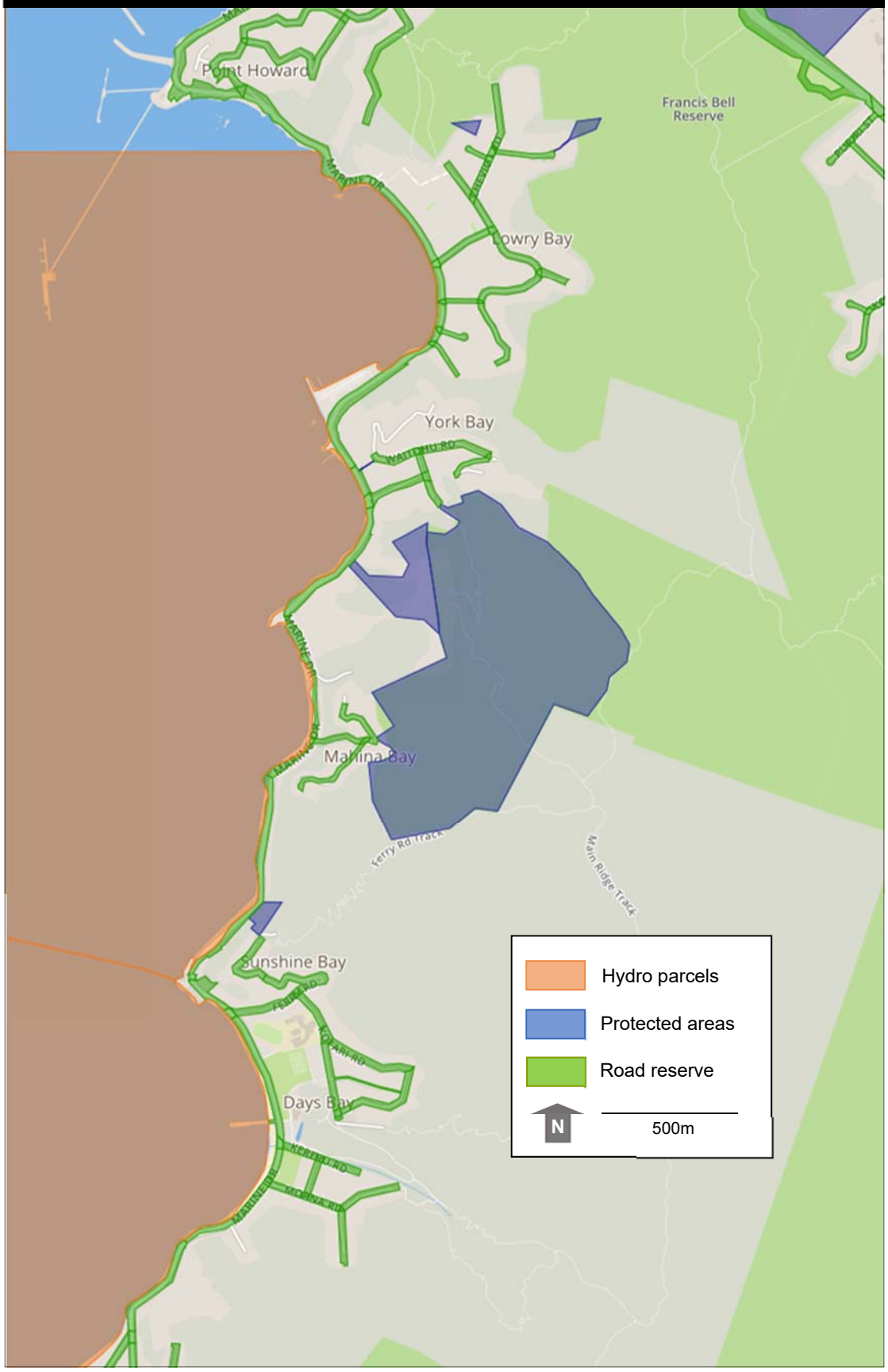
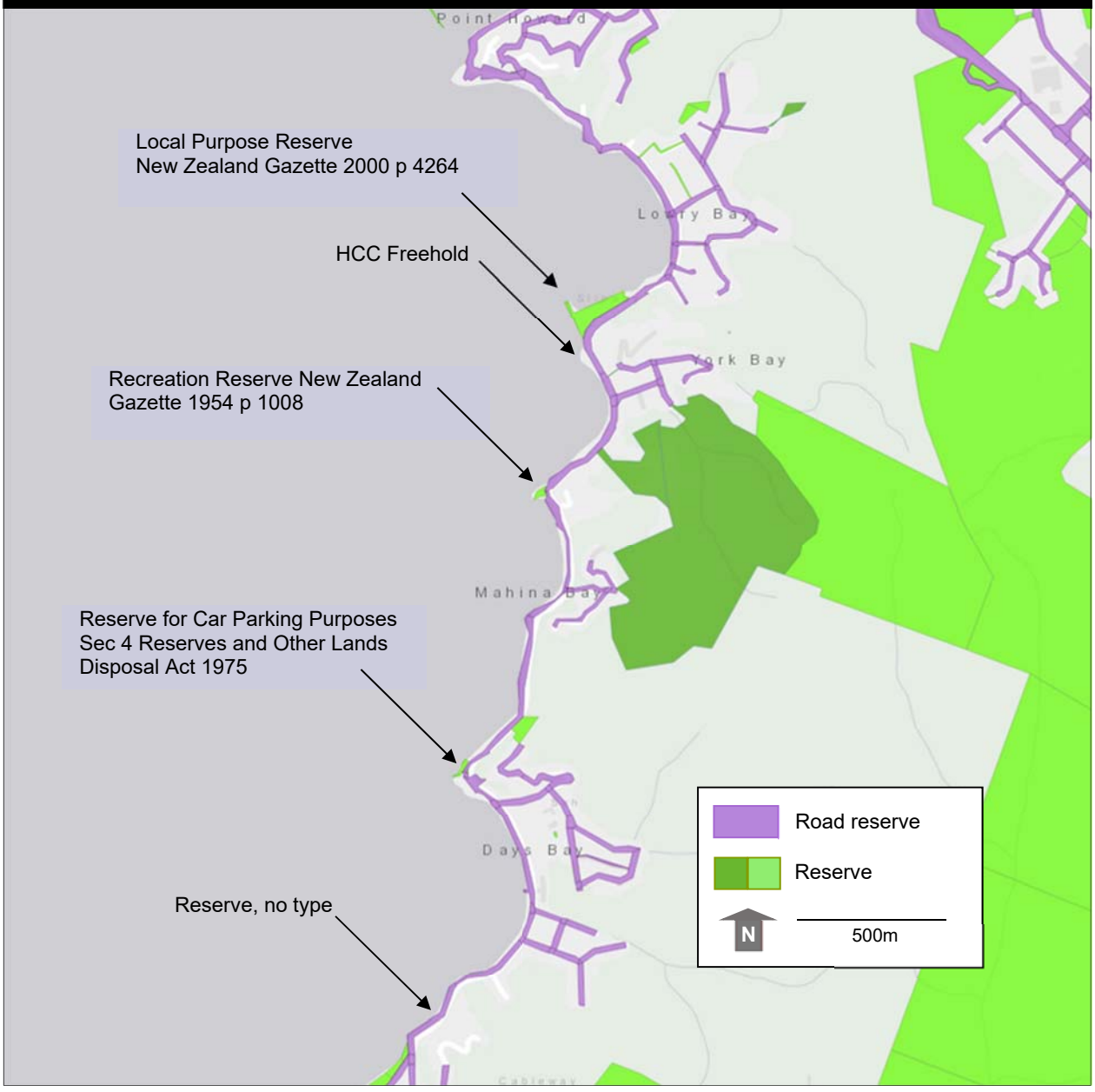


Figure 14 shows Walking Access Commission's online walking access mapping system (WAMS) output for study area. WAMS aims to show all public access opportunities nationally, but does not feature easements, and frequently has large omissions (compare Figure 20 with Figure 22, for example). In this case, the WAMS output shows two gazetted reserves on the local foreshore – Whiorau Reserve (local purpose reserve with no subsidiary purpose under the Reserves Act 1977) and the headland south of York Bay (recreation reserve, Reserves Act 1977); the Ferry Road headland near the service station at Sunshine Bay originally classified under the Reserves and Other Lands Disposal Act 1975, which no longer applies, and which includes a wastewater pump station and a parking area regularly used for shore-based fishing.

The small headland south of Whiorau Reserve does not appear to have reserve status, but is held freehold by the HCC, has no recreation infrastructure and is occupied by a wastewater pump station. A slender strip of land with unidentified reserve status is located at Windy Point.

The Hutt City Council (HCC) has no reserves management plan covering these areas; the Hutt City Council Parks and Reserves Bylaw applies to gazetted reserve, and all sites are zoned

Figure 22: Walking Access Commission walking access maps



General Recreation in the Hutt City District Plan with three relevant Anticipated Environmental Results (7A 3):

- Adverse effects of recreation activities on adjoining residential activity areas will be avoided, remedied or mitigated;
- Compatibility of recreation activities with the characteristics of the land;
- The scale, size, location and external appearance of buildings and structures will have adverse effects which are no more than minor on amenity values and flood protection structures.

