

b r o w n

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PAKIRI MID-SHORE SAND EXTRACTION PROJECT



LANDSCAPE EFFECTS ASSESSMENT

For: McCallum Brothers Ltd
August 2020

1.0 INTRODUCTION

This report addresses the landscape and natural character effects associated with the proposed implementation of new sand extraction permits within two areas off Pakiri Beach by McCallum Bros Ltd® (MBL).

Currently MBL has consent to undertake extraction in closer proximity to Pakiri Beach in accordance with limits set by the Environment Court in 2006 – between the 5m and 10m contours as mapped on the LINZ Bathymetric Chart NZ53 1992. Extraction under those consents is precluded from areas within 100m seaward of the crest of the nearshore bar, with the total area of operations extending over some 10.8km of the in-shore CMA parallel with Pakiri Beach (with a 1.9km exclusion area near Te Arai / Eyres Point), covering some 230ha. At present, total extraction quantities are also limited to 76,000 m³/yr.

MBL's concurrent application for re-consenting of the current sand extraction operations – to be superseded in the future by the proposals addressed in this report – also involve some changes to the previously consented regime, including:

- a change of extraction vessel;
- changes to the discharge of overflow water from the new dredge / barge;
- changes to the duration of extraction operations; and
- changes to the time at which they occur.

These alterations to the current extraction consents, together with their related landscape and natural character effects, are addressed in the Brown NZ report entitled ***Pakiri Sand Extraction Project Landscape Effects Assessment*** (September 2019), which specifically addresses MBL's application for consent renewal.

The sand extraction proposals addressed in this report ('Stage 2') share the same technical and operational procedures as are described in the September 2019 report, but address a single extraction area – extending north and south of Te Arai Point – that is deeper, and offshore of, the zones currently consented for sand removal. The proposed extraction area would be located between the 15m and 25m depth contours offshore of Pakiri Beach and are described in more detail in Section 2 of this assessment.

The effects of operations within this area are assessed in relation to the landscape setting and values of the Pakiri Beach coastline, contextualised by current extraction operations – which comprise part of Pakiri's "current environment". They are also evaluated with regard to relevant statutory instruments that include key provisions of the Auckland Unitary Plan (RPS and District Plan), Policies 13 and 15 of the NZ Coastal Policy Statement and relevant provisions of the Hauraki Gulf Marine Park Act.

This report is accompanied by **25 Attachments**, which show the following:

- The landscape of Pakiri Beach, Te Arai Point and Leigh that is exposed to the current and proposed extraction operations;
- Two maps showing those areas on and near Pakiri Beach that would be theoretically exposed to the top of the exhaust stacks on the new dredge proposed for use at Pakiri – the *William Fraser*;
- Typical views from the Pakiri road network towards the current coastal consent; and

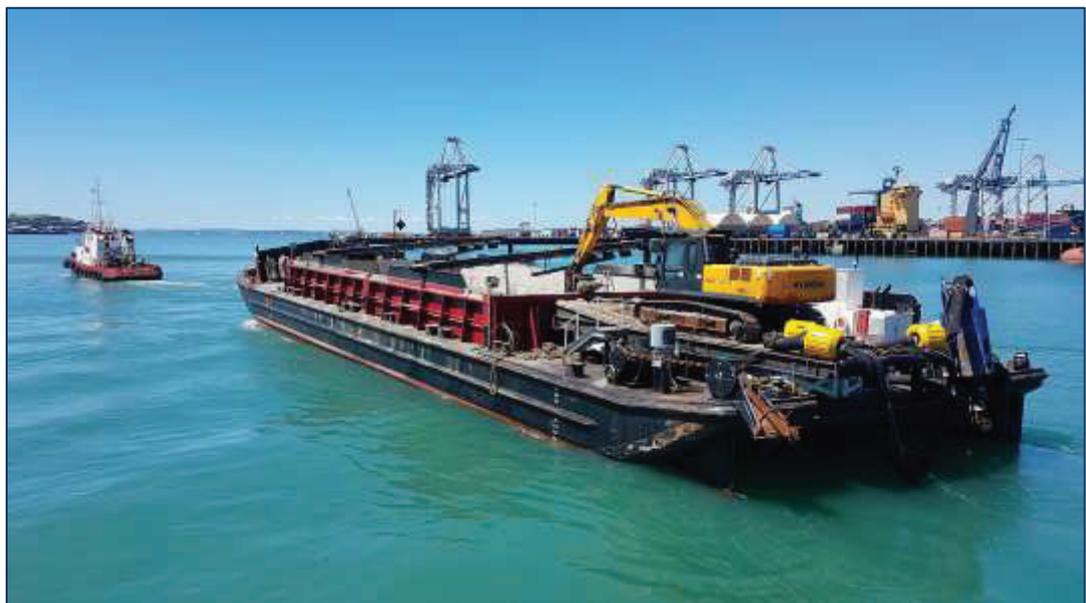
- Key viewpoints used to assist in the comparison of existing and proposed operations incorporating a photographic / visual comparison of the previously employed *Coastal Carrier* operating within the proposed consent areas.

2.0 THE PROPOSAL

As indicated above, the new sand extraction proposal would adopt the following operational changes that are already incorporated in the consent renewal application:

1. A change to the delineation of the extraction area boundaries: in the past the extraction license areas (Zones 1-4) have been loosely defined by seabed contours off Pakiri Beach. It is proposed that the future consent area be demarcated solely by coordinates aligned with LINZ's bathymetric contours, without reference to water depths or contours.
2. A change of extraction vessel: until late 2019, the *MV Pohonui* (see photo overleaf) and its tug, the *Acheron III*, undertook most dredging off Pakiri from a stationary position, supplemented by the *Coastal Carrier* which undertook dredging while moving up and down the consented extraction zones (at approximately 1.0 to 1.5 knots). Both of these vessels have since been replaced by a single, slightly larger, trailing suction dredge: the *William Fraser*. A comparison of the key dimensions of the three previously employed, vessels with the *William Fraser* is outlined in **Table 1** overleaf.
3. This has also resulted in a change to the discharge of overflow water in the course of dredging. In the past, the *Coastal Carrier* discharged overflow water via weir boards on the sides of the hopper and oversized sand and shell via flume pipes: the *William Fraser* discharges overflow water and oversized product from the screening process under the keel of the ship via 6 'moon pools'.
4. A shift in the timing of such operations: much of MBL's previous sand extraction already occurred at night-time, but the proportion of night-time extraction has increased with the introduction of the *William Fraser*. MBL has also limited such operations to weekdays – avoiding extraction over weekends when Te Arai Regional Park is more heavily used, especially over the Summer months.

On the other hand, the frequency of trips up to Pakiri would not greatly change. The *MV Pohonui* used to average 10 trips to Pakiri per month, with the *Coastal Carrier* averaging 2 trips – resulting in a total of 12 trips per month on average, although the duration of each trip will typically decrease from (approximately) 4.5hrs per trip to 3.5 hours with the *William Fraser*.



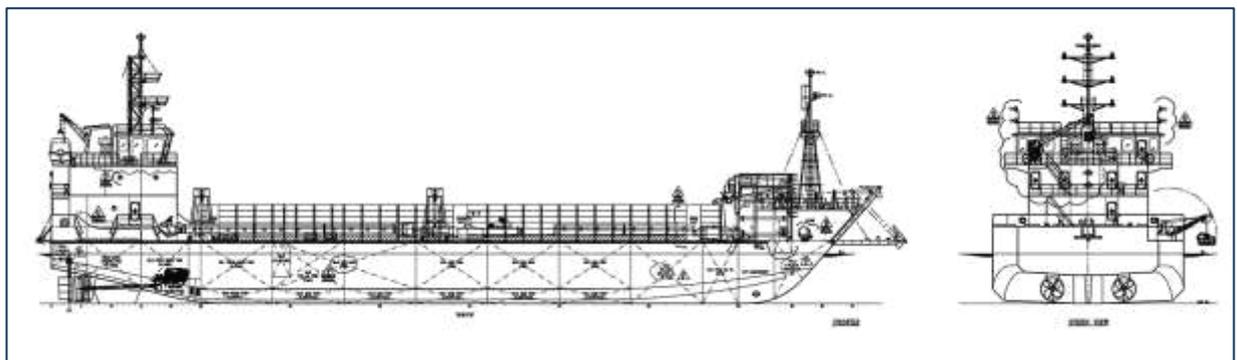
The Pohonui leaving the port of Auckland

Table 1.

	Pohonui	Acheron III	Coastal Carrier	William Fraser
Length	56.65m	23.9m	56.65m	68m
Beam	13m	7.3m	12m	16m
Depth of Vessel: Mast to Keel	7.5m	10.0m	14.5m*	22.0m
Height Above Water to Top of Mast*			13.0m* / 12m	20m* / 17.8m
Height A.W. to Top of Exhaust Stacks*	6.5m		10m*/9m	12.8m*/10.6m

* When unloaded; otherwise when loaded

From this comparison, it can be seen that the *William Fraser* is larger than the dredges and tug employed through until late 2019. The following diagram shows the profile and layout of the *William Fraser*, and is followed by a recent photo of the newly commissioned dredge:

