Coastal Protection Project

Glen Isla Dune - Waihi Beach

ASSESSMENT OF

LANDSCAPE AND VISUAL EFFECTS

11 October 2024

Isthmus.

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1.0 EXECUTIVE SUMMARY

1.1 The Glen Isla Protection Society Incorporated ("GIPS") proposes to construct a buried coastal protection structure ("the structure") at the coastal dune frontage of Glen Isla Place – just south of Three Mile Creek at Waihi Beach. The structure is proposed to be located within the Three Mile Creek Reserve,[1] seaward of properties 9, 11, 13, 15, 16, 14 and 12 Glen Isla Place.

1.2 The dune frontage at Glen Isla Place is subject to ongoing erosion from natural coastal processes and has sustained considerable damage at times from large storm events (including Cyclone Gabrielle in 2023). The structure is proposed to protect the Reserve land and adjacent properties from further erosion, and future-proof this land from the effects of sea-level rise.

1.3 At completion, the proposed structure will be buried/covered with sand and planted with indigenous dune species. The new structure will be vested with the Western Bay of Plenty District Council ("the District Council").

1.4 As the site is located within the Coastal Environment, the New Zealand Coastal Policy Statement ("NZCPS") applies.[2] Effects on natural character and natural landscapes and features in the coastal environment are key considerations.

1.5 The site has not been identified in any statutory planning documents as having Outstanding, Very High or High natural character values.

1.6 The site is within an Outstanding Natural Feature ("ONF") overlay in the Western Bay of Plenty District Plan ("the District Plan"). The overlay extends across the coastal edge along Waihi Beach.[3]

1.7 This report provides an Assessment of Landscape and Visual Amenity Effects ("LVA") for the proposal. It includes assessment of effects on the natural character of the site and its immediate surroundings.

1.8 Refer to Graphic Attachments in **Appendix C** for a visual simulation of the completed proposal (using a viewpoint on Waihi Beach).

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[1] The Reserve is covered by the Three Mile Creek Reserve Management Plan, administered by the Western Bay of Plenty District Council.
[2] Refer to Appendix B for the relevant objectives and policies of the NZCPS.
[3] ONF S24 - Open Coastal Landscape Landward Edge Protection Yard. The District Plan identifies that the ONF contains "all land adjoining the open coastline, zoned Rural and within 100m of MHWS". No other specific characteristics or values are identified in the District Plan for the ONF.

Existing Environment

Context

1.9 Landscape values at Waihi Beach are closely aligned with the coastal location and its natural character.

1.10 Existing natural character within the Waihi Beach area is characterised by the broad open beaches and dune systems. While the beach and dune systems retain a relatively natural profile in places, residential development and erosion protection works have altered the profile along parts of the coastal edge.

1.11 There is approximately 1.3km[4] of rock revetment along the landward edge of Waihi Beach to the north of the Glen Isla Place site,[5] and groynes have been installed at Three Mile Creek, adjacent to the site to the north.[6] The coastal protection works reduce natural character at the coastal edge, although recent works (such as near the Flat White Café), have included the use of new planting integrated with sand 'push ups' over rock revetment, and this has provided visual softening of the edge protection and a more "naturalised" appearance.

Site

1.12 Landscape characteristics at the site contributing to the values of ONF S24 will derive from the site's natural character (as summarised below). In addition, the site will contribute landscape values associated with the potential for access along the coastal edge.[7]

1.13 The site contributes to the natural character of Waihi Beach through its naturalised dune landform and planting. There have been modifications undertaken at the Glen Isla dune in the past to provide coastal protection for residential development; and the site is seen as part of an existing modified context (with other structures visible close to the site, including coastal protection structures at Three Mile Creek).

1.14 The site is not identified as an area of Outstanding, Very High or High natural character in statutory planning documents. This is consistent with the observed character.

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[4] As measured in the Engineering Design Report (Davis Coastal Consultants, October 2024).
[5] This occurs at the frontages of The Loop and parts of Shaw Road.
[6] Regular maintenance work occurs within Three Mile Creek to remove accreted sand. The removed sand is deposited near the Glen Isla dune, just to the south of the Three Mile Creek groynes.
[7] Currently there is no formed public access through the reserve at the Glen Isla dune, although the existing width of the reserve in front of the GIPS properties provides for this, should the District Council wish to provide it. The GIPS proposal does not include provision of a public accessway.

Effects of the Proposal

Natural Character

1.15 At completion of the project the effect on natural character at the site is assessed as **Moderate-High positive.** The proposal will provide a naturalised sand dune form with more extensive indigenous planting than currently exists.

1.16 Should erosion cause parts of the structure to become visible in the future,[8] there will be a reduction in natural character at the south end of the site. Over the next (approximately) 20-year period, the adverse effect will be temporary, until the sand dune face is re-established through ongoing natural processes.[9] Beyond 20 years the structure is likely to become increasingly exposed due to effects from climate change.

1.17 If exposed, (either in the short or long term), the structure would be seen with planting retained to the north and top parts of the dune (at areas protected by the structure). It would be seen as part of a modified context which includes other structures close to the site; and would be visually consistent with other areas of rock revetment to the north of the site along Waihi Beach.

1.18 In the long term, the structure will ensure a higher-quality coastal edge (providing a "naturalised" appearance of rock revetment seen together with planting), than would be likely to occur with the (future) effects of climate change.

Landscape

1.19 Landscape effects relating to the potential for public access are assessed as **High positive.** The proposed location of the structure will prevent the potential future loss of public access along the coast.

1.20 The proposal will be consistent with characteristics and values in near-by parts[10] of ONF S24, and will avoid adverse effects on the characteristics contributing to values of the ONF.[11]

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[8] Erosion could occur from large storm events and (in time) from the effects of climate change and related sea-level rise. Refer to section 5.0 "The Proposal" for further details.
[9] Refer to the photos provided at Graphic Appendix C to the LVA, which document this recovery process at the Glen Isla dune, after erosion caused by Cyclone Gabrielle in 2023.
[10] At Three Mile Creek and the coastal edge north of Three Mile Creek (where there are existing coastal hazard protection structures).
[11] NZCPS Policy 15a requires that development proposals "avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment."

Visual Amenity

1.21 Private views of the site will be limited to views from the adjacent dwellings on Glen Isla Place (the applicants). The main public views will be from Waihi Beach; and from parts of Three Mile Creek Reserve just north of the site.

1.22 In views from Waihi Beach effects on visual amenity are assessed as **Moderate-High positive**. The increased visual amenity will result from views of enhanced and more extensive areas of naturalised indigenous planting.

1.23 Effects in views from Three Mile Creek to the north of the site are assessed as **Neutral**. Views will be of new planting at the northern end of the site and the change will be less discernible.

Construction

1.24 Temporary construction effects are assessed as **Low adverse** and are considered to be appropriately minimised by the proposed timing of works and construction methodology.

Statutory

1.25 The proposal is considered to be consistent with the relevant statutory provisions. It will preserve the natural character of the coastal environment; protect natural features and landscapes of the coastal environment from inappropriate subdivision, use and development; and promote restoration or rehabilitation of the natural character of the coastal environment.

Recommendations

1.26 The LVA includes recommendations relating to detailed planting and the sourcing and selection of rock. (Refer to section 12.0 “Recommendations”). The effects ratings provided in the LVA assume inclusion of the recommendations.

2.0 INTRODUCTION

2.1 This report (the "LVA") sets out the assessment of the natural character, landscape and visual amenity effects (including temporary effects from construction), arising from the proposed coastal hazard protection structure ("the structure") at the coastal frontage of Glen Isla Place, Waihi Beach.

2.2 GIPS[12] proposes to locate the structure inside the Three Mile Creek Reserve at the dune frontage of private properties 9, 11, 13, 15, 16, 14 and 12 Glen Isla Place (listed from north to south). The purpose of the structure is to protect the Reserve land and adjacent properties from further erosion, and future-proof this land from the effects of sea-level rise and coastal hazards.