Whiorau Reserve has recently been redeveloped for boat launching, car and trailer parking and casual recreation use. Effects on these areas are considered in section 5.

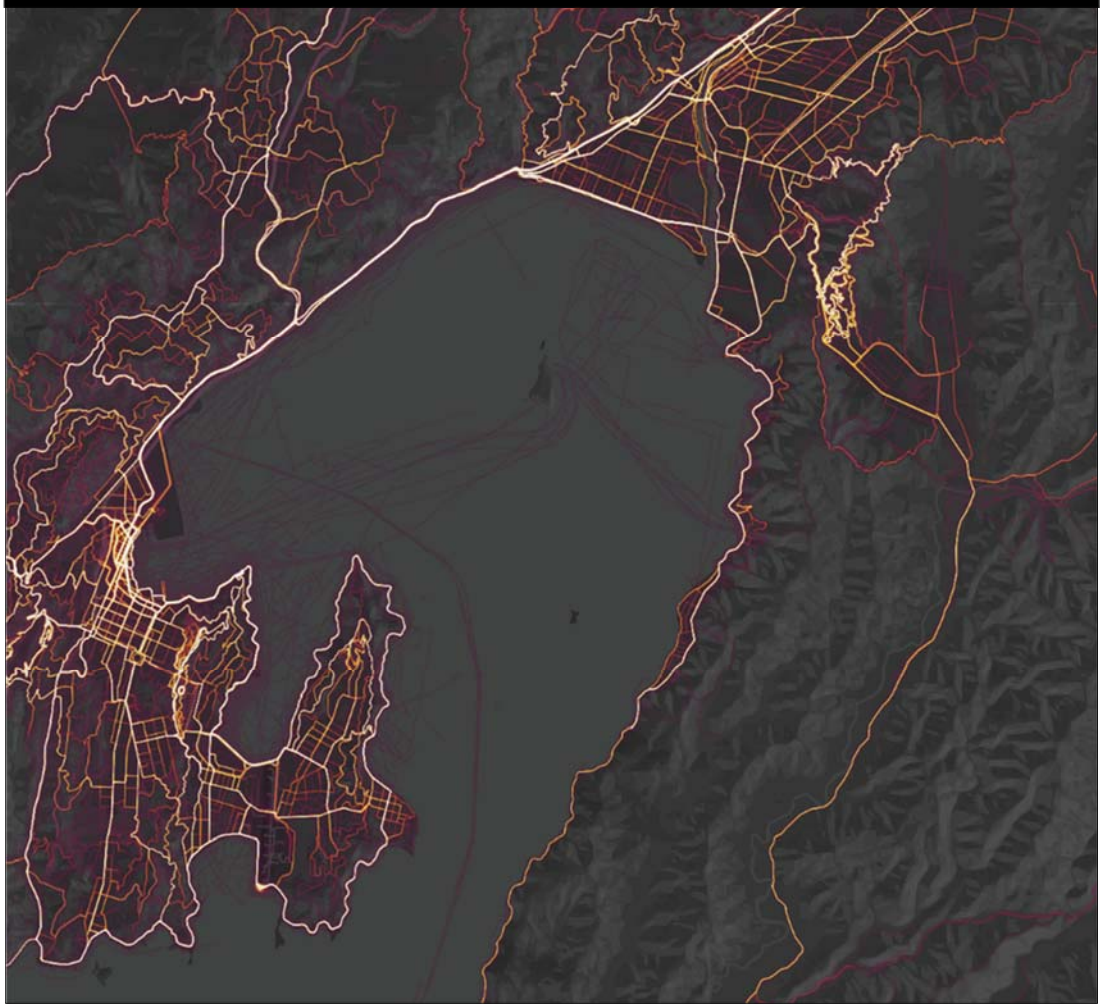
4.3.2 Road and track activities

Figure 23 and Figure 24 shows the Strava heatmaps for cycling and running, respectively, for 2015 and 2017 (see section 4.2.5 for a summary of the basis and limits of Strava data).

These show, for cycling, lower but still relatively high levels of activity in the Eastern Bays compared with central Hutt City and the Hutt River Trail, and a change in intensity at Burdens Gate, probably due to the change in surface and a modal shift from road to mountain biking.

Strava allows members to identify specific segments of a ride and to identify their ranking for speed over that segment with other members. Those other members who have used the

Figure 23: Strava heat map for cycling, 2015 and 2017



segment are automatically entered as comparisons, and so each segment analysis shows how many rides have been recorded for each segment and the number of riders. Between Point Howard and Days Bay there are six identified segments. Any two provide similar data. The Days Bay to Point Howard segment has records for 15,000 rides by 1,824 riders since 2011, although the vast majority of that use is in the past three years. For the 2018 year-to-date (29 August), 714 riders are recorded (76% men and 24% women). For a shorter section – the York Bay Sprint from Whiorau Reserve to the southern York Bay headland – 1,953 individual cyclists are recorded since 2011, and 762 for the year to date. By comparison, the Hutt River Trail from Trentham to Fergusson Drive had 4,231 rides by 1,145 riders since 2011, and 479 riders in the year-to-date; while SH2 on the other side of the Hutt River had 15,622 rides by 1,757 riders since 2011, and 645 riders in the year-to-date.

It is difficult to benchmark the Strava counts against total use data. For example, in Nelson there is a trail counter for a section of coastal shared path between Richmond and Nelson (Whakatu Drive) which forms part of the Great Taste Trail (a Great Ride). From 30 January 2018 (the counter install date) to 28 August 2018 this recorded 57,000 cyclists passing in both directions (and only 6000 walkers or runners). The Strava record for a similar period (year-to-date) for the relevant cycling segment shows 448 riders (and 121 runners). The average number of rides per rider for this segment since 2011 is 5.3 (8,612 rides by 1,628 people). Applying this ratio would give us only 2,374 Strava rides for the year-to-date – or less than 4% of the total count (and 5.4% for runners – if all the non-cyclists on Whakatu Drive were runners). The Whakatu route is a popular commuter ride for cyclists.

Figure 24: Strava heat map for running, 2015 and 2017

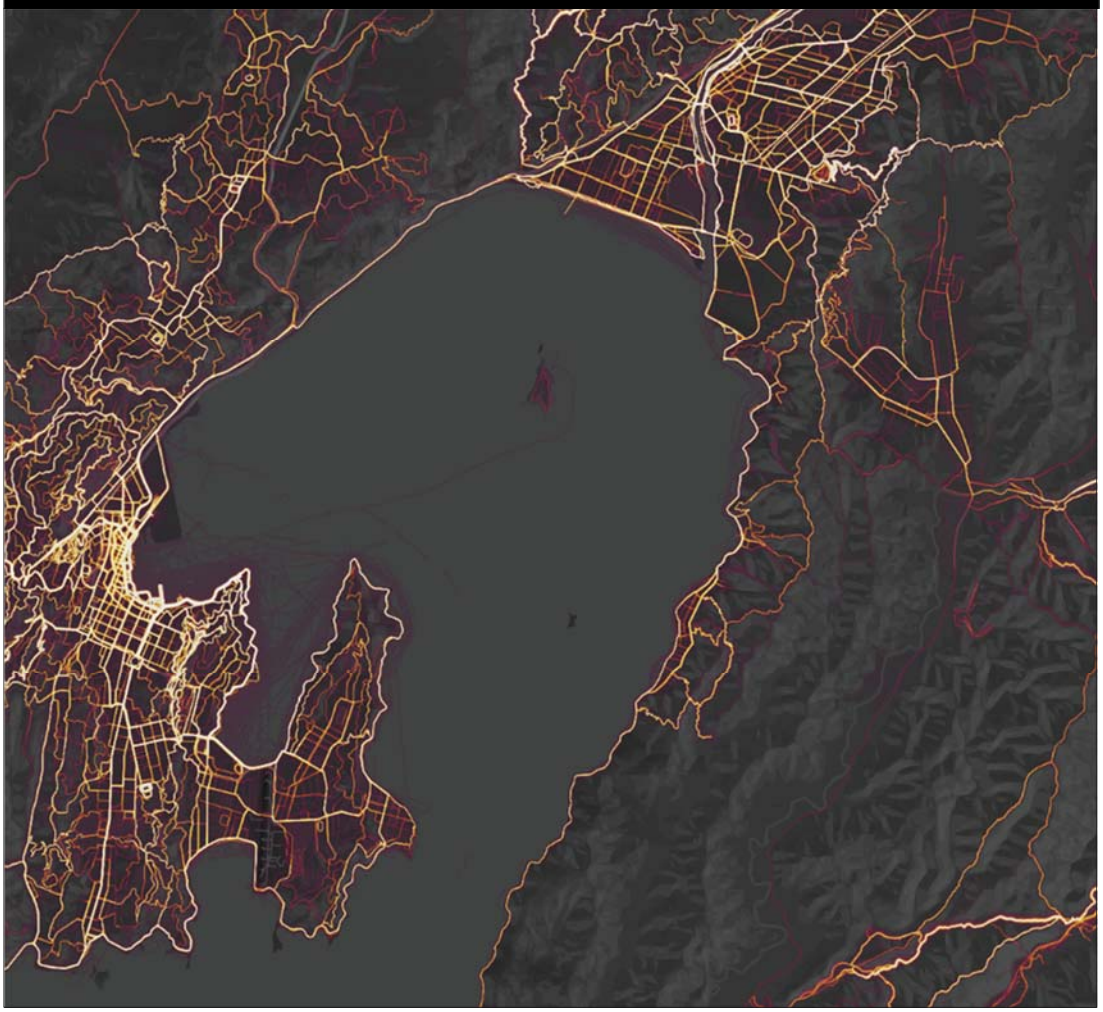


Figure 24 shows the Strava heatmap for running. It is important to note that the data show relative levels of activity for running only, and do not compare running and cycling. For example, only 128 runners are recorded by Strava for the Point Howard to Days Bay segment since 2012 (with 464 activity records in total), and 53 runners for the year-to-date. Oriental Parade, by comparison, has 108,335 Strava run records by 8,436 people since 2011, and 3,683 individual runners for the year-to-date.