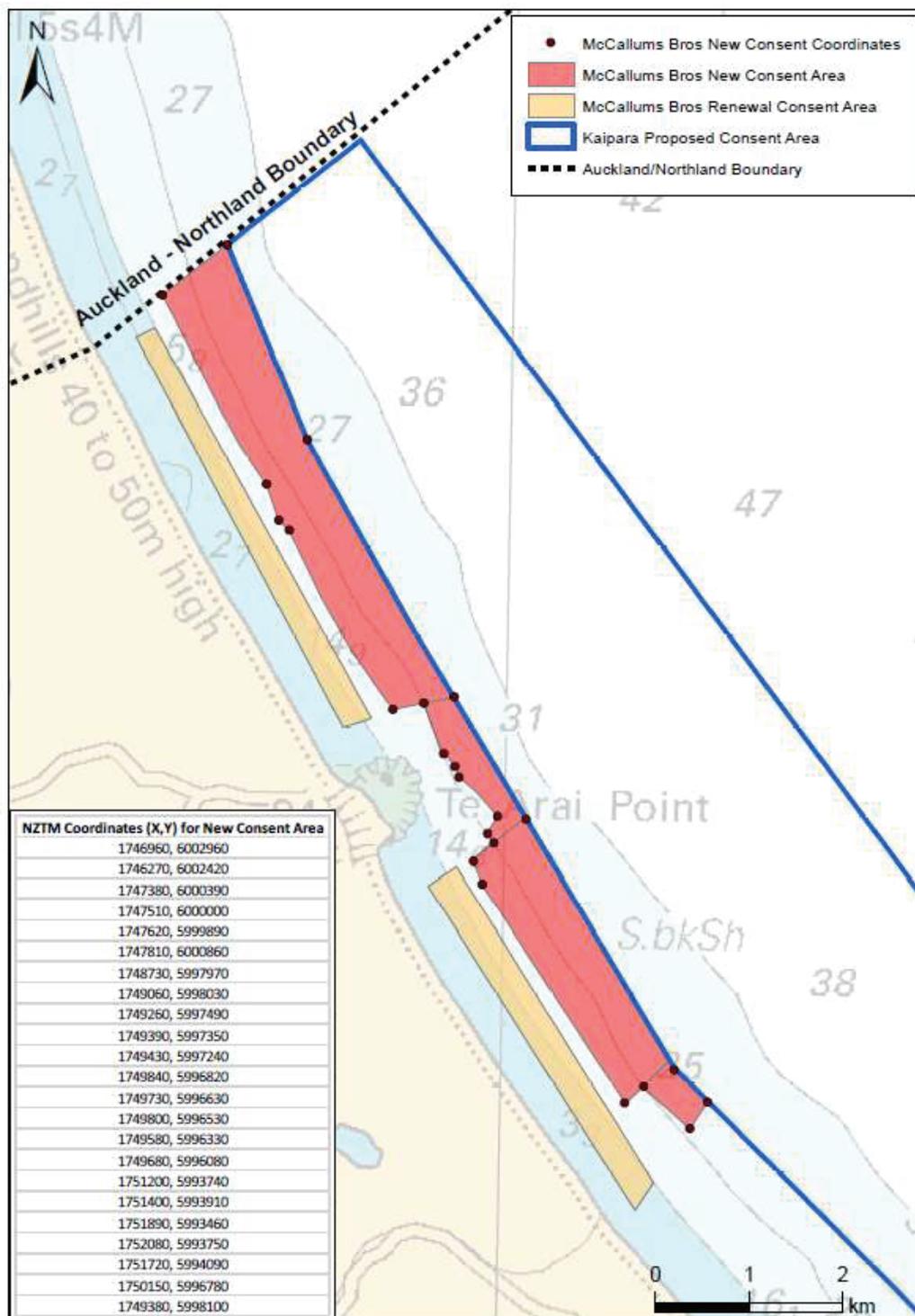


The William Fraser

The proposed sand extraction area is shown below in **Figure 1** overleaf. The northern and southern boundaries are defined by the same limits as the existing inshore consents, but no exclusion area is proposed offshore of Te Arai Point due to the greater physical separation of the proposed extraction area from that coastal feature. The landward and seaward boundaries of the proposed consent are to be defined by water depths – limiting extraction to depths of between 15m and 25m offshore of Pakiri Beach – with the position of these contours mapped on the LINZ Bathymetric Chart NZ522. The

consent area proposed extends 10.4 km along the Pakiri Beach shoreline and covers some 6.6 km². It would terminate approximately 10km north of the Goat Island Marine Reserve boundary and would accommodate sand extraction of up to 125,000 m³/year

Figure 1.



The two sand extraction areas subject to re-consenting & the proposed mid-shore extraction area

Key points to emerge from all of the above are that sand extraction would occupy a license area that is further removed from the immediate shoreline of Pakiri Beach than the currently consented zones, although it would also traverse part of the ocean directly offshore of Te Arai Point. At the same time, future extraction would continue to be undertaken by the new single dredge, the *William Fraser* – replacing the *Pohonui / Acheron III* and the *Coastal Carrier*. This new vessel is slightly larger than the

Coastal Carrier, which was the largest of the three vessels used previously. However, this changeover has also resulted in slightly shorter trip durations and the consolidation of sand extraction operations so that they mainly occur during week days, and thus minimise impacts on Te Arai Regional Park and Pakiri Beach (both north and south) over weekends. In addition, the greater bulk of extraction will continue to shift from daytime to night-time. These various factors need to be considered when assessing the effects of the new application.

3.0 LANDSCAPE CONTEXT

Pakiri Beach, extending either side of Te Arai and Eyres Points, is the largest of the Region's eastern ocean beaches (**Attachments 1-3**). Its broad crescent, defining the coastal edge of the Jellicoe Channel (which extends out to the Hen and Chicken Islands to the north, and Little Barrier Island to the south), provides an expansive 'gateway' to the Pacific Ocean, with its rolling seas and surf backed by a series of dune formations that culminate in the massive dunes of Mangawhai Heads. This dune corridor, much lower down most of the rest of the beach, spreads out to enclose three dune lakes south of Te Arai Point: Slipper Lake, Spectacle Lake and Tomarata Lake; while behind the northern-most of these dunes, low lying, formations of sand, mud and peat underpin a coastal terrace that extends from near Mangawhai to Te Arai Point Road. A mixture of underlying mudstone and sandstone formations combine to then form a sequence of more elevated, rolling to gently rolling, ridges and foothills, that provide the backdrop to most of the beach and its dune / terrace hinterland.

Farming operations have long dominated the area behind the coastal edge, with large areas of open pasture, especially obvious around Coal Hill and Black Swamp Roads north of Te Arai / Eyres Point and parts of Ocean View Road further south. By contrast, one of the defining features of the Pakiri coastline and landscape is the broad strip of pine forest that separates these hinterland areas from both ocean beaches. While pine forestry in the more immediate vicinity of both the northern and southern halves of Pakiri Beach was initially established to protect the coastline from dune progression inland, forestry production has superseded that initial protective function, despite the adverse effects of coastal winds and salt on many of the pine rows closer to both ocean beaches. More recently, development of the exclusive Tara Iti links golf course together with the adjoining Tara Iti Cottages (**Attachment 3**, lower photo), has removed a substantial portion of the pines north of Te Arai / Eyres Point. Even so, there remains a clear demarcation and separation of Pakiri Beach from its more immediate hinterland that is frequently accentuated by the shelterbelts criss-crossing pasture behind both arms of the Mangawhai Forest.

Moving further inland, however, the rising hill country and ridges that many local roads follow – notably Coal Hill Road, Te Arai Point Road, Lake Road, Red Hill Road and Atkins Road, all, of which 'fall' towards the sea – offer increasingly panoramic views of the Pacific Ocean, its forest fringe and the array of dunes and dune lakes, coastal terraces and lower lying ridges that frame both ocean beaches. At the same time, this sequence of rising terrain becomes both increasingly convoluted and notable for the interplay of residual pasture with stands of bush and native regeneration. A patchwork of rural-residential development and dwellings is also apparent behind both beaches, more obviously near Ocean View Road. Spread across the rising mantle of ridges behind the coastline and its lowland margins, this matrix of development extends as far inland as Mangawhai Road.

The simplicity and scale of the coastal landscape also starts to break down as one moves inland, but these qualities are replaced by increasingly complex, terrain, a string of dune lakes that vary in their size and aesthetic character, and bush remnants that – like the lakes – are evocative of the Region's natural heritage. The intertwining of landforms and bush helps to articulate the three-dimensional nature of this landscape and also creates a sense of attractive enclosure that contrasts with the expansive, often panoramic, views towards the Pacific Ocean and its margins. Even though the sea and other features like Slipper and Spectacle Lakes (**Attachment 4**), remain key features within such views, the interplay of landforms, vegetation, sea and lakes is both complex and enticing: the sea is the centrepiece of most views, but it is strongly farmed by an array of other elements that also contribute to the area's wider landscape character and values.

South of the Pakiri River, the relatively gradual and progressive layering of landforms just described is replaced by a sequence of sharply defined, cliffs and steep slopes that rapidly rise up to over 300m. Closely linked to Goat Island, just north of Leigh and Cape Rodney, this line of steep faces remains

dominated by old pasture, although an area of extensive native regrowth falling from M Greenwood Rd to the stony shoreline and rock shelves below, marks the presence of Pakiri Regional Park.

Returning to the actual coastline, Pakiri Beach has long been regarded as one of Auckland and the North's pre-eminent surfing beaches, but also a place that Aucklanders and their families can escape to on weekends and at holidays. The DoC car park at Te Arai / Eyres Point itself is now also frequently full of cars and vans carrying tourists on week days as well. Consequently, it is far from uncommon to see locals and visitors alike swimming and surfing off the Point; wading and strolling along its white sand margins; picnicking among and behind the dunes within the grassed reserve area; or clambering up the tracks that climb above the old quarry and cove at the outer edge of the headland.

Tern Point, near the Mangawhai estuary, and the forestry access road immediately south of Te Arai Point offer other means of public access to Pakiri Beach (as also does Pakiri River Road at the very southern end of main beach), Te Arai Point Road offers the most obvious and readily accessible of these points of entry to this important ocean beach. It is also the only point of access that caters for public use with provision of a DoC reserve, and Te Arai / Eyres Point itself is a clear and legible landmark that is intrinsically linked to both the northern and southern beaches. Much further south again, Pakiri River Rd offers an alternative point of access to the southern end of Pakiri Beach, although the beachfront immediately south of the Pakiri River lies some 6.3km from the nearest edge of the current sand extraction consent area, close to Poutawa Stream.