2.3 The proposed structure is a rock revetment wall, with two main sections. The northern section is to be buried within the existing dune; and the southern section is to be located at the face of the existing dune and covered with sand at completion to present a naturalised dune frontage to the beach. New planting with dune species is proposed to all disturbed areas and with supplementary planting landwards of the structure in some places.

2.4 Refer to section 5.0 of this report ("The Proposal"), for more detailed information on the proposal (as relevant to this assessment); and to the graphic attachment **Appendix C** for a visual simulation of the completed proposal (as seen from Waihi Beach near the south end of the proposal site).

Background

2.5 The coastal dune frontage to Glen Isla Place, just south of Three Mile Creek on Waihi Beach, has been subject to erosion from wave action, and has sustained significant damage at times from large events, such as Cyclones Gabrielle and Hale. The 2024 shoreline now occurs at approximately 3-5m landward of the 1999 coastline. Cyclone Gabrielle is considered responsible for a large part of this retreat.[13]

2.6 In 2023, GIPS met with the Western Bay of Plenty District Council ("the District Council") to put forward a proposal to protect the dune with a rock revetment. GIPS tabled a proposed

[12] The Glen Isla Protection Society Incorporated.
[13] Refer to Coastal Protection Project for Glen Isla Protection Society, Assessment of Coastal Processes, Davis Coastal Consultants, October 2024. (Refer also to the photos included at Appendix C, which show the Glen Isla Dune in 2023 after Cyclone Gabrielle).

design in a document entitled "Waihi Beach – Waterfront Erosion Protection",[14] which the Council's Operations and Monitoring Committee voted to support.[15]

2.7 The 2023 proposed rock revetment[16] included a northern section buried within existing dune, and a southern section of exposed (visible) rock revetment,[17] facing Waihi Beach. Subsequent design updates (completed for this application) have enabled provision of the southern section of the revetment with a forward-sloping sand face towards the beach, with new planting proposed over and at the top of the new face.

2.8 Refer below to section 5.0 "The Proposal", for further details of the updated design, prepared for this application.

3.0 ASSESSMENT APPROACH AND METHODOLOGY

3.1 The assessment follows best practice as set out in Te Tangi a te Manu, ("TTatM"), the Aotearoa Landscape Assessment Guidelines (2022) adopted by Tuia Pito Ora, the New Zealand Institute of Landscape Architects ("NZILA").

3.2 The assessment focuses on the long-term natural character, landscape and visual amenity effects of the proposal, and the temporary natural character, landscape and visual amenity effects arising from construction of the proposal.

3.3 The LVA uses the identification of areas of Outstanding, Very High and High Natural Character and Outstanding Natural Features and Landscapes (ONFL) in the regional and local planning documents, and provides further assessment to identify site specific characteristics and values at the Glen Isla dune. (Refer to section 4.0 "Existing Environment".)

3.4 The LVA methodology uses an approach whereby effects on natural landscape and natural features (the characteristics of which will contribute to both landscape and natural character values) are considered under the heading of Natural Character and are not considered again under the heading of Landscape. The approach is taken to avoid "double-counting" of effects. In this assessment, landscape effects are considered in terms of "urban" landscape characteristics (relating to potential for public access along the coastal edge).

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[14] Refer to the AEE for the 2023 proposal, which includes the earlier (2023) Waterfront Erosion Protection proposal.
[15] GIPS met with the District Council's General Manager Infrastructure Group and Reserves and Facilities Manager, on 8th September 2023; ahead of meeting with the Council's Operations and Monitoring Committee on 31 October 2023 – at which time the committee voted to support the proposal.
[16] As supported by the Council.
[17] Running from No.12 to No.15 Glen Isla Place.

3.5 The assessment has included visits to the site and surrounding context on 5 April 2024 and 12 July 2024. The report authors have undertaken previous site visits for the adjacent Council erosion protection projects and are familiar with the site and its' context.

3.6 Refer to **Appendix A** for detailed information on the assessment approach and methodology; and for information on the 7-point ratings scale and definitions of natural character and landscape used in the assessment (taken from TTatM).

3.7 **Appendix A** includes an explanation of the NZILA 7-point ratings scale in relation to effects-based terminology used under the Resource Management Act 1991 ("RMA").

Assumptions

3.8 The effects ratings provided in this LVA assume the inclusion of recommendations made in section 13.0 of the LVA.

Reference Documents

3.9 This assessment has considered the following documents and drawing sets:

- Coastal Protection Project, Glen Isla Dune Waihi Beach - Construction Methodology Statement and Drawing Set 23028 (Sheets 1-4, Plans and Sections); Davis Coastal Consultants, October 2024;
- Coastal Protection Project for Glen Isla Protection Society, Assessment of Coastal Processes, Davis Coastal Consultants, October 2024;
- Coastal Protection Project for Glen Isla Protection Society, Engineering Design report, Davis Coastal Consultants, October 2024;
- Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen Ecology Ltd, 19 August 2024.

4.0 EXISTING ENVIRONMENT

4.1 Refer to the graphic attachment **Appendix C** for photos of the existing environment (site and context).

Context

4.2 The site is located at Waihi Beach. Waihi Beach is a coastal settlement in the Western Bay of Plenty at the base of the Coromandel Peninsula and north of the northern entrance to the Tauranga Harbour. The settlement is well established, containing a mixture of traditional baches and recent beach house development. The street fabric and layout of Waihi Beach is aligned parallel to the beach, taking advantage of the spectacular coastal views available.

4.3 The profile of Waihi Beach is generally very flat, with a broad intertidal zone offering a deep open beach at low tide, and a narrow beach against the fore dune and existing coastal erosion structures at high tide.

4.4 Landscape values at Waihi Beach are closely aligned with the coastal location and the natural character of the area.

Natural character

4.5 Existing natural character within the Waihi Beach area is characterised by the broad open beaches and dune systems. Inland areas of the back dunes from Bowentown Heads to northern Waihi Beach have generally been domesticated to some degree, by fencing and management in pasture, draining of wetlands, and subdivision and development for residential use.

4.6 At Waihi Beach, while the beach and dune systems retain a relatively natural profile in places (with the broad sweep of the beach generally intact and including an open intertidal zone through to a remnant foredune system), natural elements and processes within the coastal environment have been impinged upon where development has been carried out up to, and within the fore dune.

4.7 In places the foredune has been significantly compromised by development including residential development and associated accessways and coastal protection works. Residential buildings (including multi-storey dwellings) are built to the crest of the foredune in places, leaving little or no natural buffer between built development and the natural coastal dune edge.

4.8 Foredune areas include a mixture of both natural, and planted exotic vegetation and this provides some vegetative context to the developed crest of the foredunes. However, there is now virtually no dynamic indigenous vegetation (and fauna) covered dune system left along Waihi Beach. Weed species cover is now dominant, and areas of spinifex and pingao are small and scattered.[18]

4.9 The hardening of the coastal edge at Waihi Beach (as described above) has disrupted the natural process of coastal erosion of the fore dune, and the corresponding dune building process, and has resulted in a tension between dynamic coastal erosion processes, and the static seaward residential boundaries, which are within the erosion zone.

4.10 To manage the erosion risks, there has been a history of coastal protection works along Waihi Beach, and various ad-hoc structures have been installed in the past, including timber wall.

4.11 Work has been completed between 1993-2011 to remove the ad-hoc protection structures and provide improved coastal hazard protection structures. In some locations (such as near the Flatwhite café), this has included new naturalised dune plantings with sand 'push ups' over rock revetment, which has provided visual softening of the edge protection and a more "naturalised" appearance.

4.12 Rock revetments (installed in 2010-2011) now extend along the coastline for approximately 1.3km[19] to the north of the site - along the frontage of parts of Shaw Road and the frontage to The Loop. Groynes (constructed with geotextile bags) were installed at Three Mile Creek (adjacent to the north end of the site) in 2009, to reduce erosion around the stream mouth and enable sand and dune development adjacent to the groynes (including along the Glen Isla frontage).[20] Ongoing maintenance is carried out to remove accreted sand from the Creek, with removed sand placed at the base of the northern end of the Glen Isla dune.