Running activity tends to fade slowly as the distance south increases, and there is evident use of the Regional Park tracks – which are closed to mountain biking south of Point Howard.

The GWRC *East Harbour Regional Park Resource Statement* (GWRC 2007) reports a 2001 survey of visitors to the Park which found that 31% of the recreational users of the Park were Eastern Bays residents. Lower and Upper Hutt residents accounted for 23% of visitors and Wellington City 21%, and Wainuiomata residents 6%.

The Eastbourne Community Board 2014 *Eastbourne Community Survey* (Hutt City 2014) included questions about existing use of the Eastern Bays pathway, and expectations for future development. The survey sample was self-selected and based on response to an insert in the local Eastbourne Herald, with 624 responses, or 17% of the Eastern Bays adult population. Response rates from each bay were generally very proportional to their populations. Table 5 shows the frequency of use of the existing Eastern Bays walk and cycleway, with 70% using it at least monthly. Fifty-four percent of respondents stated that the current state of the path 'deterred' them from using it, and a similar number – 59% – described the path as unsafe or very unsafe (Table 6).

Table 5: Frequency of use of Eastern Bays walk / cycleway Eastbourne Community Board 2014 (n=624)

Frequency of use	Percent
Daily	13
Weekly	25
Monthly	32
Never	27
No response	3
Total	100%

Table 6: Perceptions of safety of the walk / cycleway Eastbourne Community Board 2014 (n=624)

Sense of safety	Percent
Very safe	1
Mostly safe	33
Unsafe	43
Very unsafe	16
No response	6
Total	100%

A third of respondents considered having the proposed new shared path built was the 'number one most important issue' facing the community; while 52% placed the activity in their top three most important issues (along with a 'Vibrant village' and 'Seawall / planning for climate change'). More results from the Eastbourne Community Survey are discussed in section 7.2.

5 Interview summaries

Twenty interviews to support the development of this assessment were carried out with the individuals listed in Appendix 1. The intent of the interviews was, primarily, to help describe the recreational uses of the beaches and headlands in the study area, and this information advises section 6 of this report.

Several other issues were discussed as summarised below.

The interviews do not represent a survey or quantitative review but were required to ensure amenity effects on beach use were better understood. The findings in this report are those of the author and do not necessarily represent the opinions of those interviewed.

5.1 Reactions to beach nourishment

Fourteen of the 20 interviewees considered beach nourishment a good idea, largely as a response to the effects of the shared path on beach width, but also as a general amenity development. One considered shifting material from a short distance offshore rather than bringing in new material. Two considered nourishment unnecessary since the beaches change naturally. One considered having a narrower path a better option than adding beach material. One preferred sand over shingle to create better beaches, and one preferred shingle or pea gravel over sand to prevent it being blown across the road.

Point Howard was most frequently referenced as needing nourishment (8), followed by Lowry Bay (6) and York Bay (3). Sorrento Bay, Windy Point and Mahina and Sunshine Bays were mentioned by one interviewee each.

5.2 Changes to beaches over time

Many of the interviewees had lived in or been visiting the Eastern Bays for more than 30 years, and one for 60. Fifteen interviewees noted that the beaches in the study area north of Days Bay were generally quite stable, although they changed from day-to-day or week-to-week; and six of those noted that some considerable change in beach area was evident at and south of Days Bay and particularly in Rona and Robinson Bays. Two noted a negative change in orientation and scale of beach at Point Howard in response to the construction of the small launching ramp at its northern end. One queried whether the construction of Whiorau Reserve had had an effect on sand supply in Lowry Bay, which in their opinion was only just recovering. One expressed an opinion that waves washing ashore at Lowry Bay were larger in the past, but that some locals disagreed.

5.3 Benefits of path construction

All interviewees supported the proposal for a shared path in general terms, with enhanced walking and cycling options, health benefits, better access for children and improved safety the key benefits (17 interviewees mentioned one or more of these). The growth of use of e-bikes was mentioned by three. Five noted the benefits of the path to tourism and visitors to the Eastern Bays, while one, jokingly, mentioned the down-side of this. Three noted that the path should not come at a cost to beach amenity, with either nourishment or narrow paths a solution. Two noted that commuting cyclists would probably remain on the road, although if the path was smooth and clear of debris – such as shells dropped by seagulls – commuters could access it. Two noted the potential for losing carparks and having more demand for parking, although one of these noted that any small potential loss of residential carparking was balanced by the benefit of the new shared path. Three noted the potential for conflicts between cyclists and walkers.

6 Review of effects by coastal section

This section:

- Details the recreation values of each section of coast in the study area,
- Describes the effects of the proposal on them; and
- Considers the need for beach nourishment as a response to loss of beach width, including rocky areas and headlands.

A summary of these findings are presented in Table 1 in section 1.3.4.

The scale of beach loss is described in the AEE report and in its Appendix E: the Coastal Processes Report. Appendix F – Beach Nourishment Design – further considers beach nourishment activity.

Photos of each relevant component of the study area are provided (all dated early August 2018, apart from Sorrento Bay which is Google Streetview from February 2015). Area descriptions are taken from observation and interviews.

6.1 Point Howard and Point Howard Beach

Point Howard Beach is sometimes referred to as part of Sorrento Bay. In this assessment, Point Howard Beach is the sandy bay indicated in Figure 1, including the rocky headlands on either side, while Sorrento Bay is the smaller and discrete beach with its rocks surrounds immediately to the south and discussed in section 6.2.

The proposal requires the construction of a shared path linking the existing path on the western side of Seaview Road with the proposed shared path heading south, retaining the existing access ramp at the northern end of the beach and with new access steps constructed at the southern end. Double curve seawall is proposed for the most of the section, although in the beach section, often only the upper curve will extend above sand level. This affects:

- the layout of the parking area at Point Howard;
- the use of a grassed roadside berm area (Photo1);
- the layout and quality of the Point Howard Beach parking area (Photo 2);
- coastal access via some additional revetment in the north (an extension to, and tidying of, existing rubble revetment);
- coastal access via construction of double curve sea wall and a 2.5m wide path adjacent to the Point Howard Beach (the sandy portion) (Photo 3);
- coastal access via construction of curved double seawall and a 3.5m wide path adjacent to the rocky section of coastline to Sorrento Bay.

Point Howard is a popular fishing area, but this use will wane with the proposed demolition of the Point Howard Wharf. Shellfishing – including for mussels – occurs around the Point itself. The carpark is otherwise a casual pull-over area or a spill-over carpark for Point Howard Beach. The proposal has no effect on these values.

Recreation amenity provided by the grassed berm (Photo 1) will be focused on events as part of the wide Point Howard parking area. It is not connected to the beach area and is exposed to the road. There is no effect of the proposal on the number of carparks immediately to the north of Point Howard Beach; and the existing area is in need of remediation (Photo 2).

The proposed section of rock revetment to the north of the beach proper covers an area with some protruding bedrock and rock detritus from previous coastal works. There is no effect on recreation amenity.

The 100m beach section of Point Howard is a very popular summer destination and is used for triathlon and swimming events and small boat launching, including by kayak rental companies. Unlike other beaches in the study area, it is largely sandy, although it can have exposed gravel after storms. It has a shallow profile and is therefore a safe beach for families, with waist-deep water up to 30m offshore. It is also protected by rocky headlands and has adequate off-road parking on both sides of the road nearby. Changing sheds and toilets, a rubbish bins and picnic table are located on the adjacent road reserve. Also unlike most bays in the study area, Point Howard Beach attracts use from outside the local area, with days visitors from Lower Hutt and Wainuiomata. Interviewees report the beach being used to capacity on summer days.

The access ramp at the northern end of the beach was described by two interviewees as having had a negative effect on the retention of sand on the beach. This is proposed to be retained.

The effect of the construction of the double curve seawall along this sandy section of beach is to reduce the width of available high and all-tide beach. Due to the scale (local and regional) and type of beach use, mitigation via beach nourishment is recommended.