Regardless of how it is accessed, Pakiri Beach is a place of many moods. It can be bright and suffused with colours that are deeply saturated on a hot summer's day, with its glass like, surf crashing onto bleached sand that is both crisp and uncomfortably hot. At other times, it can be bleak, rain lashed and turbulent – with surf that is grey and wind-whipped amid a wider landscape that is largely bleached of its colour. Regardless, it also remains – for the most part – a place that is imbued with feelings of remoteness, spectacle, dynamism and grandeur. The scale of both the northern and southern beaches makes it easy to retreat from human contact, but also contributes to a sense of openness and of an almost endless, 'big sky', landscape that contrasts with the much more physically convoluted, and intimate, climes of both Leigh and Mangawhai nearby. It caters to a varied mix of passive and active recreational pursuits, as I have just indicated, but it can also be a place for quiet contemplation and 'getting away from it all'.

It is this amalgam of landscape characteristics and qualities, together with the strong feeling of still being in a relatively remote, untrammelled (albeit modified), part of the Auckland Region that has most served to draw decades of beach visitors and surfers, and even the surge of much more recent rural-residential development amid Te Arai's foothills and ridges.

3.1 IDENTIFIED VALUES

These contrasting values are clearly reflected in the delineation of two ONLs near Te Arai and Eyres Points in the Auckland Unitary Plan's Schedule 7 (**Attachment 5**). ONL 22 "*Pakiri Beach*" stretches from Auckland's northern regional boundary at the edge of Mangawhai's high dunes down the length of Pakiri Beach, before embracing the steep coastal slopes that extend through to Cape Rodney (and Goat Island) before turning southwards to enclose the rocky inlet of Leigh's small boat harbour. At its centre, this ONL captures the beachfronts of northern and southern Pakiri Beach together with the coastal slopes of Te Arai / Eyres Point, and the descriptions of ONL 22's key characteristics in Schedule 7 include the following (overleaf):

Schedule 7: ONL22

ONL Description					WESI Criteria							
ID	Name	Location	Landscape Type, Nature & Description	Elements, Patterns & Processes	Natural Science Factors			Aesthetic Values		Expressiveness	Transient Values	
					Geological Topographical	Ecological	Dynamic	Memorability	Naturalness			
22	Pakiri Beach	North East Rodney	Wild Nature (coastal) Pakiri Ocean Beach extending into dune system for most of its length together with some coastal terrace landforms at the southern end near Pakiri Stream.	Natural duneland topography, strongly expressed coastal processes. Long uninterrupted sweep of beach.	High <i>Very extensive and open ocean beach together with a clearly articulated dune system, the elevated headlands of Eyres Point and Te Arai Point, as well as a small area of coastal terrace and stream corridors near the Pakiri River in the south.</i>	High Clear dune, stream corridor and coastal terrace sequence interacting with the open sea of the Pacific Ocean. Also a significant bird habitat.	High Strongly expressed coastal processes evident in sequence of landforms and stream corridors, and their dramatic interaction with the ocean.	Very High Arising from the combination of the beach's expansive aesthetic sheer length, together with openness, remoteness and wildness.	High / Mod Despite the incursion of the pine forest backdrop and limited pockets of development the unit's naturalness is derived from an amalgam of its natural elements, the dynamic and obvious natural processes at play along the beach and its relative remoteness and wildness.	Very High Very obvious combination of natural elements and dynamic natural processes, in particular related to the beach and dune corridor.	High Interplay of coastline and the open waters of the Pacific Ocean, including variation resulting from atmospheric conditions, time of day/year, tide and wildlife. Sea birds prevalent.	

Inland from Te Arai / Eyres Point and the ocean beach either side of it, ONL 21 “*West Te Arai Point*” embraces much of the hill country and bush around the top two-thirds or more of Lake Road, together with most of Red Hill Road and cemetery Road. Among Schedule 7’s description of this landscape are the following comments:

Landscape Type / Nature & Description:

Prominent amalgam of ridges and spurs as well as stream gullies that are reinforced and articulated by remnant native forest and shrubland. Rural development related to land use.

Natural Science Factors Geological / Topographical:

Clear sequence of ridgelines and gullies, at the back of Te Arai Point and Pakiri Beach, including several stream corridors, which are reinforced by remnant indigenous vegetation.

Aesthetic Factors – Memorability:

Clearly defined landform and sequence of ridges that is reinforced by native forest remnants; strong interplay between bush and open pasture on surrounding farmland creating a very marked structure and pattern.

These descriptions give a clear indication of some of the qualities associated with the area around, and inland of, Pakiri Beach. Viewing this area even more broadly, it is also apparent that there is a profusion of ONLs within this north-eastern corner of the Region (**Attachment 6**), with ONLs arrayed down the coastline extending through to Goat Island and Leigh, as well as across the inland hill country, intertwined with remnant stand of bush, that frames its coastal margins. This contrasts very markedly with the more sporadic ‘pepper-popping’ of ONLs across most of the Auckland Region and reflects the concentration of higher order landscape values, generally, within the Leigh / Omaha / Mangawhai area.

In addition, HNC Area 48 “*Te Arai and Pakiri Beach*” (**Attachment 7**) runs down the length of the Te Arai coastline, again focused primarily on its beachfront, foredune corridor and the coastal edge of Te Arai / Eyres Point. It avoids the pine forest and all but the outer edge of the Tara Iti Golf Course. AUP Schedule 8 describes this HNC Area as follows:

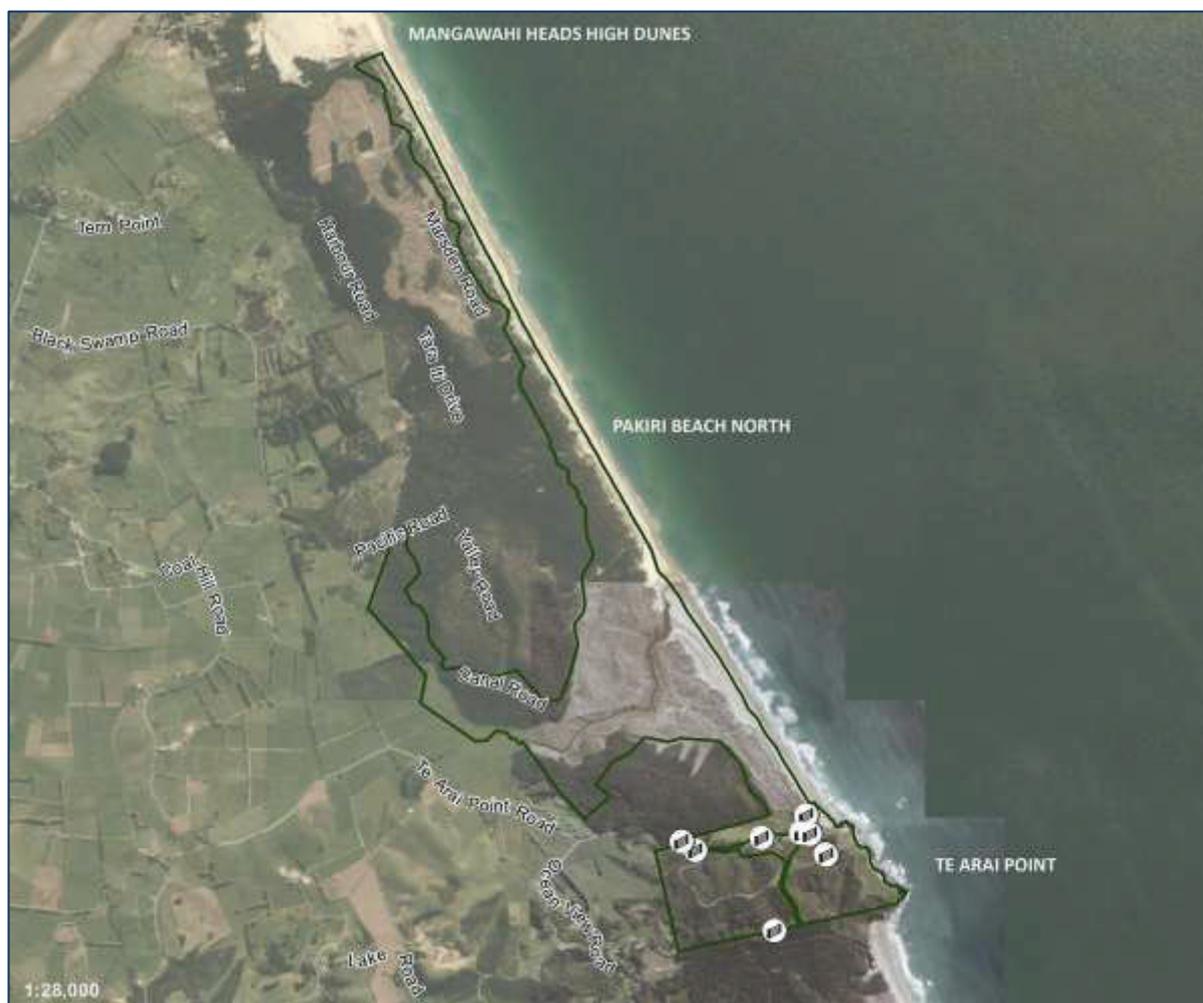
An extensive unit comprising remote beaches, sand dunes and dramatic coastal cliffs and scarps which descend to rock shoals and coves. Very little development is evident throughout the unit, which adds to the feeling of remoteness. Natural vegetation is variable – being influenced to the north by adjacent forestry vegetation – but is extensive in the upper reaches of the Pakiri River, with the regenerating native forest on the ridges above Pakiri Road and the remnant native forests on the coastal scarps between Leigh and Pakiri.

This HNC area merges with HNC Area 50 “Goat Island” southeast of the Pakiri River (also shown on Attachment 6) and is described as follows in Schedule 8:

An exposed and dramatic island landform that combines sheer cliffs and rock shoals with craggy coves backed by mature pohutukawa and other re-emergent coastal vegetation. The rocky shoals that surround much of the island interact dramatically with the open waters of the Pacific Ocean.

Looking beyond the ONLs and areas of High and Outstanding Natural Character identified in the AUP, Spectacle Lake and Tomarata Lake are also identified as being Outstanding Natural Feature No.75 in Schedule 6 of the AUP (**Attachment 5**). They are jointly described as being, “the best examples of dune-dammed lakes on the east coast of Auckland or Northland”. Although Slipper Lake is not given such status, it remains an important adjunct to Spectacle Lake in the general vicinity of Te Arai Point.