4.13 Adjacent to Glen Isla Place to the south is reserve land which extends from the coastal edge through to Seaforth Road.[21] This provides a much deeper natural dune landform edge to the

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[18] Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; page 4.
[19] As measured in the Engineering Design Report (Davis Coastal Consultants, October 2024).
[20] Since completion of the work sand has built up on either side of the Creek, but this effect doesn't extend to the southern end of the Glen Isla dune. Widening of the dune has mainly been towards the northern end, immediately adjacent to the groynes, as described in the coastal processes assessment for the proposal. (Refer to Coastal Protection Project for Glen Isla Protection Society, Assessment of Coastal Processes, Davis Coastal Consultants, October 2024.)
[21] This comprises WBoP District Council reserve at the coastal edge, and Department of Conservation (DoC) reserve landward of that, (Island View Recreation Reserve), extending through to Seaforth Road, and including grassed areas behind the natural coastal-edge dunes.

beach than exists at the Glen Isla dune;[22] and results in a difference in landscape and natural character to the coastal edge to the immediate south of the site, as experienced from the beach. With no views from the beach of development at the top of the coastal dune edge, the coastal edge south of the site is perceived as more highly natural (until development starts to occur again further south along Broadway Road).

4.14 Overall, while the beach and dune systems retain a relatively natural profile in places at Waihi Beach, residential development and erosion protection works have altered the profile along parts of the coastal edge. The natural process of coastal erosion of the foredune, and the corresponding dune building process has been disrupted in areas; and the distribution of natural elements, including indigenous coastal flora has been altered and degraded by development, including residential building at/close to foredune areas, and the historical erosion protection works.

4.15 There are no areas of Outstanding, Very High or High natural character identified[23] at the coastal edge of Waihi Beach between Orokawa Bay and Island View.

Site

4.16 The site is located immediately south of Three Mile Creek and comprises sand dune at the coastal frontage of properties at (from north to south) 9, 11, 13, 15, 16, 14 and 12 Glen Isla Place.

4.17 The coastal dune edge at the site is dynamic – with changes occurring over time from ongoing natural coastal processes. The coastal processes report for the proposal[24] notes "relatively constant accretion continuing to occur, at least in front of the site, through to 1999. The 2024 shoreline picks up the nearly unprecedented retreat that occurred in the extreme weather events in Jan-Feb 2023 and is approximately 3-5m landward of the 1999 coastline."[25]

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[22] At Glen Isla Place frontage the dune form extends landward from the beach for a distance between approximately 5 – 25m. At the reserve land to the south of Glen Isla Place the natural dune landform is approximately 80-90m wide/deep landward of the beach. This is much closer to the normal depth of a natural dune landform of 50-100m.

[23] Natural character for the Waihi area is mapped in the Bay of Plenty Regional Policy Statement.

[24] Coastal Processes Assessment, Davis Coastal Consultants, October 2024.

[25] The report notes that Cyclone Gabrielle was likely responsible for a large part of the retreat that occurred. Refer to Coastal Protection Project for Glen Isla Protection Society, Assessment of Coastal Processes, Davis Coastal Consultants, October 2024; Page 20.

4.18 The following image (taken from the Coastal Processes Assessment) shows the historic shoreline at the site.

Historic coastlines overlaid on 2024 aerial (Figure 3.5a from the Coastal Processes Assessment, Davis Coastal Consultants, October 2024).

4.19 There have been past modifications to the Glen Isla dune to provide coastal protection, including a seawall. Work was undertaken at the dune in 2011, (as part of the coastal protection works along Waihi Beach), which included removal the old seawall and grading to form a new, naturalised dune - with new planting. (The dune enhancement was washed away by a severe storm within a few weeks of completion).

4.20 The Glen Isla dune currently presents a sand face to the beach, with mixed vegetation on its upper portions. Vegetation occurs to (roughly) the upper half of the dune face and across the top areas as these extend landward towards private properties. Dune species are generally confined to the area between the dune front (subject to erosion) and the boundaries of private properties, where lawn is typically established to the edge of the reserve. The current vegetated extent of the back dune system at the site is approximately 20m wide, closest to Three Mile Creek, and narrows to approximately 4-5m wide towards 12 and 14 Glen Isla Place.[26]

4.21 The dune vegetation has been described in detail in the Ecological Assessment but is predominantly low and contains a mix of species – including exotic species. There is a high

[26] Coastal Protection Project for Glen Isla Protection Society, Assessment of Coastal Processes, Davis Coastal Consultants, October 2024, page 9.

value area of spinifex vegetation in the northern foredune. Indigenous plants are most prominent in the north in the area of the foredune including beach bind weed, spinifex, pingao and in the very south where pohuehue on the terrace and spinifex along the erosion scarp face are notable (but no pingao). Otherwise, knobbly club rush and pohuehue are the common native dune plants throughout. The majority of the back terrace and terrace slope is covered in exotic species, many considered weed species.[27]

4.22 There is a large Norfolk Pine between the properties at 11 and 13 Glen Isla Place (on private property outside the reserve), and this is prominent in views from the beach and reserve.

4.23 The dwellings on Glen Isla Place are set back from the beach[28] and are a mix of single and two-storey dwellings. While not dominant on the beach experience, they are easily seen at the top of the dune, including from the beach (where they are seen above/behind the low dune planting). In places, boundary fencing can be seen from the beach at the landward edge of the reserve and project area/site.

4.24 There are informal access tracks across the dune / through the site, between the beach and the beach-front properties on Glen Isla Place.[29]

4.25 Public access along the coastal edge at the Glen Isla Dune is provided by the beach. While the site is located within reserve land, public access is limited by the unmanicured, vegetated nature of the back dune area and there is currently no formalised accessway through this part of the reserve. The existing width of the reserve in the vicinity of the site provides sufficient room for public access, should access along the beach become unavailable – for example due to high tides / storm events.

4.26 The site is zoned Rural in the District Plan but does not exhibit characteristics which would be typically associated with a rural area or rural character - such as wide, open areas of pasture and/or agricultural uses and livestock.

Outstanding Natural Feature Overlay

4.27 The site is within an Outstanding Natural Feature (ONF – S24 Open Coastal Landward Edge Protection Yard) overlay in the District Plan – which extends along the Waihi Beach

[27] Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; page 11.
[28] The dwellings on Glen Isla Place have varied set back from the beach – ranging between approximately 40m and 68m.
[29] Formal public access to the beach is provided from Seaforth Road and off Glen Isla Place, along the southern bank of Three Mile Creek. There is access along both sides of Three Mile Creek to the foreshore.

land/coast edge. The District Plan identifies that "the area contains all land adjoining the open coastline, zoned Rural and within 100m of MHWS." No other specific characteristics or values are identified in the District Plan for ONF S24.

4.28 Landscape characteristics and values at the site which contribute to the ONF will be closely aligned with and derive from its natural character (as summarised below).

4.29 There will be further values at the site associated with the potential for public access (should the Council wish to provide this at some point in the future).

Natural character evaluation - baseline

4.30 Key site characteristics contributing to natural character (as experienced from the beach/coastal edge) are:

- A dynamic coastal edge, with changes to the dune occurring from ongoing natural coastal processes (in particular weather events such as storms);
- Naturalised sand-dune landform – with a natural appearance to the dune, but noting that past landform modifications have occurred to the dune;
- Naturalised planting on upper portions of the dune-face (facing the beach) and across top parts through to the landward edge of private property boundaries. Vegetation includes a mix of predominantly low-growing indigenous and exotic plantings. There is an area of high-value indigenous vegetation on northern parts of the dune, (spinifex and pingao), and occurrence of some weed species in other parts. Some exotic / amenity plantings are visible from the beach – including large and prominent exotic species (Norfolk Pine);
- Existing views of dwellings and structures at the top of /behind the dune (housing, fencing, garden/pergola-type structures, private accessways/paths). Some of the two-storey dwellings (where these are closer to the beach) appear as taller than the dune height (in views from the beach) and this increases their prominence in relation to the dune feature;
- Exposed, wind-blown/eroded character to lower potions of the dune face, where wave action occurs and planting has not established – which is expressive of ongoing coastal processes;

- Ongoing natural patterns and processes have been interrupted at the site with the earlier coastal protection works at and near the site, and the establishment of residential development adjacent to/at the top rear parts of the dune.