6.2 Sorrento Bay

The proposal includes the construction of double curve seawall along the Sorrento Bay section of the study area, with new beach access steps to replace those at the northern and southern ends of the beach. This affects the:

- Width of the beach and rocky foreshore,

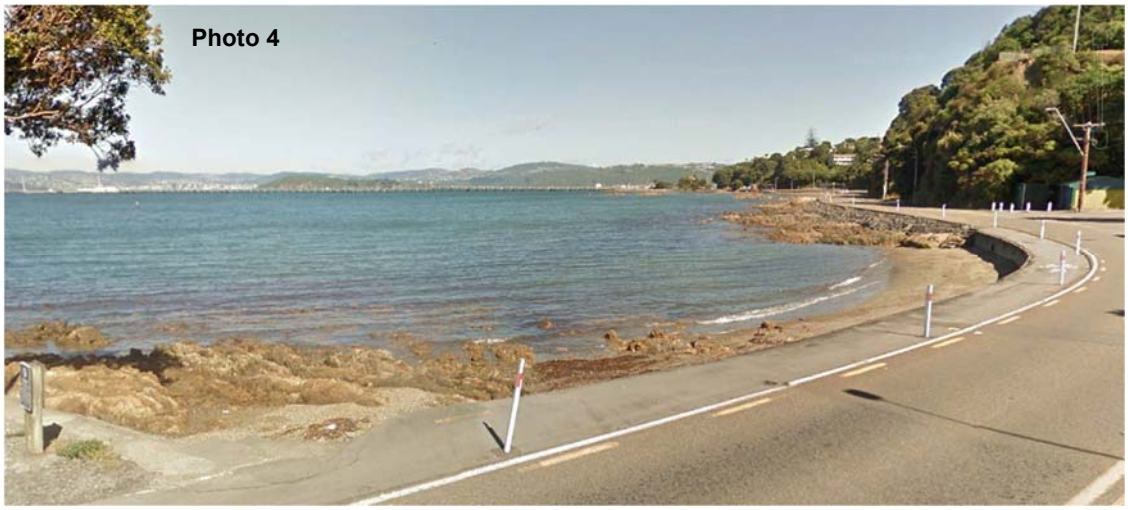


Photo 4


Photo 5

- The small seating area to the north of bay (Photo 6) (positively by providing better access).

Sorrento Bay is predominantly a local swimming beach with no high-tide beach, and little visitor parking. The rocky headlands are occasionally used for shore fishing and shellfish collection. There is some 'overflow' beach use when Point Howard is busy.

The improvement of access between Point Howard Beach and Sorrento Bay could increase the level of use of the beach. However, the change in beach amenity caused by the wider path will not affect its use for swimming and beach nourishment is not required to mitigate adverse effects on beach amenity.

Photo 6

6.3 Lowry Bay

Lowry Bay is proposed to include double curve seawall in the central part of the bay, and single curved wall in the south, with a section of revetment south of Whiorau Reserve, with access steps at both ends of the double curve wall. This will affect the width of the Lowry Bay beach.

Lowry Bay has two distinct beach sections. North of the bus stop there is very little high tide beach, and the beach material tends to be more gravel than sand. This section has relatively little use compared with south of the bus stop with has a consistent area of high-tide beach with a small area of vegetation (Photo 7) and sand along the low-tide mark. Parking is only available on side-streets and there is some local tension with visitors parking illegally. Consequently the beach is used mostly by locals for swimming and boat launching, with a swimming platform located in the southern corner of the Bay over summer.

Lowry Bay is the most frequently used part of the study area for shellfish harvesting – pipi, cockles and tuatua – but mostly by visitors to the bay. Locals occasionally spear or net for flounder and there are occasional scallops offshore. The headlands are used for some shore fishing. Small boat launching can carried out directly off the road (which was noted as unsafe by one interviewee, due to manoeuvring trailers on the road), or via the small ramp at the northern end of Whiorau Reserve (see Photo 11).

Loss of beach width south of the bus stop will affect local and regional recreation amenity and mitigation via beach nourishment is this section is recommended.


Photo 7
50


Photo 8


Photo 9

6.4 Whiorau Reserve

Whiorau Reserve is a reclaimed area of local purpose reserve (Reserves Act 1977) administered by the Hutt City Council. It has no defined subsidiary purpose (such as 'boat launching' or 'community use' or similar), which is the norm for such reserves. In 2015 it was redeveloped from a large carpark with roadside planting to the existing setting with more diverse potential uses and a sealed pathway along part of the coastal edge.

The proposal has the potential to affect recreational use of the Reserve – positively by better connecting it to users – and boat launching activities by introducing additional users and cycle and pedestrian traffic.

The Reserve is primarily a boat launching and trailer and car parking area, with a major towed-trailer ramp, jetty and pontoon in the south and a ramp for dinghies and kayaks and similar in the north (Photo 10, HCC aerial 2017 and Photo 11). Several picnic platforms are provided.

The western seawall is a popular shore fishing site (Photo 12).

The pump station immediately south of Whiorau Reserve has a small layby area, and there is no requirement for path construction in this short section.

The path location is largely at the rear of the Reserve to avoid conflicts with boat launching activities. There are no adverse recreation amenity effects at this site.

Photo 11

Photo 12

6.5 York Bay

York Bay is proposed to feature double curve seawall from the northern headland to join the existing seawall in the south (Photo 15).

York Bay has three sections. In the north is an approximately 40m section of stony high tide beach (Photo 13), followed by approximately 130m section with no high tide beach and more stones and two sets of steps, ending at the bus stop. The centre of the Bay, south of the bus stop, has a 60m section of narrow high tide beach where the Atkinson pohutukawa – to be removed to facilitate the path – is located (Photo 14), along with a short concrete dinghy ramp. Here the beach is accessed directly off the road. The southern arc of the bay features double curve sea wall and a 3.5m shared path (Photo 15).

The proposed new shared path will affect beach width north of the existing section of curved sea wall. The latter is to be retained.

York Bay is primarily a local beach, with very few visitor parking spaces, used for swimming (with a swimming raft over summer) and boat launching. Some interviewees reported a slight increase in non-local use, but parking is a major limitation.

The loss of beach width warrants a mitigation response in the northern part of the Bay via nourishment. Safety will be improved for boat launching by the installation of a replacement ramp parallel to the shared path.


Photo 13


Photo 14


Photo 15

6.6 Mahina Bay

Mahina Bay features in the north several small pockets of low tide beach, with some small areas exposed at high tide, between small sections of exposed rock and reef, with approximately 90m of stony beach in the centre of the Bay (Photo 16). The rocky areas often sit within pockets of gravel (Photo 17, looking north from the southern headland). A dinghy ramp is located north of the bus stop, with a small parking area at the northern headland.

The proposal is for double curve seawall for the majority of the Bay, with a short section of revetment in the south.

The proposal will affect the width of the beach.

Mahina Bay is a local swimming and boat launching site (with a summer swimming raft), with fishing from the headlands. The scale of beach amenity is unlikely to change with the shared path in place. Beach access is retained via steps and a new dinghy ramp parallel to the path. Not mitigations are recommended.


Photo 16

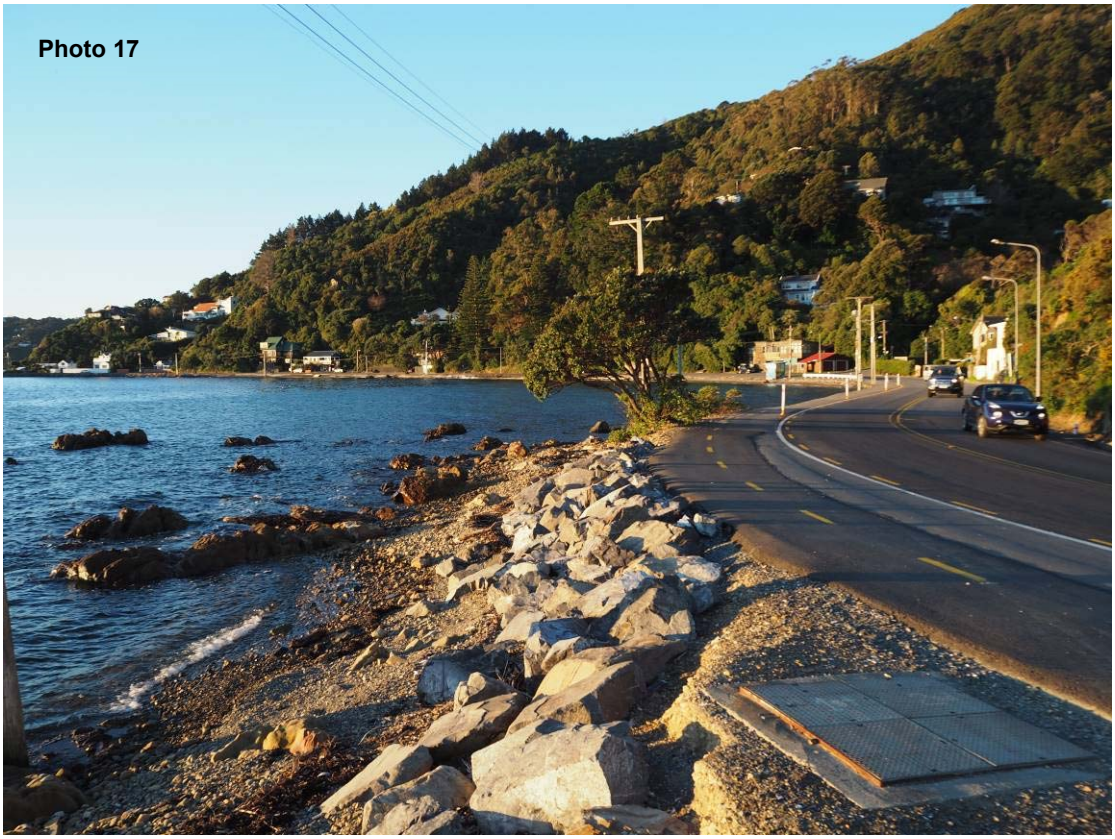


Photo 17

6.7 Sunshine Bay

Sunshine Bay, in the north, is fringed by a rocky shoreline (Photo 18) with a small parking area at the northern headland and another 190m further south (with two pohutukawa). The mid-section features an approximately 80m stretch of gravelly beach with some exposed at high tide, followed in the south by an area dominated by riprap (Photo 20, looking north), and featuring near the southern headland a small parking area and pump station.