In addition to these statutory ‘values’, all of northern Pakiri Beach, together with much of its dune corridor – extending to the edge of the Tara Iti Golf Course – and Te Arai Point, are included within Auckland Council’s Te Arai Regional Park, as shown below and on **Attachment 7**.

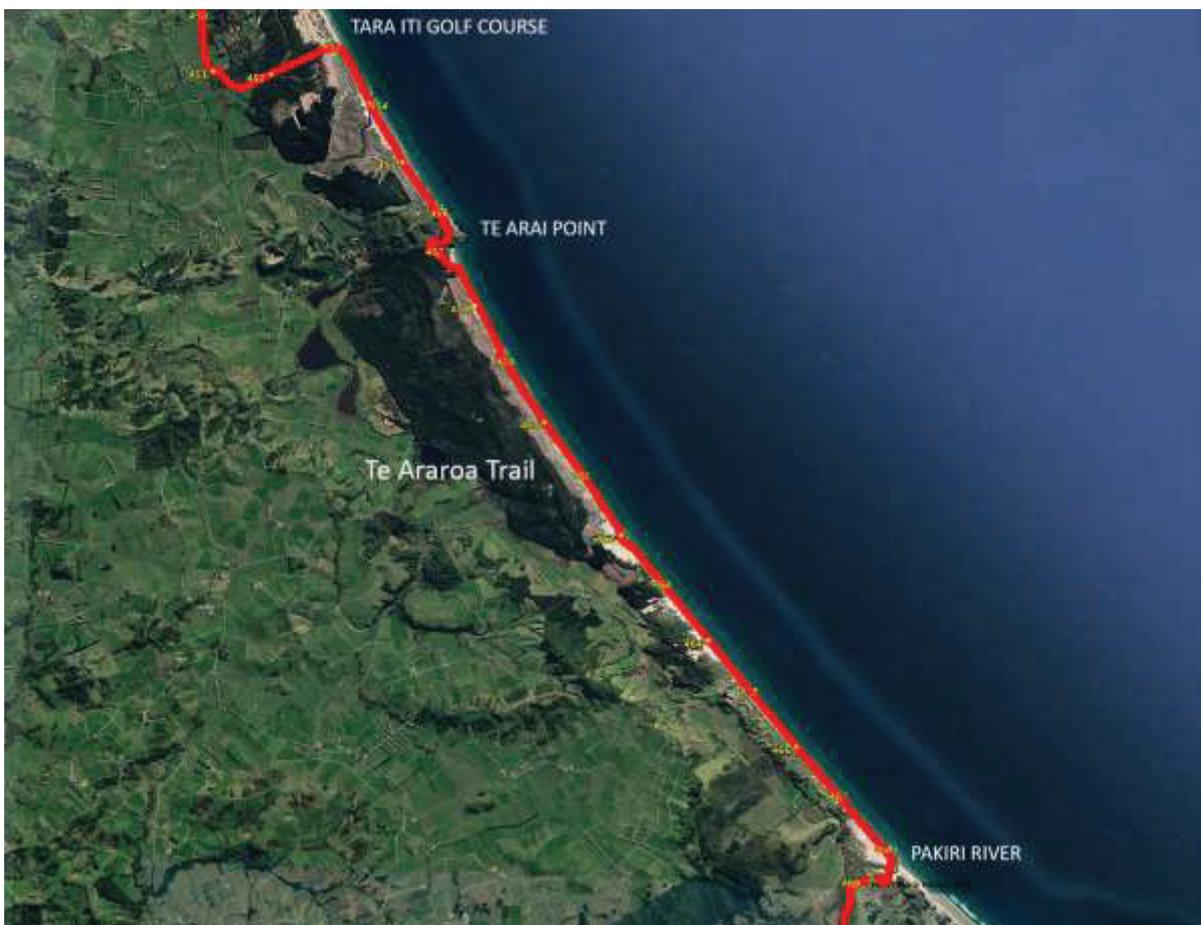


Te Arai Regional Park (outlined by dark green line)

The Tara Iti Golf Course and Cottages are located immediately behind (west of) the regional park and its dune margins, while part of the nationally important, Te Araroa Trail enters the regional park via Pacific Road – through the Mangawhai Forest– before running down the length of Pakiri Beach to the Pakiri River. The walkway / cycleway is not formed down the beach, but nevertheless remains a significant component of the northern Te Araroa Trail. Both the golf course and Te Araroa Trail route are shown overleaf.



Tara Iti Golf Course & Cottages behind Pakiri Beach (north)



Te Araroa Trail running down Pakiri Beach to the Pakiri River

Although the Te Araroa Trail and even the adjoining golf course have no statutory significance, the Trail, in particular – together with the Te Arai Regional Park – strongly reinforce the importance of Pakiri Beach and Te Arai / Eyres Point from a community perspective. The interplay between the beach area, its dunes and the ‘volcaniclastic’ of Te Arai Point with the Pacific Ocean makes a powerful landscape statement that resonates with locals and visitors alike.

Moreover, in relation to all of the landscapes and views / outlooks associated with the Te Arai / Pakiri area, the open plane of the Pacific Ocean is THE central feature: the fulcrum around which the beachfront, its dune system and the layering of hinterland terrain behind Pakiri Beach pivots. Although not referred to in any detail within the unit descriptions found in the AUP’s Schedules 7 and 8, the broad expanse of the Jellicoe Channel and beyond is critical to the character of the Pakiri coastline and the regional community’s perception of its value.

4.0 STATUTORY CONSIDERATIONS

The new application area lies off-shore of ONL 22 and HNC Area 48, while ONL 21 is located inland of Pakiri Beach and HNC Area 50 lies south of it, at the southern end of the beach. Although not within these overlays, any potential effects on them need to be considered. Relevant provisions include the following.

The Auckland Unitary Plan

B4.2. Outstanding natural features and landscapes B4.2.1. Objectives

- (1) *Outstanding natural features and landscapes are identified and protected from inappropriate subdivision, use and development.*
- (2) *The ancestral relationships of Mana Whenua and their culture and traditions with the landscapes and natural features of Auckland are recognised and provided for.*
- (3) *The visual and physical integrity and the historic, archaeological and cultural values of Auckland's volcanic features that are of local, regional, national and/or international significance are protected and, where practicable, enhanced.*

B4.2.2. Policies

Identify, evaluate and protect outstanding natural landscape

- (1) *Identify and evaluate a place as an outstanding natural landscape considering the following factors (refer to Schedule 7 of the AUP)*
- (2) *Include a place identified as an outstanding natural landscape in Schedule 7 Outstanding Natural Landscapes Overlay Schedule.*
- (3) *Protect the physical and visual integrity of Auckland's outstanding natural landscapes from inappropriate subdivision, use and development.*

Management of outstanding natural landscapes and outstanding natural features

- (8) *Manage outstanding natural landscapes and outstanding natural features in an integrated manner to protect and, where practicable and appropriate, enhance their values.*

D10.2. Objectives [rcp/dp]

- (1) *Auckland's outstanding natural features and outstanding natural landscapes are protected from inappropriate subdivision, use, and development.*
- (2) *The ancestral relationships of Mana Whenua with outstanding natural features and outstanding natural landscapes are recognised and provided for.*
- (3) *Where practicable the restoration and enhancement of outstanding natural features and outstanding natural landscapes, including in the Waitākere Ranges Heritage Area and the Hauraki Gulf /Te Moana-nui o Toi/Tīkapa Moana, is promoted.*
- (4) *Existing rural production activities are recognised as part of landscape values including in outstanding natural features and outstanding natural landscapes.*

D10.3. Policies [rcp/dp]

- (1) *Protect the physical and visual integrity of outstanding natural landscapes by:*
 - (a) *avoiding the adverse effects of inappropriate subdivision, use and development on the natural characteristics and qualities that contribute to the values of the outstanding natural landscape;*
 - (b) *maintaining the visual coherence and integrity of the outstanding natural landscape;*
 - (c) *maintaining natural landforms, natural processes and vegetation areas and patterns;*
 - (d) *maintaining the visual or physical qualities that make the landscape iconic or rare; and*
 - (e) *maintaining high levels of naturalness in outstanding natural landscapes that are also identified as outstanding natural character or high natural character areas.*
- (2) *Protect the physical and visual integrity of outstanding natural landscapes while taking into account the following matters:*

- (a) *the extent of anthropogenic changes to the natural elements, patterns, processes or characteristics and qualities;*
- (b) *the presence or absence of structures, buildings or infrastructure;*
- (c) *the temporary or permanent nature of any adverse effects;*
- (d) *the physical and visual integrity and the natural processes of the location;*
- (e) *the physical, visual and experiential values that contribute significantly to the natural landscape's values;*
- (f) *the location, scale and design of any proposed development; and*
- (g) *the functional or operational need of any proposed infrastructure to be located in the outstanding natural landscape area.*

D11.2. Objectives

- (1) *The natural characteristics and qualities of areas with outstanding natural character, or high natural character values are preserved and protected from inappropriate subdivision, use and development.*
- (2) *Where practical areas with outstanding natural character or high natural character values in the coastal environment, including areas in the Waitākere Ranges Heritage Area and the Hauraki Gulf/To Moana Nui o Toi/Tikapa Moana, are enhanced.*