4.31 Overall, the site contributes to the natural character of Waihi Beach through its naturalised dune landform and planting. The site's natural character is lowered by the dune modifications undertaken to provide coastal protection for residential development; the exotic and residential/amenity plantings present on the dune (and visible from the beach); and the clear views of dwellings and associated structures (fencing and garden structures) at the top of the dune.

4.32 The site is not identified as an area of Outstanding, Very High or High natural character in statutory planning documents. This is consistent with the observed character at the site.

5.0 THE PROPOSAL[30]

5.1 GIPS proposes to construct a buried rock revetment ("the structure") along approximately 200m of the back and foredune area at Waihi Beach, immediately south of Three Mile Creek and inside the Three Mile Creek Reserve.[31]

5.2 The proposed structure will be continuous over the frontage of seven beach front properties (Nos. 9, 11, 13, 15, 16, 14 and 12 Glen Isla Place). At the north end, the structure will be buried within existing (reinstated) dune area, with new planting to all disturbed areas and supplementary planting landwards of disturbed areas in some areas. At the south end, the structure will be topped and faced with sand to present a new dune face to the beach, with sand placed to integrate the new form into existing natural dune contours to the south. New planting will be provided to the top and face of the new dune form, and at the south end of the new dune, to integrate it into the adjacent natural dune.

5.3 The landward edge of the rock revetment will vary slightly in distance from the private property boundaries – being approximately 5m from the boundary at the south end, 7.6m in middle (to protect a Norfolk Pine between properties No.11 and No.13 Glen Isla Place), and 6.5m from the boundary of No.9 Glen Isla Place, at the northern end of the structure. The following graphic (taken from the Construction Methodology Statement), shows the

[30] Refer also to the detailed Description of the Proposal provided in the AEE.
[31] The reserve is vested with the Western Bay of Plenty District Council.

proposed alignment of the structure. (Refer also to **Appendix C** for additional plans and cross-sections for the proposal).

Layout of rock wall (Figure 2.0a from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 7).

5.4 Key components of the proposed structure relevant to this assessment are as follows:[32]

Vegetation removal

- Removal of existing vegetation is required for construction of the structure. The extent of clearance will be limited as much as practicable, and in principle will comprise the footprint of the structure plus any sloping sides to the trench where that area is currently vegetated:

  - Clearance will be more limited at the southern end of the proposed structure (seaward of properties 12-16 Glen Isla Place - where the structure will be located at and slightly landward of the existing dune face). Clearance is anticipated in this area to 1m landward of the rear of the structure (calculated as approximately 70m^2);[33]

  - More extensive clearance will be needed at the northern end of the structure, (9 – 15 Glen Isla Place), due to the extent of excavation needed to place the structure below

[32] As taken from the Construction Methodology Statement for the proposal prepared by Davis Coastal Consultants (October 2024).
[33] As calculated by the project ecologists. Refer to the ecology report: Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; page 18.

the existing ground level of the dune. An approximate width of 13m has been defined for vegetation removal (calculated as comprising approximately 1,820m^2).[34]

- In total, (as calculated above), it is anticipated there will be a need for vegetation removal over approximately 1,900m^2 of the site.

- There will be no vegetation removal in the area of high-value Spinifex and Pingao vegetation identified by project ecologists at the northern end of the site. The area will be marked out and fenced off prior to work commencing.

- Vegetation removed will include existing exotic species within the project footprint.[35]

Indicative area of vegetation requiring removal (Figure 5.0a from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 10)

Earthworks

- Excavation of the existing dune landform is proposed to construct and locate the structure inside the existing dune landform:

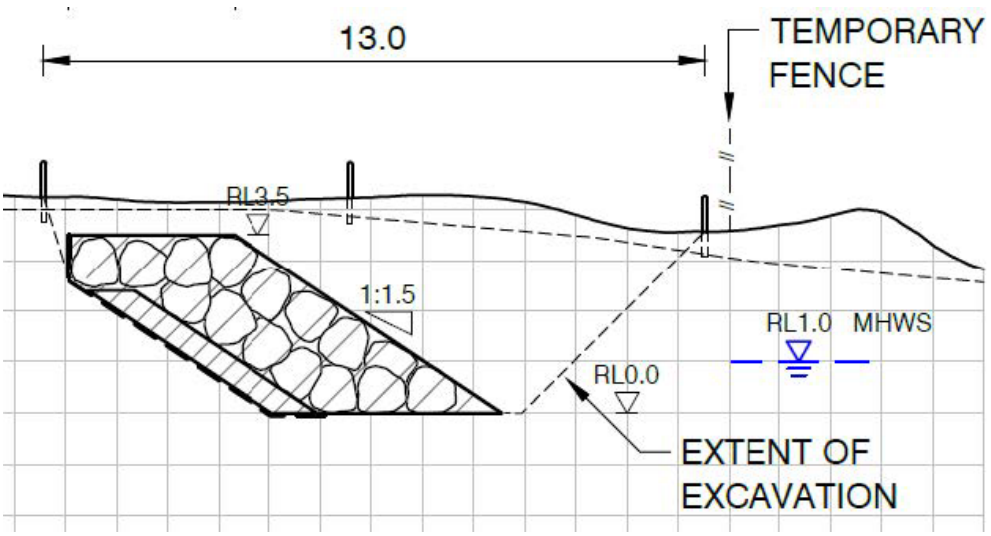
  - For southern parts of the structure less excavation will be needed, due to the proposed structure being located at and slightly seawards of the existing dune face.

[34] As calculated by the project ecologists. Refer to the ecology report: Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; page 18.
[35] There is currently a mix of exotic species through the site, described in ecology reporting for the project as a "dense tangled exotic cover" in places, and including agapanthus, yucca and pampas. (Refer to Existing Environment, below, for further details).

- For northern parts more excavation will be required, due to the placement of the structure below existing ground level. Excavation to a width of approximately 13m is proposed in this northern area.

- Excavated sand will be used to bury the completed structure. At the northern section the excavation trench will be re-filled and sand reestablished to meet the adjacent contours along the length of the section. At the southern section the structure will be topped and faced with sand, with shaping to integrate the new dune form into the adjacent existing natural dune contours. Refer also to Site Rehabilitation, below.

- At completion (after placement of sand over the rock structure) the top of the dune will be at approximately RL 4.0, which will be approximately 2m above the toe of the dune on the beach.



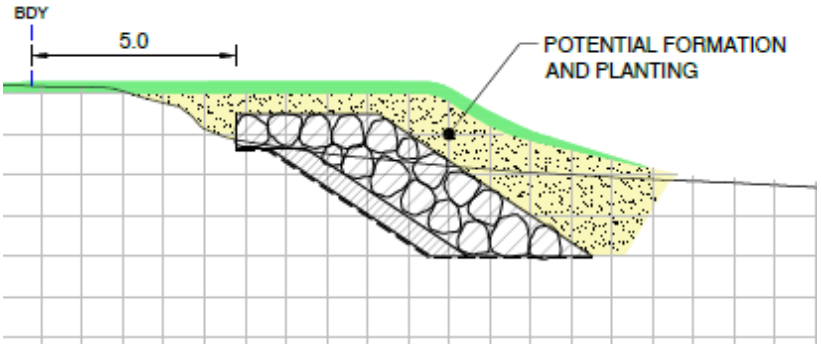
Indicative excavation to place wall (Figure 5.0b from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 10).