The proposal is for double curve seawall for the majority of the Bay, with a short section of revetment in the south.

The proposal will affect the width of the beach.

Sunshine Bay is a local swimming and boat launching site (although there is no ramp), with fishing from the rocky sections and headlands, particularly in the south by the pump station, which is probably the most popular shore-fishing site in the study area. There is insufficient change to amenity to warrant nourishment, and beach access is retained by steps at either end of the main beach area.


Photo 18


Photo 19


Photo 20

6.8 Windy Point

Windy Point links Days Bay and Rona Bay (Photo 21, taken from Days Bay looking south), and features a rocky coastline with some small sections of gravel exposed at low tide. Access is poor with one set of steps over the existing seawall, which is to be replaced as part of the proposal.

Only local recreational use has been reported with some swimming, fishing and shellfish gathering and small boat launching.

Double curve seawall is proposed, which will narrow the extent of the exposed shoreline. However, there is no significant change to the scale of amenity to suggest the need for mitigation.


Photo 21

7 Benefits of the Shared Path

This section considers the social and individual benefits that are likely to accrue from construction of the shared path, not including resilience (reduction of the effects of sea level rise, for example).

Accruing benefits depends on people using the shared path. The Transport Assessment (Appendix L to the AEE) identifies, from an economic perspective, that there is a net transport benefit from the proposal. This analysis is not repeated here. Rather, the focus is on community and personal wellbeing, and tourism and recreation participation.

7.1 Benefits of physical activity

The health and social benefits of physical activity are well-established. There is ample literature supporting the relationship between physical activity and wellness. For example, a 2010 literature review by Janssen and LeBlanc into the health benefits of physical activity and fitness in school-aged children and youth found:

> *…a total of 437 citations were identified for cholesterol, 1151 for depression, 2505 for injury, 1181 for bone density, 1677 for blood pressure, 5824 for obesity, and 1677 for the metabolic syndrome. Thus, the grand total was 13,174. Many of these 13,174 citations were retrieved for 2 or more health outcomes, and after removing these duplicates there was a total of 11,088 unique citations. After the titles and abstracts of these 11,088 citations were reviewed, full-text copies of 454 potentially relevant citations were obtained and reviewed.*

Considering these data, the authors' number one recommendation was that children and youth 5-17 years of age should accumulate an average of at least 60 minutes per day and up to several hours of at least moderate intensity physical activity per week. Some of the health benefits can be achieved through an average of 30 minutes activity per day.

And in more detail:

> *In summary, the findings of this systematic review confirm that physical activity is associated with numerous health benefits in school-aged children and youth. The dose-response relations between physical activity and health that were observed in several observational studies suggest that the more physical activity, the greater the health benefit. However, the results from several experimental studies suggested that even modest amounts of physical activity can have tremendous health benefits in high-risk youngsters (e.g., obese, high blood pressure). To achieve substantive health benefits, the physical activity should be of at least a moderate intensity, and it should be recognized that vigorous intensity activities may provide an even greater benefit. Aerobic-based activities that stress the cardiovascular and respiratory systems have the greatest health benefit, other than for bone health, in which case high-impact weight bearing activities are required.*

Appropriately, the NZ Ministry of Health's 2016/17 *New Zealand Childhood Obesity Programme Baseline Report* has three of its fifteen baseline indicators related to physical activity (the others relate to, for example: eating well, sleep deprivation, and natal and neonatal measures):

- Time spent on physical activity, using similar guidelines to those quoted above;
- Active transport to and from school ("Research has shown that children who walk to school are less likely to be obese, and are more likely to have a lower BMI and a smaller waist circumference, than children who use more sedentary modes of transport, such as a car or bus"); and

- Use of a bicycle, noting that nearly 70 percent of families/whānau have one or more bicycles at home, and that, "The health benefits of regular cycling include increased cardiovascular fitness, increased muscle strength and flexibility, improved joint mobility, improved posture and coordination and decreased body fat levels."

For adults, the picture is the same. Bidwell (2012) found, via literature review, that in New Zealand, physical inactivity is third only to smoking and diet as a modifiable risk factor for poor health, associated with 9.5% of all deaths and estimated to account for over 2600 deaths per year. The direct gross cost of physical inactivity to the Australian health budget in 2006/2007 was estimated at around $1.49 billion. Australian studies reported that insufficient physical activity was the third largest single determinant on the Burden of Disease Scale in Queensland and that inactivity was costing Australia $13.8 billion.

Bidwell's key findings included:

- Walking and cycling for transport has the potential to address a wide range of costly health and environmental issues, particularly the health burden of physical inactivity, and the need to address climate change;
- There is consistent and growing evidence that increasing walking and cycling levels in the population also achieves substantial economic return over the long term;
- Evidence is emerging that investments in infrastructure that encourages walking and cycling demonstrate greater benefits than interventions that target behaviour change in the population.

Market Economics (2013), identified that physical inactivity cost New Zealand $1.3 billion in 2010 (just less than 1% of New Zealand's GDP), including on a regional basis: $402 million for the Auckland region, $106 million for the Waikato region and $141 million for the Wellington region, stating:

> *Physical inactivity is costly. At an individual level, it can lead to suffering and disruption to a person's life with the onset of a disease that could have been avoided. Ultimately, it can lead to premature death which may impact on household economics and organisation. The premature death of 246 New Zealanders was caused by physical inactivity for the 2009 year. Seventy three of these deaths were in the Auckland region, 21 in the Wellington region and 18 deaths in the Waikato region. These premature deaths were estimated for those aged under 65 years only…. To put these figures into context, there were 420 motor vehicle fatalities and 510 deaths caused by self-harm for that same year. Physical inactivity is at a serious pandemic level in New Zealand, as in other countries. In a recent major report published in The Lancet medical journal, New Zealand was the 27th (out of 122) most inactive country, with nearly 50 percent of the population insufficiently physically active.*

With this information in mind, it is worth reflecting on the recreation participation data referred to in section 4.1 of this report. Wellington's most important forms of physical activity are (see Figure 11), first, walking (56% participation), followed by jogging or running (29%), with cycling and biking 5th (10%) after playing games, individual workouts, gardening and swimming. For adults (18+, 7-day participation), 42% described roads or footpaths as a location for recreation (the most popular setting of all), 25% named walkways, and 15% 'on, in or beside the coast' and 6% on a 'cycleway or cycle lane specifically set aside for cyclists' – compared with 32% for 'private property, home, garden or pool', 20% for 'public park, field, playground, skate park or BMX track', 18% for a gym or fitness centre and 10% for 'outdoor sports facility or purpose-built environment'.

The World Health Organisation summarised all these issues in 2006 (Prüss-Üstün, 2006):

> *Physical inactivity is a risk factor for noncommunicable diseases including: ischaemic heart disease and stroke; cancers of the breast, colon and rectum; and diabetes mellitus. For these diseases, the attributable fraction for physical inactivity varied between 10% and 22% globally, depending on the disease. The prevalence of physical inactivity can be modulated by the environment, via factors that encourage physical activity… More than half of the global population gets insufficient physical activity to protect them from related risks causing death, chronic morbidity and disability from a range of noncommunicable diseases. Inactivity levels could be reduced by designing environments that are more conducive to physical activity in the workplace, at home, in transport and in leisure time.*

Similarly, the Capital and Coast District Health Board (CCDHB) reported in its *2015 Regional Health Needs Assessment*:

> *Physical activity helps protect against heart disease, stroke, type two diabetes, certain cancers, osteoporosis and depression. It is also important for maintaining a healthy weight and preventing and reducing obesity. The Ministry of Health recommends that adults do at least 30 minutes of moderate-intensity physical activity (eg, brisk walking) at least five days per week….*
>
> *Just under half of all adults in the sub-region (47%) were physically active. This was similar to the rate in 2006/07 and somewhat lower than the overall New Zealand figure (54%). CCDHB adults were significantly less likely to be physically active (45%) than New Zealand adults overall.*

Victorio (2016) estimated for the Ministry of Business, Innovation and Employment that cycling on New Zealand's Cycle Trails in 2015 resulted in national savings of $11 million from reduced mortality risks; and more than 8% of this was from use of the Rimutaka Cycle Trail. The analysis used a very small level of change in participation levels; considered that:

> *It was also not known whether the trails might have changed prior exercise attitudes. There was no clear consensus as to whether facilities like cycle trails actually have an effect on exercise attitudes. Some researchers emphasise that their availability can have a strong influence upon activities like cycling. Others say that such facilities only create opportunities for exercise, with any effects being instead the result of individual and social factors.[15] Thus, a decision was made to assign only a small change, of one percentage point, to the number of individuals switching from being inactive to being active as a consequence of the trails being available for them to use.*

Walking and cycling does cause injuries and mortalities, but despite these, Janssen & LeBlanc (2010), via their meta-data analysis, maintained their significant recommendation that being active is better than not, and all the research quoted above maintains the same position (the benefits far outweigh the costs).