D11.3. Policies

- (1) *Subdivision, use and development in areas scheduled in Schedule 8 Outstanding Natural Character and High Natural Character Overlay Schedule must:*
 - (a) *avoid adverse effects on the natural characteristics and qualities that contribute to the natural character values of outstanding natural character areas;*
 - (b) *avoid significant adverse effects, and avoid, remedy or mitigate other adverse effects, on the characteristics and qualities that contribute to the natural character values of high natural character areas;*
 - (c) *maintain significant landforms and indigenous vegetation and habitats that are significant natural characteristics and qualities in outstanding natural character and high natural character areas, to protect the visual and biophysical linkages between areas, while taking into account:*
 - (i) *the location, scale and design of the proposed subdivision, use or development;*
 - (ii) *the extent of anthropogenic changes to landform, vegetation, coastal processes and water movement;*
 - (iii) *the presence or absence of structures, buildings or infrastructure;*
 - (iv) *the temporary or permanent nature of any adverse effects;*
 - (v) *the physical and visual integrity of the area, and the natural processes of the location;*
 - (vi) *the intactness of any areas of significant vegetation and vegetative patterns;*
 - (vii) *the physical, visual and experiential values that contribute significantly to the wilderness and scenic value of the area;*
 - (viii) *the integrity of landforms, geological features and associated natural processes, including sensitive landforms such as ridgelines, headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs, streams, rivers and surf breaks;*
 - (ix) *the natural characteristics and qualities that exist or operate across mean high water spring and land in the coastal environment, including processes of sediment transport, patterns of erosion and deposition, substrate composition and movement of biota, including between marine and freshwater environments; and*
 - (x) *the functional or operational need for any proposed infrastructure to be located in the area.*

These objectives and policies are effectively carried through to Policies E18.3, E19.2 and E19.3, which comprise Auckland wide provisions addressing the Natural Character of the Coastal Environment and Natural Landscapes in the Coastal Environment. They are followed by objectives and policies that directly address resource extraction from the Region's sea beds:

Objective F2.6.2

- (1) *The extraction of minerals, sand, shingle, shell, petroleum, and other natural material occurs in a manner that does not have significant adverse effects on the coastal marine area or near-shore environments.*

Policy F2.6.3

- (4) *Require applications for mineral extraction in the coastal marine area to include measures to manage any adverse effects, including remediation and mitigation measures.*

NZ Coastal Policy Statement

Objective 2

To preserve the natural character of the coastal environment and protect natural features and landscape values through:

- *recognising the characteristics and qualities that contribute to natural character, natural features and landscape values and their location and distribution;*
- *identifying those areas where various forms of subdivision, use, and development would be inappropriate and protecting them from such activities; and*
- *encouraging restoration of the coastal environment.*

Objective 4

To maintain and enhance 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 3 Precautionary Approach

1. *Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.*
2. *In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:*
 - (a) *avoidable social and economic loss and harm to communities does not occur;*
 - (b) *natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and*
 - (c) *the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.*

Policy 4 Integration

Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires:

- (c) *particular consideration of situations where:*
 - (i) *subdivision, use, or development and its effects above or below the line of mean high water springs will require, or is likely to result in, associated use or development that crosses the line of mean high water springs; or*
 - (ii) *public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected; or*
 - (iii) *development or land management practices may be affected by physical changes to the coastal environment or potential inundation from coastal hazards, including as a result of climate change; or*

- (iv) *land use activities affect, or are likely to affect, water quality in the coastal environment and marine ecosystems through increasing sedimentation; or*
- (v) *significant adverse cumulative effects are occurring, or can be anticipated.*

Policy 13 Preservation of Natural Character

- (1) *To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development:*
 - (a) *avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character; and*
 - (b) *avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment; including by:*
 - (c) *assessing the natural character of the coastal environment of the region or district, by mapping or otherwise identifying at least areas of high natural character; and*
 - (d) *ensuring that regional policy statements, and plans, identify areas where preserving natural character requires objectives, policies and rules, and include those provisions.*
- (2) *Recognise that natural character is not the same as natural features and landscapes or amenity values and may include matters such as:*
 - (a) *natural elements, processes and patterns;*
 - (b) *biophysical, ecological, geological and geomorphological aspects;*
 - (c) *natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;*
 - (d) *the natural movement of water and sediment;*
 - (e) *the natural darkness of the night sky;*
 - (f) *places or areas that are wild or scenic;*
 - (g) *a range of natural character from pristine to modified; and*
 - (h) *experiential attributes, including the sounds and smell of the sea; and their context or setting.*

Policy 15 Natural Features and Natural Landscapes

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

- (a) *avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and*
- (b) *avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment; including by:*
- (c) *identifying and assessing the natural features and natural landscapes of the coastal environment of the region or district, at minimum by land typing, soil characterisation and landscape characterisation*

The Hauraki Gulf Marine Park Act (2000)

8 Management of Hauraki Gulf

To recognise the national significance of the Hauraki Gulf, its islands, and catchments, the objectives of the management of the Hauraki Gulf, its islands, and catchments are—

- (a) *the protection and, where appropriate, the enhancement of the life-supporting capacity of the environment of the Hauraki Gulf, its islands, and catchments:*
- (b) *the protection and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments:*
- (c) *the protection and, where appropriate, the enhancement of those natural, historic, and physical resources (including kaimoana) of the Hauraki Gulf, its islands, and catchments with which tangata whenua have an historic, traditional, cultural, and spiritual relationship:*
- (d) *the protection of the cultural and historic associations of people and communities in and around the Hauraki Gulf with its natural, historic, and physical resources:*

- (e) *the maintenance and, where appropriate, the enhancement of the contribution of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments to the social and economic well-being of the people and communities of the Hauraki Gulf and New Zealand:*
- (f) *the maintenance and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments, which contribute to the recreation and enjoyment of the Hauraki Gulf for the people and communities of the Hauraki Gulf and New Zealand.*

This array of provisions provides guidance as to the acceptability of sand extraction within the new area. Of particular note, Policy 13 of the NZ Coastal Policy Statement requires the avoidance of significant adverse effects on HNC Areas 48 and 50. However, Policy 15 ‘raises the bar even higher’ by stipulating that all adverse effects on ONL 22 (in particular) must be avoided. Although other provisions pertaining to protection of the characteristics and qualities of both the CMA and wider coastal environment at Pakiri are also relevant to assessment of the current proposal, this particular policy sets the highest ‘test’ for the application by MBL and is supported by AUP Objectives D.10.2 and D11.2, as well as Policies D10.3, D11.3, E18.3, E19.2 and E19.3.

The only appreciable difference between NZCPS Policy 15 and the AUP provisions listed above is that Policy 15 stresses the avoidance of effects on outstanding natural character values and landscapes in a rather generic fashion, whereas the AUP provisions tend to emphasise avoiding effects on the ‘characteristics and qualities’ that contribute to such higher order values. Policies D10.3, D11.3, E18.3 and E19.3 also indicate that the assessment of effects on such higher order landscapes and parts of the coastal environment is also contextualised by having regard to:

- the extent of anthropogenic changes found within particular areas / locations that have already affected their landforms, vegetation, coastal processes and water movement;
- the presence or absence of existing structures, buildings or infrastructure within those same landscapes and parts of the coastal environment; and
- the temporary or permanent nature of any adverse effects.

In addition, the new application needs to be assessed taking into account the effects associated with MBL’s current and previous dredging operations off Pakiri Beach, undertaken utilising the *Pohonui* and *Coastal Carrier*, together with those undertaken further offshore by Kaipara Ltd. The current MBL activities, in particular, provide a benchmark against which the future effects of reconsented extraction need to be evaluated, as those present operations are part and parcel of the ‘existing environment’.

5.0 EFFECTS

Adverse impacts upon landscape, amenity and natural character values typically arise where there is evident discontinuity between the character and values of an existing environment and what is proposed, and where the resultant ‘challenge’ to the existing landscape ‘order’ is perceived in a negative light. Consequently, this section of the report addresses the effects of the proposed continuation of sand extraction operations at Pakiri – albeit within a single consent area / ‘zone’ slightly further offshore of Pakiri Beach than the currently consented, Zones 1-4. Future extraction will also employ the *William Fraser* subject to the other operational modifications outlined in Section 2.0 of this report.

5.1 RECEIVING ENVIRONMENTS & AUDIENCES

In order to gauge the realistic exposure of a dredge to different parts of the Pakiri landscape, a site visit was undertaken on the 17th June 2019, during which the *Coastal Carrier* was directed by Shayne Elstob (Chief Operating Officer of MBL) to traverse the current consent areas offshore of our location at Pakiri Beach, Te Arai Point and within the local road network. By travelling up and down Pakiri Beach and the roads behind it while the *Coastal Carrier* (the *William Fraser* was not available at that time) traversed current and proposed consent areas it was possible to gauge the (then) current dredge’s level of visibility from a wide range of vantage points on local roads, including:

- Mangawhai Road;
- Te Arai Point Road,
- Lake Road;
- Red hill Road;
- Ocean View Road;
- Atkins Road;
- Pakiri Block Road; and
- M Greenwood Road.

On the basis of this site visit, it was determined that the current dredge is visible at the outer limits of the existing, northern consent area from a few isolated points on Te Arai Point Road and one specific part of Mangawhai Road – albeit over a viewing distance of more than 4kms. Even so, it was not visible from most of the other roads listed above, even when travelling from the northern to southern consent areas past Te Arai / Eyres Point, via Ocean View Road. In particular, the dune corridor behind both beaches, and its broad swathe of production pines, created a substantial barrier between most of Pakiri’s coastal hinterland and the existing dredge. As a result, exposure to the *Coastal Carrier* from most of the road network behind Te Arai Point and the beaches was, at worst, sporadic. **Attachments 8-15** showing views from Mangawhai Road, Te Arai Road (2 photos), Lake Road, Ocean View Road, Atkins Road and Pakiri Block Road (**Viewpoints 1-7**) while the *Coastal Carrier* was operational help to ‘explain’ this assessment.

It is unlikely that the slightly larger profile of the *William Fraser* has appreciably changed this situation. The newer dredge – like its predecessors – may still be visible from some rural residential properties and farms off more elevated parts of Te Arai Point Road (Viewpoints 2 & 3), Ocean View Road (Viewpoints 5 & 6), Red Hill Road, Cemetery Road (including the recent subdivision at the ‘top’ of that road), and Mangawhai Road (Viewpoint 1). However, the distance of such views would appreciably reduce awareness of the dredge and its visual presence to the point where it is often insignificant.