Inclusion of an engineered structure

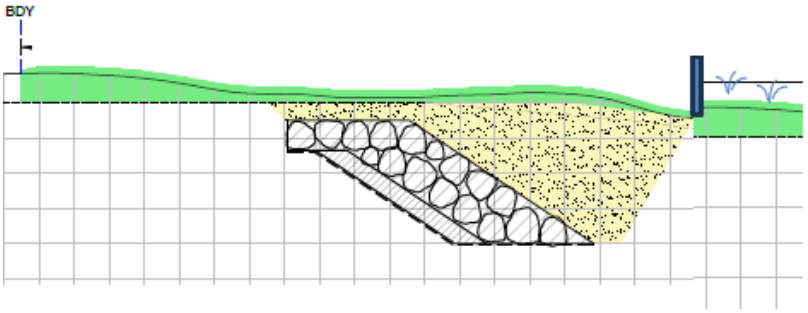
- A rock revetment wall will be constructed within and at the face of the existing dune landform. As previously described, the northern section of the structure will be buried within existing dune; and the southern section will be constructed at the seaward face of the existing dune and topped and faced with sand contoured to integrate with the surrounding natural dune environment.

- The structure will be designed in accordance with accepted design guidelines (CIRIA C683) and will include a slope no steeper than 1:1.5.[36]

- Rock is to be sourced from a local Waihi Beach quarry.[37] Selection is to include rocks with a weathered appearance (as possible) and a variety of sizes to ensure a more naturalistic appearance to the revetment (should rocks become exposed after a large storm event, and over time from sea level rise[38]).



Completed Southern Wall section (Figure 7.1 from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 13).



Completed Northern Wall section (Figure 7.2b from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 15).

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[36] Detailed design of the structure is yet to be completed (and will be completed in the next project stages – following consent).
[37] The structure will be constructed out of Andesite, which is understood to have been supplied for the majority of the work on the current Waihi Beach structures at Shaw Road and The Loop (as noted in the Engineering Design Report (Davis Coastal Consultants, October 2024); paragraph 4.6 Structure Materials).
[38] Coastal engineers calculate there could be 1-2 possible exposures of upper 1-1.5m of the structure (at the south end), in the ten years after completion of the structure. Rocks would become exposed temporarily and would become covered with sand again from accretionary periods between storm events. Refer to Appendix C of the LVA for photos which document this occurring at the site after Cyclone Gabrielle. In the long-term (after 20-30 years), coastal engineers calculate that "the structure may be exposed at all times in large storm events high tide may reach wall". Refer to Table 5.3.3 "Wall exposure" in the Assessment of Coastal Processes, (Davis Coastal Consultants, October 2024). The table provides calculations of the extent of likely exposure over time (Table 5.3.3 Wall exposure.)

Site rehabilitation

- A minimum of 0.5m of sand will be spread over the upper wall crest and battered down at approximately 1:3 to meet existing ground level over the full length of the southern section.

- Disturbed dune areas will be re-vegetated with a mix of indigenous fore- and back-dune species, using a species mix recommended by BlueGreen Ecology.[39] In some areas new supplementary planting will be included landward of the disturbed areas.[40]

- The development of a detailed revegetation plan is proposed to ensure that all disturbed vegetation is replaced with appropriate native species.[41] The planting plan will include mixing/integration of species across the different planting areas (back of dune/top of dune/dune face), to provide a naturalistic appearance to the new planting (as recommended in section 13.0 of this report).

- Where necessary, wind fences may be established along face of new planting and at dune crest to minimise wind-blown sand to back dune areas and to protect plants while they are establishing. If required, these will be removed once planting is established.

- Planting will be timed for spring or autumn as practicable.

Construction Phase

Timing/Duration and Work Hours

- Work will be kept to within 7.00 am to 5.00pm Monday to Friday (working hours) to the extent practicable. Work will not be undertaken at night or once daylight becomes unsuitable. However, the work is tidally and storm dependent and work may continue outside working hours for up to three days a week every two weeks. This may include

[39] A recommended revegetation plant mix is included in the ecology report for the project and includes lower dune species such as Muehlenbeckia, grasses and rushes. Refer to Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; page 22.
[40] Refer to Appendix C for the proposed (high-level) planting plan. A detailed planting plan is proposed in the next project stages.
[41] This has been recommended by BlueGreen Ecology (refer to Coastal Protection Project, Glen Isla Dune – Waihi Beach, Ecological Assessment; BlueGreen 19 August 2024. The recommendation is supported by this LVA. Refer also to section 13.0 of the LVA "Recommendations".

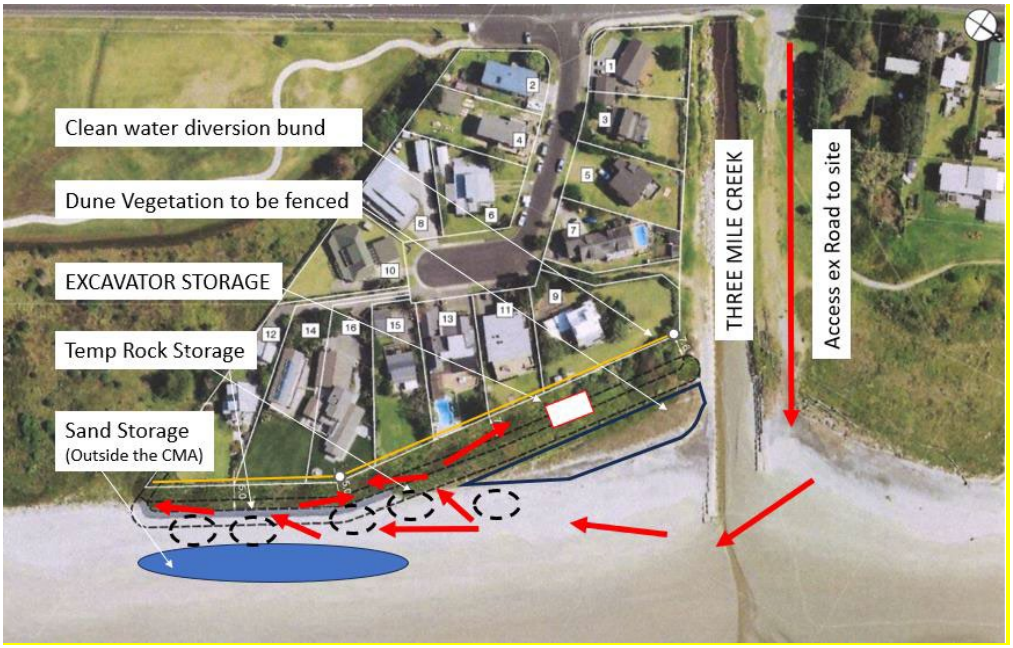
Saturday working outside school holiday periods. No work will take place before 6am or after 8pm.

- The project is expected to be undertaken between the months of April 2025 and November 2025. It is anticipated that the entire project will be completed in 4 months, however a specified project duration of 6 months is proposed between the dates of April – November (inclusive), to allow for inclement weather and unforeseen issues. Work will not be undertaken at Easter or other Public Holidays.

Site access

- The primary construction access for delivery of machinery and rock spalls will be through the Council Reserve at 100 Seaforth Road (the northern side of Three Mile Creek). Rock delivery will be through the Reserve and along the beach seaward of the groynes at Three Mile Creek, passing across the mouth of the creek which is identified as CMA.

- During rock placement for wall construction, access to the southern section will be directly from the beach. The excavator will sit seaward of the working face, above the Mean High Water Springs line, and place rock. Access to the northern section will be along the wall alignment. The contractor is to maintain fencing along this alignment to ensure no damage to vegetation occurs outside the specified access way.



Indicative access through Reserve and excavator storage (Figure 3.0a from the Construction Methodology Statement, Davis Coastal Consultants, October 2024; page 10).