The ACC reports on injury rates for all sports activities, which does not include walking. For cycling, 21,485 injuries were reported in the year ended June 2018 (2,140 in the Wellington region), compared with a high of 23,135 in the year ended June 2016 (2,144 in the Wellington region), and a recent low of 19,683 in the year ended June 2014 (1,786 in the Wellington region). By comparison, Rugby Union had 51,597 reported injuries in the year ended June 2018. Just 2.4% of the adult national population participate in rugby compared with 11.2%

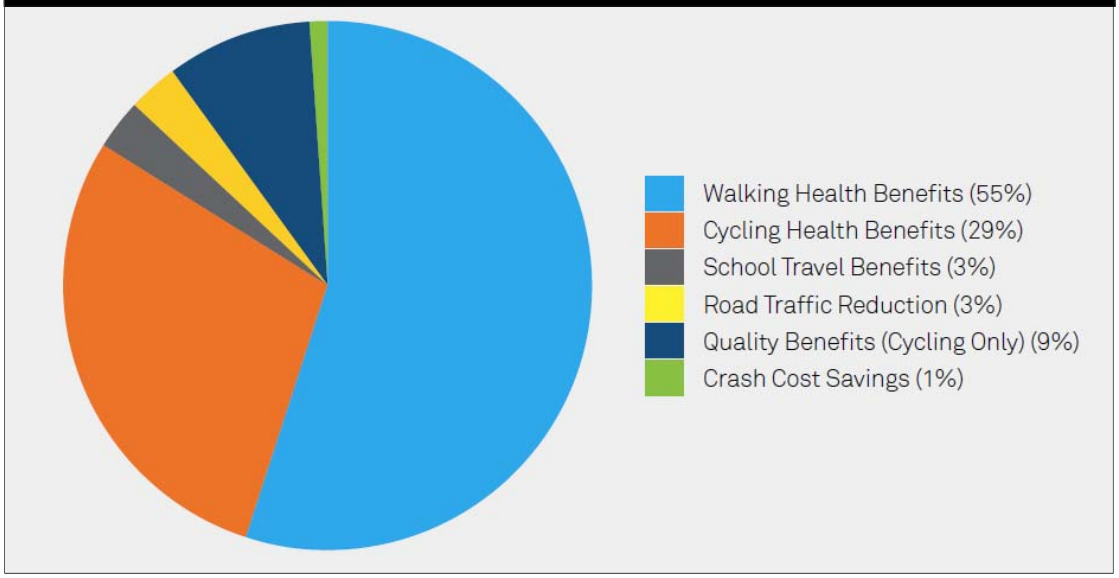
[15] This multi-factorial influence is noted, but it is significant that activity cannot occur without a venue.

cycling; and 10% and 29% respectively for young people (aged 5-17) (average 7-day participation rates, Sport NZ, 2017).[16]

Groundwater (2016) reported on the benefit cost ratio of the New Plymouth Coastal Walkway, a 12.7km coastal path from central New Plymouth to Bell Block Beach in the north. The walkway and an associated 'Let's Go' activation programme were assessed to have resulted in a benefit cost ratio of 3.8, considering only transport benefits (with a net present value of $71.4 million made up of $97.3 million in benefits (Figure 25) and $25.9 million in costs). Groundwater reported:

> *The coastal walkway has been a very successful infrastructure investment. While the cost of implementation was high, the benefits associated with the investment have far outweighed the cost. This demonstrates that investing in high quality infrastructure for walking and cycling, especially where this is supported by education and encouragement, can be extremely successful. As demonstrated in the census Journey to Work data, the coastal walkway has been successful in encouraging active commute trips, as well as recreation and other utility trips. It should be noted that there are likely other economic benefits associated with the coastal walkway and 'Let's Go' programme that are outside the scope of this transport focused evaluation, these could include tourism and benefits to local businesses.*

Figure 25: New Plymouth Coastal Walkway benefits analysis (Abley 2016)



7.2 Activity Friendly Environments and physical activity

Activity friendly environments are created by building physical and social settings which enable physical activity to become part of everyday behaviour. Sport NZ (2004) defined activity friendly environments as allowing "people to take the active option first. Activity Friendly Environment infrastructure, settings and services allow and encourage people of all ages and abilities to make an active choice." Similar terms include 'active transport' and 'active living'.[17] The concept is reflected in the NZ Transport Agency's primary outcome for Walking and Cycling Model Communities (NZTA 2013): "A community where walking or cycling is the easiest choice."

[16] Participation rates based on 12 month and 7-day periods are used in the Active NZ surveys, and in this report both sets of data are used depending on which results are available for specific activities.
[17] See for example: https://activelivingresearch.org/

The concept is reflected in such strategies as The *Healthy Auckland Together Plan 2015-2020*, with as, Action 1, better developing "streets, parks and places", with the vision: "Physical activity is integrated into our daily lives":

> *Physical activity can be incorporated into daily life through leisure and recreational activities or everyday activities such as active transport. Well planned urban environments increase opportunities to be physically active by creating neighbourhoods that are easy and safe to move around, encourage people to use both active and public transport, and create spaces for people to be active. The World Health Organization has estimated that changes to the urban environment could reduce physical inactivity by one third. Streets, parks and places have the biggest potential for gains in physical activity for people with disabilities, by ensuring that the built environment is usable and accessible (physically and practically) for them.*

The World Health Organisation reported (Prüss-Üstün 2006):

> *Pedestrian friendly and bicycle-friendly environments include side-walks, ample building setbacks, walking and cycling paths, parks, bus shelters, and streets that are easy to cross. The level of car use in a population is related to the built environment and also has been linked to physical inactivity and obesity. Therefore, measures that discourage reliance on a car also may encourage physical activity, and reduce physical inactivity…*
>
> *It has been estimated that inactivity levels could be reduced by 31% (12—59%) for North America and developed areas of the Western Pacific region, 27% (12—58%) for the European region, 20% (8—38%) for China, 18% (11—34%) for the Latin America and the Caribbean region, and 13% (3—35%) in other developing regions. Globally, 19% (13—27%) of current inactivity levels could be prevented by environmental interventions.*

The concept is in-line with the United Nations Sustainable Development Goals[18]; specifically Goal 11: *Make cities inclusive, safe, resilient and sustainable*; and Target 11.7:

> *By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.*

Outcomes from developing activity friendly environments are measurable. For example, Powell *et al* (2003) reported in the American Journal of Public Health that 41% of adult Georgians were likely to meet the recommendations for physical activity if they lived near a safe walking setting compared with 27% for those who did not.

Kopcakova *et al* (2017) in a review of data from a World Health Organization (WHO) collaborative cross-national study of adolescents in Europe found that an environment perceived as activity-friendly was associated with higher odds that adolescents meet recommendations for physical activity and lower odds for excessive screen-based activities; and that their findings were, "in line with previous research, which suggests that the built environment may be key in promoting an active lifestyle among adolescents."

Davison & Lawson (2006) analysed 33 previously published quantitative studies into the relationship between physical activity and the physical or built environment for youth aged 3 to 18 and reported that, "children's participation in physical activity is positively associated with publicly provided recreational infrastructure (access to recreational facilities and schools) and

[18] See: https://www.un.org/sustainabledevelopment/cities/

transport infrastructure (presence of sidewalks and controlled intersections, access to destinations and public transportation). At the same time, transport infrastructure (number of roads to cross and traffic density/speed) and local conditions (crime, area deprivation) are negatively associated with children's participation in physical activity."

Humpel *et al* (2002), in a review of 19 quantitative studies relating to how environmental factors affect adult participation in physical activity, found that accessibility of facilities, opportunities for activity, and aesthetic attributes (neighbourhood features and character) had significant associations with physical activity; and that, "physical environment factors have consistent associations with physical activity behavior." Weather and safety showed less-strong relationships.

Giles-Corti & Donovan (2003) in a review of walking activity in Perth noted, "The physical environment also appeared to influence walking at recommended levels. …. In comparison with those who had major traffic and no trees on their street, the odds of achieving recommended levels of walking were nearly 50% higher among those who lived on a street with one or both of these features."