In reality, this indicates that the proposed dredge within the proposed 15-25m consent area will – like the *Pohonui*, *Acheron III* and *Coastal Carrier* within consented Zones 1-4– be more visible from:

- Pakiri Beach itself, both north and south of Te Arai / Eyres Point;
- The adjoining Te Arai Regional Park, including a series of elevated vantage points offered by the tracks up and over Te Arai and Eyres Points, as well as from its old quarry; and
- The Tara Iti Golf Course and Cottages.

Two maps showing the Zones of Theoretical Visibility cast from the top of the *William Fraser's* exhaust stacks (set at 22.8m above the sea floor at 10m depth) – **Attachments 16** and **17** – help to confirm these findings, although the maps don't take into account the screening generated by vegetation cover, notably the pine plantations either side of Te Arai Point. This ultimately limits their value in terms of accurately defining the dredge's visual receiving environments.

Turning to the key audiences associated with these 'catchments', those most exposed to the MBL's existing vessels already comprise users of Pakiri Beach – including the majority of regional park users who utilise the beachfront and dune margin north of Eyres Point. Over the summer months, especially, those already exposed to the *Pohonui* and *Coastal Carrier* include family groups visiting the regional park, those swimming and picnicking near the car park, surfers, tourists, and those meandering up and down the beach foreshore / 'promenade' – including some on the Te Araroa Trail. In addition, many visitors clamber over the volcanic plug of Te Arai / Eyres Point itself, which acts as a natural lookout. The southern half of Pakiri Beach is also regularly used by fishermen, including long-liners, away from the more heavily used northern beach. However, a few also venture up the northern beach, away from the areas of greater public activity towards the beachfront off the Tara Iti Golf Course.

Others likely to clearly see the *William Fraser* in the future (much as at present) comprise those staying at the Tara Iti Cottages or playing on the golf course.

On the other hand, exposure of the vessel to locals and visitors alike on the local road network would be much more sporadic, as would the views experienced by residents from Pakiri's matrix of farms and rural-residential properties. Even so, some road users and local residents still see the *William Fraser*, either periodically or on a more regular basis, and this would remain the case in the future.

5.2 EFFECTS ASSESSMENT

To assess the effects of the proposed dredge and related extraction operations, a sequence of 'before and after' images have been prepared for a representative sample of viewpoints. These images show the *Coastal Carrier* operating within the consented extraction areas (Zones 2 and 4 specifically) near the 10m contour, then further offshore above the 20m contour. Although this comparison employs the slightly smaller, *Coastal Carrier*, as opposed to the *William Fraser* (which was not available in April 2019), it nonetheless offers a direct comparison of the same vessel operating within the currently consented, and proposed, extraction areas. This has greatly assisted my examination of the current application. The viewpoints used in this assessment are located as follows (refer to **Attachment 8 & 18-27**):

- Viewpoint 8. **Te Arai Regional Park Car Park**
- Viewpoint 9. **Pakiri Beach North** (near the Tara Iti Golf Course)
- Viewpoint 10. **Eyres Point Track**
- Viewpoint 11. **Pakiri River Mouth**
- Viewpoint 12. **M Greenwood Road & Pakiri Regional Park**

This assessment takes into account the following factors / considerations:

Existing Values:

Reflecting the relative extent to which a landscape / environment is valued in terms of:

- Biophysical Components: including landforms, vegetation cover, freshwater / marine bodies, and key cultural elements / features: buildings, other structures and activities
- Perceptual Components: aesthetic value, expressiveness, legibility (focusing on the degree to which landscape elements combine to create an attractive composition, 2D patterns, 3D sense of structure) and ephemeral / transient values

Legibility / Prominence:

- Visibility / Legibility of The Proposed Development / Activities: indicating the extent to which the activity proposed would be legible and visually prominent from the vicinity of each viewpoint

Landscape Effects:

- Impacts on Landscape Elements & Patterns: the extent to which the proposal would adversely affect the structure of Pakiri's coastal landscape: its layering of elements, the interplay between different types of land use / structures
- Impacts on Visual Coherence / Unity: the extent to which the proposal would adversely affect the perceived integrity of the Pakiri coastline's landscape by altering the balance between natural and man-made elements found within that landscape and/or disrupt its visual cohesion
- Impacts on Character & identity: the extent to which the activity would adversely affect public perceptions of Pakiri Beach and Te Arai / Eyres Point, and the area's related sense of place and identity
- Impacts on Key Features / Views: (where applicable) the extent to which the presence of the proposed activity would disrupt or disturb views to, and of, the expanse of sea directly off Pakiri Beach and Te Arai / Eyres Point

Natural Character Effects:

The degree to which the development proposal would adversely affect perception and appreciation of the following characteristics associated with the existing Coastal Environment:

- Abiotic factors (essentially landform)
- Vegetation Type & Cover (native / endemic to exotic)
- Sea / Water Areas
- Natural Processes
- Uses / Activities: Buildings & Structures (their presence / absence)

Taking all of the above into account, each viewpoint analysis (starting on page 22) concludes with an overall **Impact Rating** for the individual development component. These ratings employ the impact scale depicted overleaf in **Table 2**.

Table 2.

	<i>Landscape Effects:</i>	<i>Natural Character Effects:</i>	<i>Rating:</i>	<i>RMA Rating:</i>
1	<i>No change or barely legible change to some landscape elements & character; no change to values</i>	<i>No change or barely legible change to some coastal elements; no change to overall naturalness</i>	<i>No Effect</i>	<i>Less Than Minor Effect</i>
2	<i>Limited change to some landscape elements & character; no change to values</i>	<i>Limited change to some coastal elements; no change to overall naturalness</i>	<i>Very Low / Low Effect</i>	<i>Minor Effect</i>
3	<i>Increasingly evident change to some landscape elements & character; limited change to values (naturalness, expressiveness, aesthetic value, etc)</i>	<i>Increasingly evident change to coastal elements & patterns; slight reduction in overall naturalness</i>	<i>Low / Moderate Effect</i>	
4	<i>Appreciable change to some landscape elements & character; more obvious impact on some values</i>	<i>Appreciable change to some coastal elements & patterns; more apparent change in overall naturalness</i>	<i>Moderate Effect</i>	
5	<i>Marked change to some landscape elements, character and values</i>	<i>Marked change to coastal elements & patterns; evident reduction in overall naturalness</i>	<i>Moderate / High Effect</i>	<i>Significant Effect (or greater)</i>
6	<i>Obvious degradation of landscape elements, character and values</i>	<i>Obvious degradation of coastal elements & patterns, and overall naturalness</i>	<i>High Effect</i>	
7	<i>Very serious and obvious degradation of elements, character & values</i>		<i>Severe Effect</i>	

This scale is aligned with the 7-point scale of ratings recommended by the NZ Institute of Landscape Architects (*Best Practice Note: Landscape Assessment And Sustainable Management 10.1*) and the Auckland Council Design Manual, which contains a 9-stage outline of the steps to be taken to assess the landscape effects of any project (*Information Requirements for the Assessment of Landscape and Visual Effects*¹).

1

<http://content.aucklanddesignmanual.co.nz/resources/tools/landscapeandvisualeffectsassessment/Documents/Landscape%20and%20Visual%20Effects%20Assessment%20Requirements.pdf>

Existing Values: The main car park at Te Arai Regional Park directly abuts Pakiri’s expansive northern beachfront. Framed on one side by a rock outcrop at the edge of Eyres Point that flanks an old quarry site, and on the other by a sequence of dunes, marram grass and pingao reaching towards Mangawhai, the broad sweep of the beach opens up before those arriving at the regional park at this key vantage point. The broad expanse of the Jellicoe Channel and Pacific Ocean, interrupted only by the serrated, volcanic profile of the Hen and Chicken Islands, melds with an open shoreline to offer a spectacularly panoramic outlook.

The dynamic nature of views from this quarter – often embracing wind-tossed surf and tidal fluctuations that dramatically alter the shape and depth of the shoreline – add to this spectacle, as does the relative absence of significant signs of human intervention and development, apart from within and around the immediate car park area. Moreover, the clarity of the waters crashing on Pakiri’s beachfront, combined with its often rolling to tumultuous surf, and the flowing grasses across its even dune corridor, help to affirm the limited nature of such intervention, while the grand scale and seamlessness of the beach and sea is matched by the ‘big skies’ that reach seawards overhead. These qualities reinforce the beachfront’s sense of engagement and interaction with the Pacific Ocean, and its high level of appeal as a seemingly very natural, landscape.

Attachment 18 shows the *Coastal Carrier* within this landscape setting, at the nearest point of Zone 2 close to the 10m inshore zone limit. The dredge is clearly visible and, moving at roughly 1 to 1.5 knots per hour, takes some time to complete its operations up and down the beach. Yet, Zones 1 and 2 extend over 4.5km north of the point at which the *Coastal Carrier* is shown in Attachment 18, so that it rarely has the sense of being as close to the car park and Te Arai / Eyres Point as the Viewpoint 8 images suggest. As such, it presently remains sufficiently remote from this viewpoint that there is a sense of detachment from it. Consequently, the *Coastal Carrier* has little real impact on the key values associated with views from near the car park, and even though it introduces a man-made component to the seascape of northern Pakiri Beach, it lacks sufficient visual presence to appreciably disrupt or erode the area’s core landscape qualities.

Legibility / Prominence: Relocating the *Coastal Carrier* to the 20m contour – as shown in Attachment 19 – would result in the dredge having appreciably less visual ‘presence’ and prominence. It would remain a legible components of the coastal landscape and seascape, but would not be intrusive or obtrusive: in particular, there would be little awareness of the actual dredging operations.

In a comparative sense, therefore, relocation of such operations further offshore would have less impact, visually, than the current dredging operations closer to Pakiri’s shoreline. This would remain the case even allowing for the recent ‘switch-over’ from the *Acheron III*, the *Pohonui* and the *Coastal Carrier* to the *William Fraser*.