Stockpiling/storage of plant on site (refer to the above graphic).

- Delivery of the excavator will occur through the Seaforth Road reserve access at the start of the project. It will then be left on site for the duration of the project, outside the CMA, within the construction footprint.

- Selected rock will be stored at the quarry and delivered to site on an "as required" basis, such that stockpiling on site is minimised as much as is practicable. There may be temporary piles of rock in order to maintain efficient construction operation, but it is anticipated that rock piles will be almost completely removed daily.

- Areas where rock is temporarily stock-piled on site will have a heavy gauge geotextile placed before rock delivery and this will be held in place by suitably sized rocks. Following completion of rock delivery to any temporary stockpile location the geotextile under that location and all rock chips and fragments on the beach will be removed and disposed of off-site.

- Excavated sand will be stored at the site outside the CMA.

Construction method

- In parts where there will be tidal and ground water effects, the structure is to be constructed in sections of a length able to be backfilled with (at a minimum) geotextile and first underlayer in a single tidal cycle.

6.0 PLANNING FRAMEWORK

6.1 There is a raft of statutory provisions relevant to this LVA contained in national, regional and local statutory planning documents. Excerpts of relevant provisions[42] are attached as **Appendix B**.

6.2 The site is located within the Coastal Environment,[43] so the NZCPS is relevant.

6.3 Overall, and in summary, the aim of the provisions is to preserve the natural character of the coastal environment; to protect natural features and landscapes of the coastal environment from inappropriate subdivision, use and development; and to promote restoration or rehabilitation of the natural character of the coastal environment – in line with the

[42] Provided by Mitchell Daysh.
[43] As defined in the Bay of Plenty Regional Coastal Environment Plan ("Coastal Plan").

requirements of the RMA and the NZCPS (particularly Policies 13, 14 and 15 – as set out in **Appendix B**).

6.4 Key planning matters (as relevant to this LVA) relating to the regional and local statutory planning documents are summarised below. Refer also to the planning maps included in the graphic attachment **Appendix C** (and to the more detailed provisions set out in **Appendix B**).

6.5 It is noted that while the landward extent of the CMA is not mapped in the regional or local planning maps, this has been determined and mapped for the project by Davis Coastal Consultants.[44]

Bay of Plenty Regional Policy Statement ("RPS")

6.6 The RPS includes criteria for the identification and assessment of values of significance, and objectives and policies relating to natural character, and natural features and landscapes.

6.7 Appendix F relates to criteria for assessing matters of national importance in the Bay of Plent, including natural character, and natural features and landscapes.

6.8 Appendix I identifies and Appendix J describes areas of Outstanding, Very High or High Natural Character. The site is not within any of these identified areas.

Bay of Plenty Regional Natural Resources Plan ("Regional Plan")

6.9 Under the Regional Plan the proposed structure (inside the reserve land) is located in "Sand Dune Country" and "Erosion Hazard Zone".

Bay of Plenty Regional Coastal Environment Plan ("Coastal Plan")

6.10 Under the Coastal Plan the site (and the adjacent private properties on Glen Isla Place) are located within the "Coastal Environment".

6.11 The site falls within Indigenous Biological Diversity Area B.[45]

6.12 The site is not identified within an Outstanding Natural Landscape or Feature ("ONFL") under the Coastal Plan.

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[44] Refer to Memorandum – Location of Mean Highwater Springs, Glen Isla Place, Waihi Beach; Davis Coastal Consultants 28 March 2024.

[45] Refer to the Ecology report for further details on this. Vegetation in the area will contribute to natural character.

Western Bay of Plenty Operative District Plan ("District Plan")

6.13 An Outstanding Natural Feature ("ONF") is identified over the site (and other parts of the coastal edge along Waihi Beach) in the District Plan. This is ONF S24 Open Coastal Landscape Landward Edge Protection Yard. The District Plan identifies that the ONF contains "all land adjoining the open coastline, zoned Rural and within 100m of MHWS". No other specific characteristics or values are identified in the District Plan for the ONF.

6.14 The site is located in Council Reserve/Esplanade Reserve in the District Plan, which is zoned Rural. The adjacent properties on Glen Isla Place are locate in the Residential Zone.

6.15 The site and adjacent Glen Isla Place residences are identified as being in Coastal Erosion Areas, and partly within with the Coastal inundation Area.

6.16 The site forms part of a Local Purpose Esplanade and Recreation Reserve (Three Mile Creek) under the District Plan.

Three Mile Creek Reserve Management Plan

6.17 The Reserve Management Plan for Three Mile Creek includes policies to manage the recreation reserve, including in relation to maintenance of coastal protection structures, coastal access and neighbourhood recreation; and relating to enhancing pedestrian linkage, and to "maintain enhancement and maintenance where public recreation, amenity and natural character values are not adversely affected".

Proposal Activity status

6.18 The proposal requires resource consent from both the Western Bay of Plenty District Council ("WBOPDC") and Bay of Plenty Regional Council ("BOPRC") as a **discretionary activity.**[46]

7.0 VISUAL CATCHMENT/VIEWING AUDIENCE

7.1 There will be no private views of the site except from the adjacent dwellings on Glen Isla Place (the applicants). Public views will therefore be the most pertinent consideration for this LVA.

7.2 Main public views of the site and proposal will be from:

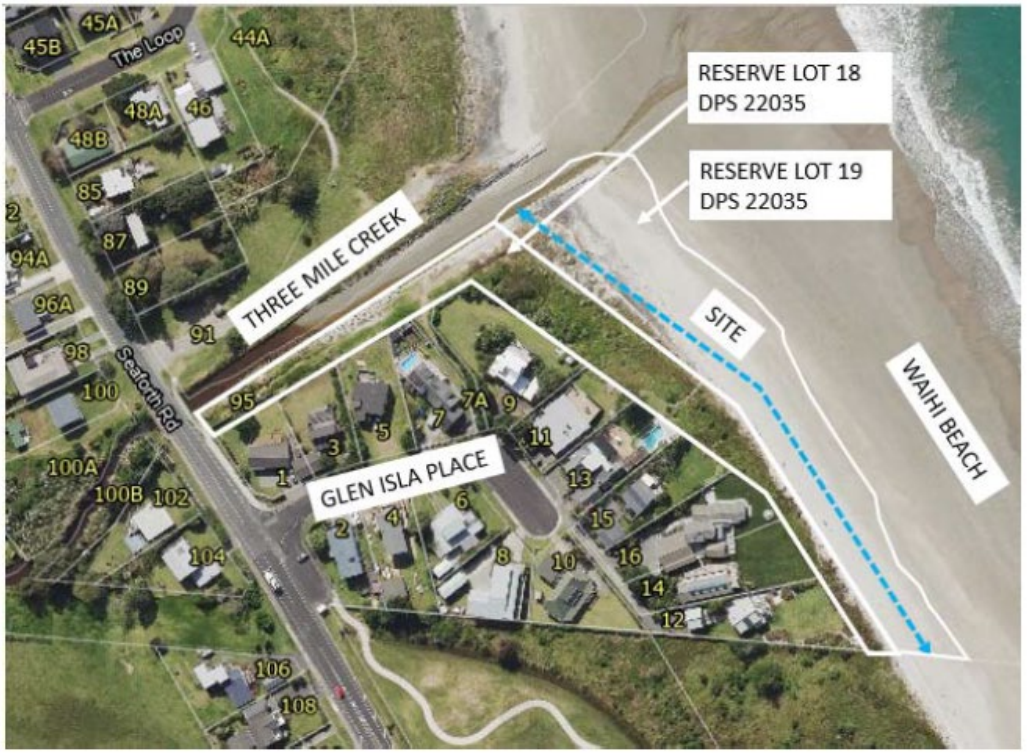
[46] As advised by Mitchell Daysh Limited.