Locally, the Eastbourne Community Board *Eastbourne Community Survey 2014* (Hutt City 2014, discussed in section 4.3.2 of this report) identified many issues which indicate that the Eastern Bays has some significant challenges for claiming an activity friendly environment, largely due to the current state of pedestrian and cycle access along Marine Drive. Sixty percent of respondents considered the current walk / cycleway as unsafe or very unsafe and 54% were deterred from using the walk / cycle way due to its current standard. When asked where in the Eastern Bays respondents felt unsafe, the greatest issue was Marine Drive, with the following example comments (as listed in the survey report):

- From cyclists
  - "I would love to see a bike way right around the bays from the light house to Petone. The way it starts, stops and fades out is dangerous. The new York Bay (south) bike way is wonderful. Build more of this."
  - "Cycling around the bays I got clipped by a bus. (2013)"
  - "Really unsafe biking between Days Bay and Eastbourne as vehicles do not allow the 1.5m distance (this is actually almost impossible as allowing this would force cars across the centre of the road)."
  - "Road between Eastbourne and Days Bay – awful. My children have to bike to school – not safe!"
  - "I watch every corner, especially when buses going past. Scary!!"
  - "Cycling safety for kids is the biggest safety issue in Eastbourne."
  - "My children cannot safely cycle from our house (Sorrento Bay) to the village. Even walking this is dangerous with our kids."
- From walkers
  - "The seaside walkway is a death-trap for anyone with young children, prams, or dogs."
  - "Walking along narrow footpaths on foreshore of Lowry Bay with buses and trucks passing within ½ metre – too close for comfort."
  - "There is no walkway on the sea side between Days Bay and Eastbourne and it is dangerous crossing the road from Windy Point to go into Marine Parade, and

more dangerous to cross earlier coming from Days Bay. I do this crossing nearly every day, and it scares me."

- "Traffic on the road and the narrow, unsafe walkway makes us feel unsafe for walking – much more than fear of crime statistics or ruffians." (from an elderly resident).

The desire for the Eastern Bays Shared Path has been, appropriately, an ongoing feature of regional and local community development strategies for a long period (see sections 3.4.2, 3.5 and 3.6 of this report). It would be very interesting to record and compare the physical activity patterns of Eastern Bays residents before and after its construction.

7.3 Regional recreation and tourism

As discussed in sections 3.4.2, 3.5 and 3.6 of this report, the Eastern Bays Shared Path has been an expectation of regional recreation and tourism planning for more than a decade. The Great Harbour Way (Figure 8) and the Rimutaka Cycle Trail (Figure 10) require the shared path to be of adequate standard to suit walkers and cyclists. Most of these will be New Zealanders – based on the data reviewed below – but perhaps as many as 15% could be international visitors.

Tourism New Zealand has identified that New Zealand has an international point of difference in four special interest areas, and that these will form part of the nation's 'unique selling proposition':[19]

- Cycling and mountain biking
- Golf
- Skiing
- Walking and hiking

Tourism NZ reported:[20]

- 73% of international holiday visitors participated in walking or hiking in the three years to 2018, an average of 1.1 million people per year, 14% of whom reported walking and hiking as a factor in influencing their decision to visit NZ. 51% of the walking was short walks of between 30 minutes and three hours. Length of stay and average spend were near the average since most visitors participate in walking or hiking.
- 9% of international holiday visitors participated in cycling in the three years to 2018, an average of 138,000 people per year. This group spent on average 33 nights on the country compared with the average of 16 nights, and spent $4,900 compared with the average of $3,900, and tended to visit more regions (5 compared with the average of 3.5).

Cycle tourism in New Zealand has been growing. Methods for gathering tourism participation data via the International Visitor Survey have changed over the years and it is difficult to compare between survey periods. However, in 2013, NZ's Great Rides experienced 56% average growth, and between 2008 and 2011 international participation almost doubled.[21]

Domestic participation in cycling and walking is discussed in section 4 of this report. Sport NZ's Active NZ surveys (Sport NZ 2014 and 2017) have also used slightly different methods over

[19] https://www.tourismnewzealand.com/markets-stats/sectors/special-interest/
[20] https://www.tourismnewzealand.com/media/3076/special-interest-infographic.pdf
[21] https://www.tourismnewzealand.com/media/1764/cycling-tourism_profile.pdf and https://www.nzcycletrail.com/about/history/

the years. The 2013/14 results showed cycling and mountain biking was carried out by 24.8% of adult Kiwis over 12 months, while in 2017 the activities of road cycling and mountain biking were reported separately, with 34% of adult Kiwis participating in either over 12 months (20% and 14% respectively).[22] By separating the activities in 2017, the latest data will include some double-counting compared with the 2013/14 result (that is, respondents who mountain biked *and* road cycled in 2013/14 were recorded as participating in only one activity, whereas they are counted separately in 2017). Growth in participation cannot be assumed, but seems likely. Sixty percent of adult Kiwis were reported to have walked for recreation over 12 months in 2013/14 compared with 85% in 2017. This appears a very large difference and may be an artefact of the survey method, but it does suggest growth.

The Ministry for Business, Innovation and Employment estimated that the Rimutaka Cycle Trail generated $2.62 million in domestic, and $683,384 in international revenue, based on just under 99,000 visits in 2015 (Victorio 2016).

The *Ngā Haerenga NZ Cycle Trail Evaluation Report 2016* (Figuracion 2016) reported for 2015 a 1:3.55 cost benefit ratio for the NZ Cycle Trail network, with 1.3 million trail users, 17% of whom were commuters and 13.5% international visitors; and a net economic contribution of $37.5 million, plus $12 million in social benefits (including the $11 million in reduced mortality risks reported in Victorio (2016) as discussed in section 7.1 of this report).

The Transport Assessment (Appendix L to the AEE) estimates – for the purposes of an economic assessment and using established methods which factor only additional demand by local walkers and some new regional demand by cyclists – less than a doubling in walking and cycling activity along Marine Drive with the proposed shared path in place. This is very likely quite conservative, considering the substantial constraint on activity caused by the current setting (see section 7.2), and the significant appeal of the proposal as a recreation opportunity.

7.4 Summary

Several key points are evident:

- Physical activity is fundamental to physical and mental health; and by providing an alternative to the use of cars, has a wide range of social and environmental benefits;
- Activity friendly environments are fundamental to enabling physical activity, and footpaths and cycleways are key components of an activity friendly environment;
- Walking and cycling are fundamental forms of physical activity for New Zealanders, are important features of our tourism product, and participation appears to be growing;
- Walking and cycling activity in the Eastern Bays is currently significantly impeded by the condition of Marine Drive;
- The proposed shared path has long-been identified as a strategic asset locally and regionally for connecting communities, enabling physical activity and alternative transport, and developing national and international tourism product;
- Ample international and domestic data support these findings.

[22] Participation rates based on 12 month and 7-day periods are used in the Active NZ surveys, and in this report both sets of data are used depending on which results are available for specific activities.

8 Conclusion

This assessment considers the effects of the proposed Eastern Bay shared path on existing coastal recreation amenity between Point Howard and Rona Bay – excluding Days Bay – and considers the benefits of the proposal. The preferred width of the path is also identified (3.5m).

This assessment has resulted in the recommendation for beach nourishment due to encroachment at Point Howard Beach, Lowry Bay (the southern end) and at York Bay. Other bays have either insufficient 'dry' high tide beach to warrant this mitigation and/or have the width of the proposed path reduced to 2.5m to limit the scale of effect. Some similarly narrow path is also required to address ecological issues. The path remains substantially at the preferred width, and the narrow sections should not compromise its success.

Hutt City Council is embarking on a wider regional review of resilience in the face of climate change, and this process is expected to consider additional options for maintaining coastal amenity as sea levels rise. These options are not required to mitigate the effects of the shared path proposal. Rather, they recognise that the proposal is located in a dynamic environment that is subject to issues beyond the scope of this project.

Undertaking physical activity is a fundamental component of a healthy lifestyle. The current condition of the paths on Marine Drive are a major handicap to local walking and cycling participation; and there is clear local demand for the proposal. Indeed, during interviews it was apparent that there was a general expectation that construction was imminent.

While this assessment does not rely on the benefits of the shared path as a mitigation for its effects on local beach amenity, it is clear that the likely scale of use of the shared path, and the resulting local, regional and national benefits, far outweigh the local and regional adverse effects. Adverse effects can be maintained at a minor level via beach nourishment and the maintenance of coastal access via replacement and new stairs, ramps and direct access over low sections of curved sea wall, and the use of existing and unaffected areas, such as Whiorau Reserve.

In the opinion of the author of this report, the shared path, once constructed, will result in a significant change – for the better – in recreation and commuting participation in the Eastern Bays. Enhancement will be much in the same manner that the New Plymouth Coastal Walkway has anchored community facility development there. Mitigations will maintain key areas of beach amenity and ensure that the scale of adverse effects are no more than minor.

9 References

Abley Transportation Consultants, 2016. *New Plymouth Model Community Evaluation*. Poster for IPENZ Transportation Group Conference, Auckland 7 - 9 March 2016. Available at *https://www.abley.com/assets/Awards/New-Plymouth-Model-Community-Evaluation-Posters.pdf*

Airey, M. 2012. *Spot X Boat Fishing New Zealand.* Spot X Publications, Auckland.