Landscape Effects: The reduced scale and visual presence of the *Coastal Carrier* in Attachment 19, and therefore of the *William Fraser* in actual views from the beach and its margins, would improve the overall situation from a landscape standpoint. Dredging further offshore would result in such operations appearing less intrusive and less disruptive of the coastal landscape’s naturalness when viewed from Viewpoint 8. This would, in turn, result in:

- Decreased awareness of human activity and ‘structures’ off the Pakiri beachfront, resulting in a positive shift in the balance between natural and cultural (man-made) elements within the coastal landscape as a whole; and
- Slightly decreased incursion into key views across the inshore margins of the Jellicoe Channel towards the Hen and Chicken Islands.

In reality, these positive effects (further assisted by the changed operational regime associated with use of the *William Fraser*) would have little real impact on the wider patterning and layering of the Pakiri Landscape, or to its character and identity. These qualities would continue to be very substantially defined by the simple, open, planes of the sea and beachfront, while human activity and development – ranging from production forestry and Tara Iti Golf Course to the regional park car park next to Viewpoint 8 – would continue to remain ‘part and parcel’ of the Pakiri landscape as a whole.

Assessed in relation to this existing environment, including the current MBL operations, this means that the proposed activity would have no adverse effect in terms of the 7-point scale outlined above.

Natural Character Effects: In a similar vein, the reduced scale of the *William Fraser* would very slightly reduce the cumulative intrusion and effects of human elements and activities within this coastal environment as a whole – having a positive effect on public perception of its natural character value. On the other hand, it would have no appreciable effect in relation to the abiotic / landform, vegetative, or natural processes, characteristics of the coastline north of Te Arai / Eyres Point – or indeed, on the integrity of the expansive sea area encompassed by HNC Area 48. Furthermore, with other elements, such as production forestry and the Tara Iti Golf Course, still defining the coastline’s margins, the reduced profile of the *William Fraser* would not greatly alter the natural character value of the northern Pakiri coastline as a whole.

The following table summarises these findings:

EXISTING VALUES:							
VALUE RATINGS:	VERY LOW	LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

ADVERSE EFFECTS RATINGS:	NO EFFECT	VERY LOW / LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	SEVERE
LEGIBILITY / PROMINENCE:							
Visibility:							
LANDSCAPE EFFECTS:							
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							
NATURAL CHARACTER EFFECTS:							
Abiotic:							
Vegetation:							
Water Areas:							
Natural Processes:							
Uses / Activities:							

VIEWPOINT 9. PAKIRI BEACH NORTH

(Attachments 20 & 21)

Existing Values: The view from most of Pakiri's beachfront shares many of the qualities outlined in relation to Viewpoint 9: panoramically expansive views (albeit with less elevation), the pre-eminence of a sweeping 'white sand' foreshore, an emphatic visual focus on the broad plane of the Pacific Ocean, the backdrop of low to medium height dunes and their marram / pingao cover, and the 'big skies' – all described above – remain key attributes of the outlook from most locations up and down the beach. Daily, seasonal, and weather induced, changes all add to the drama of this location.

Yet, whereas most views from near the car park (Viewpoint 8) and the margins of Te Arai / Eyres Point (Viewpoint 9) offer an overview of the beach and its extension northwards, views from the actual beach area tend to be more 'binary' – either directly towards or away from the sea. The surf line and tidal undulations at the very edge of the beachfront offer natural points of focus, whereas views inland tend to capture the merger of the beachfront with the rising mantle of dunes and marram / pingao that frame it – backed by pines and, in places, the Tara Iti Golf Course, beyond. Looking seaward, the often turbulent drama of Pakiri's renowned surf often takes 'centre stage' for surfers, swimmers, fishermen and just those walking up and down the beach alike – including those on the Te Aranga Walkway. In views to the north, the beach is less clearly defined, with the Mangawhai Dunes a distant sequence of landforms that merge – to a greater or lesser extent depending on viewing distance – with the Brynderwyn Hills and Bream Tail beyond the settlement of Mangawhai. Looking southwards, Eyres Point rears up more emphatically, but the sounds and smells of the surf and actual beachfront still tend to draw most attention much closer to Viewpoint 9 and other beach based vantage points, to the sea especially.

While pines of the northern Pakiri Forest dominate the skyline, their enclosure has diminished over recent years, with the emergence of the Tara Iti links course and its patchwork of both cottages and other structures. These are not so close as to be intrusive, but together with the manicured nature of the course, these have still diminished some of the beach's intrinsic naturalness, and its feelings of relative remoteness, isolation and tranquillity. The inshore presence of the *Coastal Carrier* is also clear, although some might mistake it for a trawler, and few parts of Auckland's north-eastern maritime area are totally devoid of boat and ship movements of one kind or other. Even so, the movement and limited duration of current operations mean that it has a temporary or ephemeral effect on the current environment of north Pakiri.

Overall, therefore, the beachfront and views from it embrace an area that displays a high level of visual drama and appeal, together with moderate to high levels of perceived naturalness. Importantly, the dunes and their marram / pingao cover provide an important screen and buffer between most of the beachfront and the adjacent, and much more developed environs, of the Tara Iti Golf Course.

Legibility / Prominence: Again, Attachment 20 shows the *Coastal Carrier* close to the 10m contour north of Te Arai Point, whereas Attachment 21 shows it sitting above the 20m contour. Comparison of both Attachments reveals the new vessel appearing very noticeably smaller – in effect, much more remote than the same vessel operating close to the current inshore boundary.

Until MBL's recent change-over of vessels, such 'close-up' views also occasionally allowed the public to see dredged seawater being spilled over the sides of the *Coastal Carrier*, so that while the transition to the *William Fraser* has meant exposure to a larger dredge, its use of 'moon pools' and the under-keel discharge of seawater has already reduced awareness of the actual dredging process. This, together with the significantly reduced scale and profile of the *William Fraser* when operating between the 15m and 25m contours would have significantly reduced the visual presence of the dredging operations in a comparative sense.

Landscape Effects: As for Viewpoint 8, the reduced profile of the *William Fraser* when dredging further offshore would have a beneficial effect on the Pakiri beachfront and landscape. The seaward relocation of its operations would result in it appearing less intrusive and less disruptive of the coastal landscape’s naturalness than the current extraction regime. Again, this would result in:

- Decreased awareness of human activity and ‘structures’ off the Pakiri beachfront, resulting in a positive shift in the balance between natural and cultural (man-made) elements within the coastal landscape as a whole; and
- Slightly decreased incursion into key views across the inshore margins of the Jellicoe Channel.

Such effects would be subtle – in the context of other human activities and development within and near the margins of Pakiri Beach – but would still be positive or beneficial, overall, from a landscape standpoint. Assessed in relation to this existing environment, including the current MBL operations, this means that the proposed activity would have no adverse effect in terms of the 7-point scale outlined above.

Natural Character Effects: As for Viewpoint 8, the decreased scale of the *William Fraser* would have a positive impact on public perception of Pakiri’s coastal environment, but would not appreciably affect its abiotic / landform, vegetative, or natural processes, characteristics. Effects in relation to HNC Area 48 would be subtle and very slightly positive overall, but not significant – again, recognising the modified nature of much of the northern beach’s existing margins.

The following table summarises these findings:

EXISTING VALUES:							
VALUE RATINGS:	VERY LOW	LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

ADVERSE EFFECTS RATINGS:	NO EFFECT	VERY LOW / LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	SEVERE
LEGIBILITY / PROMINENCE:							
Visibility:							
LANDSCAPE EFFECTS:							
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							
NATURAL CHARACTER EFFECTS:							
Abiotic:							
Vegetation:							
Water Areas:							
Natural Processes:							
Uses / Activities:							

Existing Values: The visual qualities of Viewpoint 10 are closely aligned with those described in relation to Viewpoint 8, although the more elevated sequence of views that unfolds as one climbs up and over the crest of Eyres Point (immediately north of Te Arai Point) means that they are even more panoramic in nature. They are also framed by more of the immediate foreground, including the old quarry site and present-day ‘inlet’ that is a distinctive feature of the Point’s volcanic apron. The distant profiles of the Hen and Chicken Islands, the Brynderwyns, Bream Tail and even Little Barrier Island – directly to the east – also come more to the fore, visually, while the gently arcing profile of Pakiri Beach is also more obvious. Particularly so at its northern end near the Mangawhai High Dunes, while the swathe of dune corridor and coastal shrubland behind the near beachfront is also revealed, together with the remnants of the northern production forest and the fairways of the Tara Iti Golf Course.

Legibility / Prominence: As for Viewpoint 8, Attachment 22 shows the *Coastal Carrier* at the nearest boundary of Zone 2. The current dredge is clearly visible although not perhaps as prominent as from near the car park. Attachment 23 displays the *Coastal Carrier* operating above the 20m contour line, appearing more remote, even detached (visually) from both the beach and viewpoint.

Additionally, while the changeover to the *William Fraser* has already resulted in slightly increased exposure to that larger vessel, it has also reduced the duration of such exposure – relative to each extraction ‘trip’. The move to more distant offshore dredging would reinforce this by further diminishing the visual presence and obviousness of both the dredge and extraction operations.

Landscape Effects: As for Viewpoints 8 and 9, relocation of MBL’s dredging to deeper waters would:

- Decrease awareness of human activity and ‘structures’ off the Pakiri beachfront, resulting in a positive shift in the balance between natural and cultural (man-made) elements within the coastal landscape as a whole; and
- Slightly decrease the feeling of incursion into key views across the inshore margins of the Jellicoe Channel.

Although the proposed extraction area would result in operations occurring directly offshore of Te Arai Point, they would appear similar to the current transit of the dredge from Zones 1 and 2 north of Te Arai Point to Zones 3 and 4 south of it. The *William Fraser’s* speed would remain at approximately 1.5 - 2.0 knots per hour, and without sediment spilling over the side of the vessel there would be little to distinguish its extraction operations from the normal passage of vessels up and down the Pakiri coastline.

As a result, the revised regime’s effects would remain subtle overall, taking into account the other development and modification that is already apparent near Te Arai Point and its beach margins to the north and south. Again, when assessed in relation to this existing environment, including the current MBL operations, this means that the proposed activity would have no adverse effect in terms of the 7-point scale outlined above.