- Waihi Beach – with most frequent and closest views of the site gained from beach areas in front (seaward) of the Glen Isla dune and to the north and south of the dune;

- Three Mile Creek Reserve (adjacent to the site to the north) – with views of the north end of the proposal likely for recreational users of this area – from just north of the Creek and from around the mouth.

7.3 Public views from within or landward of the site will be limited because the public are discouraged from walking on/in sensitive dune areas.[47]

7.4 The following graphic shows the site with the surrounding areas gaining views (as described above).



Visual simulation

7.5 A visual simulation has been completed for the proposal to assist in understanding effects, and this is shown at **Appendix C.** The simulation uses a viewpoint on Waihi Beach near the south end of the proposal site.[48]

[47] As understood from Mitchell Daysh.
[48] The visual simulation includes a small area of enhancement planting proposed to the immediate south of the site frontage, on the adjacent natural dune face, to integrate the new Glen Isla dune into the adjacent existing dune to the south. The extra planting is proposed in addition to the planting proposed at/on the Gen Isla dune.

8.0 NATURAL CHARACTER EFFECTS

8.1 The following provides an assessment of effects of the proposal on the characteristics and qualities which contribute to the existing levels of natural character at the site.

8.2 Natural character effects can arise from changes to existing natural landscape and features, and changes to the "balance" between natural/naturalised, and built/constructed, as the result of a proposal.

8.3 The natural characteristics and qualities contributing to natural character at the site are outlined in the baseline assessment (refer to section 4.0 "Existing Environment").

Landform

8.4 Landform at the site is already modified from past erosion protection works.

8.5 At completion the proposal will appear as a naturalised, sand dune form and the rock structure will not be visible. (Refer below to Structures).

8.6 At the south end of the site, the new dune will appear closer to the sea (as the toe of the new dune will move seawards from the existing dune toe). This will re-establish the dune on approximately the alignment of the 2011 dune face.[49]

8.7 The new dune form will appear well-integrated into natural landform to the north and south, with the proposed placement of sand and revegetation.

Structures

8.8 The proposal will include a new structure at the site, which will affect the balance of "natural" to "built" components.[50] However, at completion the new structure will not be visible. At the north end of the site, the existing dune landform will be reinstated with the structure buried inside the existing dune. When viewed from the beach, the south end of the site will present as a planted dune face.

[49] As noted in the Coastal Processes Assessment (Davis Coastal, October 2024), paragraph 4.10.
[50] Noting that there have been coastal erosion protection structures installed (and removed) at the site previously – refer to section 4.0 "Existing Environment".

8.9 Should parts of the structure become visible due to erosion from a large storm event[51] or (in the longer-term) due to the (future) effects of climate change,[52] there will be a change to perceptions of the dune as "unmodified" i.e, unbuilt, and a corresponding lower level of natural character at the south end of the site (compared to a planted sand dune face). However, the dune form would still appear as "naturalised" as the exposed structure would be seen together with planting retained around it.[53] Further, the exposed structure would be seen as part of a modified context, with other clearly visible structures at and immediately around the site - including buildings, garden structures, fencing at the top of the dune, and other coastal protection structures.[54] This will reduce the significance of any reduction in perceptions of natural character at the Glen Isla dune from views of exposed structure. The site is part of an existing modified context.

8.10 The proposed use of locally-sourced, weathered rock and varying sizes of rocks/boulders for parts of the revetment at risk from exposure will assist to avoid an overly engineered appearance, should the structure become exposed in some areas.

8.11 Exposure of the structure from a large storm event in the next 20 years would be temporary, as sand would build back onto the structure with deposits from ongoing natural processes.[55]

8.12 Beyond 20-30 years the structure is likely to become increasingly exposed due to the effects of climate change. In this scenario planting at the top and landward of the dune will be protected by the new revetment structure – ensuring a higher-quality coastal edge in the long term. The exposed structure would be visually consistent with other existing areas of exposed rock revetment along Waihi Beach (to the north of the site).

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[51] Erosion from a large storm event would be likely to occur only at the south end of the site. The north end of the structure will be buried within the existing dune, back from the existing dune front. Refer to Appendix C for a plan showing the extent of the structure at risk from exposure. Coastal engineers calculate there could be 1-2 possible exposures of upper 1-1.5m of the structure (at the south end), in the ten years after its completion. Rocks would become exposed temporarily and would become covered with sand again from accretionary periods between storm events. At 10-20 years the top of 1m wall could be exposed for long periods during storms, with the upper 1.5-2.0m exposed. The structure would become covered again but with the upper meeting exposed. Refer to Assessment of Coastal Processes, (Davis Coastal Consultants, October 2024), Table 5.3.3 Wall exposure.

[52] Over time it is likely that the structure will become increasingly exposed due to the effects of climate change. Beyond 20-30 years the structure may be exposed at all times in large storm events high tide may reach wall. Refer to Assessment of Coastal Processes, (Davis Coastal Consultants, October 2024), Table 5.3.3 Wall exposure.

[53] Planting would remain at northern parts of the site, and at the top of the dune in southern parts – with these areas protected by the new rock revetment.

[54] To the north of the site at Three Mile Creek, and further north along the beach/land edge.

[55] This process is shown in the photos of the Glen Isla Dune included at Appendix C. The photos were taken in 2023 after Cyclone Gabrielle, and again in 2024 to document the recovery of the dune. Refer also to Table 5.3.3 in the Coastal Processes Assessment (Davis Coastal, October 2024), which outlines the extent to which this recovery process is expected to occur over time.

V**egetation**

8.13 The Ecological Assessment has found that that the proposal will avoid adverse effects on high-value vegetation and overall, and with the recommended revegetation will result in a net ecological benefit at a local scale.[56]

8.14 The proposed new planting will increase perceptions of the dune's natural character, with more extensive planting visible than currently exists, and with removal of the visible exotic weeds and provision of a consistent cover of naturalised indigenous species. The proposed detailed planting plan will provide a planting pattern which avoids "bands" or "lines" of species across the dune (as recommended in this report), and this will assist to provide a naturalised appearance to new planting.

8.15 Should the structure become visible due to erosion, it will be surrounded by plantings in parts where the structure is not likely to become exposed, such as to the north; and in areas protected by the structure (such as top parts and landward of the structure).

8.16 If enhanced dune planting along the southern dune-face is lost to erosion from a large storm event, plants will be likely to re-establish on the face over time with new sand deposits[57] from on-going natural processes and the natural spread of plants from the top of the dune.

Natural patterns and processes

8.17 The coastal erosion processes which currently threaten properties adjacent to the site are natural processes themselves, which contribute to the natural character of the area.

8.18 The natural erosion and rebuilding pattern has been previously modified at the site with past hazard protection works at the dune. This has also occurred extensively and consistently along the Waihi Beach frontage, including close to the site to the north (at Three Mile Creek and northwards of Three Mile Creek).

8.19 Naturally occurring dune vegetation patterns at the site have been extensively modified with exotic species present, and with existing dune planting confined to an area between erosion-prone frontage, and landward private property boundaries (which are dominated by grassed lawn and with amenity/exotic plantings).

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[56] Glen Isla Dune, Coastal Protection Project, Ecological Assessment; BlueGreen 19 August 2024; Executive Summary.

[57] Estimated as likely to occur for up to 20 years. Refer to Table 5.3.3 in the Coastal Processes Assessment.

8.20 While the proposal will alter the outcome of the natural erosion and dune re-building process at the site,[58] the process itself will be ongoing. The construction of the proposed structure will reduce the impact of the natural process on the dune, and on planting on the dune. The proposal will allow naturalised indigenous dune vegetation patterns to establish at the dune, protected by the new structure.

Conclusions – Natural Character

8.21 Overall, at completion of the project (providing a naturalised dune landform with planting) the effect on natural character at the site is assessed as **Moderate-High positive** (with the inclusion of recommendations in this report). There will be a net ecological benefit at the local scale[59] and removal of exotic weeds; and perceptions of natural character will increase particularly at the south end with a higher-quality coastal edge and new planting visible across the full extent of the dune.