Allen, W. Elmetri, I. Clarke, S. Gibbons. J. Clark, K., Sinner, J., Jiang, W. and Taylor, M. 2009. *Mapping the Values of New Zealand's Coastal Waters. 3. Social Values*. Biosecurity New Zealand

Atkin, Ed. Gunson, M. & Mead S. 2015. *Regionally Significant Surf breaks in the Greater Wellington Region*. 22 May 2015 version. eCoast Ltd client Report prepared for Wellington Regional Council

Auckland Transport, 2013. *Auckland Transport Code of Practice*. Updated to 18 January 2017

Austroads, 2017. *Cycling Aspects of Austroads Guides*. Austroads Incorporated, Sydney

Austroads, 2015. *Austroads Supplement to Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths.* Austroads Incorporated, Sydney

Austroads, 2009. *Guide to Road Design Part 6A: Pedestrian and Cyclist Paths*. Austroads Incorporated, Sydney

Bidwell, S. 2012. *Review of studies that have quantified the economic benefits of interventions to increase walking and cycling for transport*. Canterbury District Health Board Community and Public Health

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

Booth, K.L. and Lynch, P.M. 2010. *Outdoor Recreation Research Stocktake: Synthesis*. Prepared for Sport and Recreation New Zealand by Lindis Consulting, Christchurch.

Booth, K.L., Lynch, P.M. and Lizamore, C.A. 2010. *Outdoor Recreation Research Stocktake: Bibliography.* Prepared for Sport and Recreation New Zealand by Lindis Consulting, Christchurch.

Brasell, K.A. and Morar, S.R. 2017. *Is it safe to swim? Recreational water quality monitoring results for 2016/17.* Greater Wellington Regional Council, Publication No. GW/ESCI-T-17/98, Wellington.

Capital and Coast District Health Board, 2015. *2015 Health Needs Assessment For Wairarapa, Hutt Valley and Capital & Coast District Health Boards*. Service Integration & Development Unit Wairarapa, Hutt Valley and Capital & Coast District Health Boards

Davison, K. and Lawson, C. 2006. Do attributes in the physical environment influence children's physical activity? A review of the literature. *International Journal of Behavioural Nutrition and Physical Activity*. 2006; 3: 19.

Department of Conservation. 1996. *Conservation Management Strategy for Wellington 1996–2005.* DOC, Wellington Conservancy.

Department of Conservation. 2010. *New Zealand Coastal Policy Statement 2010*. DOC, Wellington.

Department of Conservation. 2012. Wellington Harbour Islands Kaitiaki Plan 2012–2017. DOC, Wellington Conservancy.

Draper, M. 2012. *Sport X Surfcasting New Zealand.* Spot X Publications, Auckland.

Draper, M. Enderby, T. Enderby J. (eds) 2008. *Sport X Fishing New Zealand.* Spot X Publications, Auckland.

Enderby, T. Enderby J. 2007. *Sport X Diving New Zealand.* Spot X Publications, Auckland.

Figuracion, MT. 2016. *Ngā Haerenga NZ Cycle Trail Evaluation Report 2016*. Ministry of Business, Innovation & Employment, Wellington

Fowler, M. Lloyd, W. & Munro. C. 2010. Technical Paper Shared Path Widths. IPENZ Transportation Group Conference Christchurch. March 2010

Giles-Cort,B. Donovan, R. 2003. Relative Influences of Individual, Social Environmental, and Physical Environmental Correlates of Walking. *American Journal of Public Health*, September 2003, Vol 93, No. 9

Greater Wellington Regional Council, 2009. *Navigation and Safety Bylaws Wellington region*. GWRC

Greenaway, R. 2017. *Wellington Water Seaview Waste Water Treatment Plant Intermittent Discharge Recreation effects assessment.* Client report prepared for Stantec Ltd

Groundwater, C. 2016. *New Plymouth Model Community Evaluation*. IPENZ Transportation Group Conference, Auckland 7 - 9 March 2016.

Humpel, N., Owen, N. & Leslie, E. 2002. Environmental factors associated with adults' participation in physical activity: a review. *American Journal of Preventative Medicine*, 22 (3), 188-199.

Hutt City Council, 2014. *Eastbourne Community Survey 2014*. Eastbourne Community Board

Jansen, I. and LeBlanc, AG. 2010. Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity.* 2010 7:40.

Kalafatelis, E. & Magill, K. 2013. *Rates of participation in recreation boating*. Research New Zealand client report prepared for Paul Vance, Maritime NZ.

Kopcakova J, Dankulincova Veselska Z, Madarasova Geckova, A. Bucksch, J. Nalecz, H. Sigmundova D, van Dijk, JP. and Reijneveld, SA. 2017. Is a Perceived Activity-Friendly Environment Associated with More Physical Activity and Fewer Screen-Based Activities in Adolescents? *International Journal of Environmental Resources and Public Health*. 2017 Jan 3;14(1).

Marine Industry of New Zealand, 2007. *Marine Industry of New Zealand Annual Report for period to 31 December 2007*. MIA, Auckland.

Maritime New Zealand, 2007. *Boating Safety Strategy - 2007 Review of the New Zealand Pleasure Boat Safety Strategy*. MNZ, Auckland.

Morse, P.B Brunskill, P. 2004. *Wavetrack New Zealand Surfing Guide*. Greenroom Surf Media, NZ.

Murray, K, von Kohorn. R. 1999. *The New Zealand Cruising Guide Central Area.* Steven William Publications

New Zealand Transport Agency, 2009. *Pedestrian planning and design guide - The Design of the Pedestrian Network*. NZTA, Wellington

New Zealand Transport Agency, 2013. *The Walking and Cycling Model Community Story with New Plymouth and Hastings*. NZTA, Wellington

New Zealand Transport Agency, 2014. *Wellington to Hutt Valley Walking and Cycling Link*. Newsletter Issue 1, February 2014. NZTA, Wellington

Powell, K., Martin, L., and Chowdhury, P., 2003. Places to Walk: Convenience and Regular Physical Activity. *American Journal of Public Health*. September 2003, Vol 93, No. 9., p1519

Prüss-Üstün, A. 2006. *Preventing disease through healthy environments. Towards an estimate of the environmental burden of disease*. World Health Organisation, Geneva.

Queensland Department of Transport and Main Roads, 2014. *Guidance on the widths of shared paths and separated bicycle paths.* Technical Note 133 November 2014

Queensland Department of Transport and Main Roads, 2015. *Road Planning & Design Manual – Edition 2: Volume 3, Transport and Main Roads*. Supplement to Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths

Sport New Zealand, 2004. *Activity Friendly Environments web tool framework*. Unpublished resource, Global Leisure Group client report.

Sport New Zealand, 2015. *Sport & Active Recreation Regional Profile Wellington Region Findings From The 2013/14 Active New Zealand Survey*. Sport NZ, Wellington

Sport New Zealand, 2017. *The 2017 Active New Zealand Survey*. Sport NZ, Wellington – available via the online Sport NZ Insights Tool. This work is based on/includes Sport New Zealand's data which are licensed by Sport NZ for re-use under the Creative Commons Attribution 4.0 International licence.

Vance, P. 2014. *Synthesis of research conducted in recreational boating*. Maritime NZ internal report.

Vic Roads, 2016. *Traffic Engineering Manual Volume 3 – Additional Network Standards & Guidelines Guidance on Bicycle and Pedestrian Treatments at Roundabouts.* Edition 1, December 2016

Victoria Walks, 2015. *Shared paths – the issues*. Victoria Walks, Victoria

Victorio, A. 2016. *Ngā Haerenga The Great Rides of the New Zealand Cycle Trails: Some Benefits in Relation to Costs*. A report prepared for the Ministry of Business, Innovation and Employment by Statscience Research.

World Health Organization. 2003. *Guidelines for safe recreational water environments. Volume 1, Coastal and fresh waters.* WHO, Geneva

Appendix 1: Interview contact list

Interviews to support the development of this assessment were completed with the following people. The intent of the interviews was, primarily, to help describe the recreational uses of the beaches and headlands in the study area. This information advises section 6 of this report. Other issues canvassed are summarised in section 5. The interviews do not represent a survey or quantitative review. The findings in this report are those of the author and do not necessarily represent the opinions of those interviewed.

Name	Agency
Alan McLellan	Seaview Marina
Allison Grady	Point Howard Residents' Association
Anne Marie	San Antonio School (Eastbourne)
Belinda Moss	Lowry Bay Residents Association
Bruce Spedding	Eastbourne resident. Windsurfer, paddle board, kite surfer
Chris Smith	St James Sea Scout Group
Colleen Christison	Mahina Bay resident
Dave Bamford	Lowry Bay resident
Derek Wilshere	Eastbourne Community Board member, swimmer, diver, spear-fisher, cyclist
Iain Bain	York Bay Residents Association
John Butt	Days Bay resident
John Tattersall	Harbour Master and Rona Bay resident and road cyclist
John Wood	Point Howard resident and cyclist
Jonathan Paape	Lowry Bay resident and cyclist
Mark McAlpine	GWRC Ranger Eastern Bays
Max Myers	Lowry Bay Yacht Club
Mike Henderson	Days Bay Residents Association
Roger Lawrence	Point Howard resident
Virginia Horrocks	Eastbourne Community Board member
Warwick Wright	Sunshine Bay Residents Association