Natural Character Effects: Similarly, as for Viewpoints 8 and 9, the decreased scale of the *William Fraser* would have a positive impact on public perception of Pakiri’s coastal environment, but would not appreciably affect its abiotic / landform, vegetative, or natural processes, characteristics. Effects in relation to HNC Area 48 would be subtle and slightly positive overall, but not significant – again, recognising the modified nature of much of the northern beach’s existing margins.

The following table (overleaf) summarises these findings:

EXISTING VALUES:							
VALUE RATINGS:	VERY LOW	LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

ADVERSE EFFECTS RATINGS:	NO EFFECT	VERY LOW / LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	SEVERE
LEGIBILITY / PROMINENCE:							
Visibility:							
LANDSCAPE EFFECTS:							
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							
NATURAL CHARACTER EFFECTS:							
Abiotic:							
Vegetation:							
Water Areas:							
Natural Processes:							
Uses / Activities:							

VIEWPOINT 11. PAKIRI RIVER MOUTH

(Attachment 24)

Existing Values: The coastal outlook from the general vicinity of the Pakiri River mouth is dominated in the more immediate foreground by the course of the river and the dunes that enclose both sides of it. A more distant Te Arai Point, then Bream Tail and the Hen and Chicken Islands, enclose the northern reaches of the Jellicoe Channel and Pakiri Beach as a whole beyond the river mouth, while a cascading sequence of ridges and bush enclose its inshore margins.

As with the views experienced from Viewpoints 8-10, those from near Viewpoint 11 embrace the broad expanse of the Jellicoe Channel and Pacific Ocean, flanked by a deep layering of dunes and headlands extending up the coast north of the Pakiri River mouth. In addition, a rapidly rising sequence of hill country south of the Pakiri River frames the general outlook from the river's margins and beachfront as well. As for the other viewpoints described, the dynamic nature of views from this quarter – often embracing wind-tossed surf and tidal fluctuations that dramatically alter the shape and depth of the shoreline – add to this spectacle, as does the relative absence of significant signs of human intervention and development, apart from within and around the nearby camping ground off Pakiri River Road. The clarity of the waters crashing on south Pakiri's beachfront, combined with its often rolling to tumultuous surf, are 'part and parcel' of this coastal landscape, while the grand scale and seamlessness of the beach and sea is matched by the 'big skies' that extend out across the Jellicoe Channel. Again, these qualities reinforce the beachfront's sense of engagement and interaction with the Pacific Ocean, and its high level of appeal as a seemingly, very natural, landscape.

Legibility / Prominence: Attachment 24 shows the *Coastal Carrier* within this landscape setting, off the Poutawa Stream, at the nearest point of Zone 4 – near the 20m contour. Because of the angle of viewing from this quarter, any differences between the *Coastal carrier* or *William Fraser* at either 10m depth or 20m would be more subtle than in relation to Viewpoints 8-10. A vessel at greater depth would be more offset from the coast, but is likely to appear only slightly smaller. This change wouldn't be particularly obvious.

However, the nearly 6km viewing distance from this viewpoint to both the current and proposed extraction areas further means that either vessel at these locations would remain a relatively minor, in all likelihood, insignificant, component of the wider coastal landscape and seascape on display. Near the southern limit of both 'zones', both vessels would have very little visual presence, while operations north of these margins would push both vessels into the distant background of views from this quarter – which is the focus for most public activity. Consequently, regardless of whether the *William Fraser* operates in the future around the 10m contour or within the deeper extraction area currently proposed, it would remain a distant, quite unobtrusive, component of the coastal landscape and environment.

Landscape Effects: As a result, operations within the proposed extraction area would have little, if any, impact on the wider patterning and layering of the Pakiri Landscape, its character and identity, or its value overall. Views from around Viewpoint 11 would continue to be very substantially defined by the simple, open, planes of the sea and beachfront, while the *William Fraser's* limited exposure to this part of Pakiri Beach – also taking into account the reduced duration of operations (on a per trip basis) – would limit its effects on the Pakiri coastline to a level that is consistent with current operations.

Consequently, the Landscape Effects associated with the proposed operational area and regime would be negligible.

Natural Character Effects: The little changed profile of the *William Fraser* would have no appreciable effect on the abiotic / landform, vegetative, or natural processes characteristics of the Coastal

Environment south of Te Arai / Eyres Point. Moreover, any impacts on public perception of the coastal environment and the perceived integrity of HNC Area 48 would also be negligible.

The following table summarises these findings:

EXISTING VALUES:							
VALUE RATINGS:	VERY LOW	LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

ADVERSE EFFECTS RATINGS:	NO EFFECT	VERY LOW / LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	SEVERE
LEGIBILITY / PROMINENCE:							
Visibility:							
LANDSCAPE EFFECTS:							
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							
NATURAL CHARACTER EFFECTS:							
Abiotic:							
Vegetation:							
Water Areas:							
Natural Processes:							
Uses / Activities:							

Existing Values: M Greenwood Road provides the entrance to Pakiri Regional Park and is perched atop the sharply aligned sequence of cliffs and ridges that enclose the southern end of Pakiri Beach. As a result, M Greenwood Road offers a spectacularly panoramic overview of the southern half of Pakiri Beach, then a layering of headlands, hill country and islands beyond, including Te Arai Point, Bream Tail, the Brynderwyns and the Hen and Chicken Islands. The mouth of the Pakiri River is prominent in the near middle distance of such views, while bush regeneration covers the slopes immediately below M Greenwood Road.

Many of the qualities associated with this vantage point have already been addressed in relation to Viewpoints 8-11. They include the panoramic, and in many regards, highly dramatic, overview of Pakiri already mentioned; but also greater appreciation of the crescent profile of Pakiri Beach (south) and the framing of the river mouth and adjoining beach by both rising landforms and various layers of vegetation behind it. Also apparent is the interaction between an increasingly 'bushy' foreground, in the immediate vicinity of M Greenwood Road, and the vast expanse of the Jellicoe Channel and Pacific Ocean cradled by an array of coastal landforms from the southern end of Pakiri Beach to Bream Tail.

Legibility / Prominence: Attachment 25 shows the *Coastal Carrier* within this landscape setting, off the Poutawa Stream, at the nearest point of Zone 4. The current dredge is just about visible, as a 'pinprick' in the surface of the coastal waters below Te Arai Point, while its operational area within Zones 3 and 4 stretches some 4km north of the Poutawa Stream. Relocation of the *Coastal Carrier* or *William Fraser* to a position further offshore of the current extraction zones would not appreciably change this situation. The dredge would remain a 'pin prick' on the surface of the coastal waters of Pakiri Beach would become even more difficult to clearly see when operating further north, closer to Te Arai Point.

Landscape Effects: Accordingly, it is considered that dredging within the 15-25m proposed 'zone' would have:

- No appreciable effect on public awareness of human activity and 'structures' off the Pakiri beachfront and no related impact on the balance between natural and cultural (man-made) elements within the coastal landscape as a whole;
- No real effect on key views up the Pakiri coastline;
- No effect on the wider patterning and layering of the Pakiri Landscape; and
- No effect on its character and identity.

As a result, it is considered that the modified extraction regime would have no appreciable adverse effect on the Landscape Values experienced from Viewpoint 12.

Natural Character Effects: In much the same vein, the proposed dredging operations would have no appreciable impact, either on the biophysical characteristics of the coastal environment 'laid out' below M Greenwood Road, or its perceived characteristics and values. Any effects on the natural character values of the Pakiri South coastline, as a whole, would be negligible.

The following table (overleaf) summarises these findings:

EXISTING VALUES:							
VALUE RATINGS:	VERY LOW	LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	VERY HIGH
Biophysical:							
Perceptual:							

ADVERSE EFFECTS RATINGS:	NO EFFECT	VERY LOW / LOW	LOW / MODERATE	MODERATE	MODERATE / HIGH	HIGH	SEVERE
LEGIBILITY / PROMINENCE:							
Visibility:							
LANDSCAPE EFFECTS:							
Elements & Patterns:							
Coherence/ Unity:							
Character / Identity:							
Key Features / Views:							
NATURAL CHARACTER EFFECTS:							
Abiotic:							
Vegetation:							
Water Areas:							
Natural Processes:							
Uses / Activities:							

5.3 EFFECTS SUMMARY

The following table summarises the adverse effects ratings for all five viewpoints:

LOCATION:	LANDSCAPE EFFECTS RATING:	NATURAL CHARACTER EFFECTS RATING:
VIEWPOINT 8. Te Arai Regional Park Car Park	No Effect	No Effect
VIEWPOINT 9. Pakiri Beach North	No Effect	No Effect
VIEWPOINT 10. Eyres Point Track	No Effect	No Effect
VIEWPOINT 11. Pakiri River Mouth	No Effect	No Effect
VIEWPOINT 12. M Greenwood Road	No Effect	No Effect

Key factors that contribute to these findings include:

- The 'existing environment' associated with operations under the current sand mining consent issued by the Environment Court in 2006;
- The introduction of the *William Fraser* in late 2019 that has already led to a reduction in the duration of each trip; and
- The presence of other activities, developments and uses that already effect the landscape and natural character values of Pakiri's coastal environment – including production forestry and the Tara Iti Golf Course and Cottage.

6.0 STATUTORY ASSESSMENT

The following key statutory directives have been identified in Section 4.0 of this report as being of most significance with reference to the Auckland Unitary Plan RPS, the AUP (DP) and Policies 13 and 15 of the NZ Coastal Policy Statement:

1. The avoidance of adverse landscape effects associated with extraction activities on ONL 22; and
2. The avoidance of significant adverse effects on HNC Area 48;

It is considered that these 'tests' would be met by the current consent renewal application, for the reasons set out in Sections 5.2 and 5.3 of this report. Accordingly, the consent application is considered to be consistent with the relevant provisions of the AUP (RPS and District Plan), the NZ Coastal Policy Statement, Sections 6(a) and (b) of the resource Management Act and Section 8 of the Hauraki Gulf Marine Park Act.

7.0 CONCLUSIONS

On the basis of this assessment, including evaluation of the proposal against relevant statutory provisions, it is considered that the proposed MBL application is appropriate in terms of its landscape and natural character effects.



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