8.22 There will be no change to the visibility of residential structures (houses, garden structures, fencing) at the top of the dune.

8.23 Should erosion cause the structure to become visible in the future, there will be a reduction in natural character at the south end of the site. Over the next (approximately) 20 year period, the adverse effect will be temporary, until the sand dune face is re-established through ongoing natural processes. Beyond 20 years the structure is likely to become increasingly exposed due to effects from climate change.

8.24 If exposed, the structure would be seen with planting retained to the north and top parts of the dune, (protected by the structure). It would be seen as part of a modified context which includes other clearly visible structures adjacent to the site (dwellings at the top of the dune and groynes at Three Mile Creek); and would be visually consistent with other areas of rock revetment wall to the north of the site along Waihi Beach.

8.25 Planting at the top and landward of the dune will be protected by the new revetment structure – ensuring a higher-quality coastal edge in the long term (compared to the edge which would be likely to result from the effects of (future) climate change and sea-level rise).

[58] That is, it will prevent substantial erosion of the dune.
[59] As assessed in the Ecological Assessment (Blue Green Ecology, August 2024).

9.0 LANDSCAPE EFFECTS

9.1 Landscape effects will be influenced by changes to existing natural/naturalised features at the site (and with these contributing the ONF identified at the site[60] - refer above to "Existing Environment").

9.2 Changes to natural characteristics and qualities (such as vegetation and natural landform) are dealt with above under the heading of natural character (as these contribute to both landscape and natural character values). To avoid repetition and "double-counting" of effects (as outlined under Methodology, at **Appendix A**), this section considers effects on urban landscape values (which at this site will relate to the potential for public access along the coast).

9.3 There is currently no formed public access along the frontage of the GIPS properties and the site is not used regularly by the public, given that there are other existing formed accessways to the beach and it is possible to walk along the beach.

9.4 The proposed location of the structure will prevent the potential future loss of public access along the coast, particularly during high-tide events of from (future) changes from climate change. While the proposal will not comprise a change to existing access through the site, avoidance of potential future loss of access is positive.[61]

Conclusions – Landscape

9.5 Landscape effects relating to the potential for public access are assessed as **High positive.** The proposed location of the structure will prevent the potential future loss of public access along the coast.

9.6 The proposal will be consistent with characteristics and values in near-by parts of the ONF[62] and will avoid adverse effects on the characteristics contributing to values of the ONF overlay.[63]

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[60] The ONF is identified in the District Plan and contains "all land adjoining the open coastline, zoned Rural and within 100m of MHWS." No other more specific characteristics or values are identified for the ONF in the District Plan.

[61] The maintenance and enhancement of public access to and along the coastal marine area is a matter of national importance under section 6 of the RMA.

[62] At Three Mile Creek and the coastal edge north of Three Mile Creek (where there are existing coastal hazard protection structures).

[63] NZCPS Policy 15a requires that development proposals "avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment."

10.0 VISUAL AMENITY EFFECTS

Views from Waihi Beach

10.1 At completion, the proposal will provide views of a naturalised sand dune with planting. The new dune form will include a naturalised appearance from the new planting and species mix proposed. It will appear well integrated into natural landform to the north and south, with the proposed placement of sand and new planting.

10.2 At the south end of the site more planting will be visible than currently exists – as planting will cover the dune face above the beach. This will increase visual amenity at this part of the site.

10.3 From the beach the dune will be seen further seawards than the existing dune. The new dune will be aligned more closely with the dune alignment which existed in 2011, prior to the significant erosion which occurred with Cyclone Gabrielle.

10.4 If parts of the structure become exposed due to erosion, the structure will be seen with planting at the top of the dune, (in areas protected by the structure), and on northern parts (where there is less at risk of substantial erosion), and this will provide visual amenity in views from the beach.

10.5 It is expected that, for approximately 20 years following completion of the structure, exposure of the structure from large storm events will be temporary, until natural processes re-build the sand dune and vegetation over the structure.

10.6 It is expected that the structure will become increasingly exposed over time due to the effects of climate change. If exposed in the future, the structure will be seen with areas of retained planting (at the top of the dune, protected by the structure), will be seen as part of a modified context which includes other structures, and will be visually consistent with other area of rock revetment along Waihi Beach.

10.7 Planting at the top and landward of the dune will be protected by the new revetment structure – ensuring a higher-quality coastal edge (and provision of visual amenity from this) in the long term (compared to the likely edge resulting from the (future) effects of climate change).

10.8 Effects on visual amenity in views from the beach are as assessed overall as **Moderate-High positive**.

Views from Three Mile Creek Reserve (north of the site)

10.9 Views of the site from the reserve along Three Mile Creek (from areas just north of the site including around the mouth of the Creek), are unlikely to be noticeably changed. At completion of the proposed work the dune form at the north end of the site will be reinstated, and there will be views of plantings across the Glen Isla dune, similar to existing views. The indigenous character of planting will be increased, but this may not be strongly apparent in views from along Three Mile Creek, due to distance.

10.10 Effects are as assessed as **Neutral**.

11.0 CONSTRUCTION PHASE EFFECTS

11.1 There will be temporary effects on natural character, landscape and visual amenity from earthworks and from storage of plant and materials during the construction period.

11.2 Overall, effects will be minimised by the proposed construction methodology and timing. Stockpiling of rock and sand on the beach will be minimised by the proposed staged construction, with rock delivered in an "as needed" basis and anticipated to be almost completely removed (used) on a daily basis. Sand will be excavated, stored and backfilled within a single tidal cycle.

11.3 The work is proposed to be undertaken from April to November – when there will likely be fewer people using the beach than in summer. Access along the beach past the site will remain unaffected.

11.4 Additionally, the site is located away from private residences (other than those belong to members of GIPS – the applicants). Access to the site will be temporarily obstructed during the construction of the structure.

Conclusion – construction effects

11.5 Overall, construction effects on natural character, landscape and visual amenity will be temporary in nature and are assessed as **Low adverse** for the local community. Adverse effects have been minimised through the proposed programme and methodology; and will be further limited due to the location of the site away from private properties.

11.6 Public access along the coastal edge will not be affected by the construction phase.

12.0 RECOMMENDATIONS

12.1 It is recommended that:

- A detailed planting plan is provided for the proposed revegetation of the site, with confirmation of plant placement on the ground by an ecologist or landscape architect prior to planting, to ensure that a naturalised appearance to new planting is achieved immediately following the planting, with species located in naturalised groupings and any appearance of "bands" or "lines" of particular species avoided.

- Rock is sourced from a local Waihi Beach quarry, and with a variety of sizes selected to ensure a more naturalistic appearance to the revetment (should rocks become exposed after a large storm event or over time due to the effects of climate change). For parts of the structure at risk from erosion/exposure, rocks with a weathered appearance should be used (as possible).

13.0 ASSESSMENT AGAINST THE STATUTORY FRAMEWORK

13.1 The proposal meets the relevant[64] objectives and policies of the NZCPS and related provisions in the regional and local statutory planning documents. The proposed structure will be consistent with existing characteristics and values of the ONF identified at the coastal edge of Waihi Beach and will not will not generate adverse effects on the attributes/characteristics contributing to values of the ONF. The proposal will not generate significant adverse effects on the attributes contributing to the natural character of the site and its more immediate surroundings at Waihi Beach.

14.0 EFFECTS RATINGS SUMMARY

14.1 The following table (refer to the following page) provides a summary of natural character, landscape, visual amenity and construction effects assessed in this report. Inclusion of the LVA recommendations is assumed in the effects ratings.

[64] Relating to natural character and landscape matters.

Summary of Effects Ratings

Effect	Rating
Natural Character	Moderate-High positive
Landscape	High positive
Visual Amenity:	Waihi Beach: Moderate-High positive Three Mile Creek Reserve (north of the site): Neutral
Construction (temporary)	Low adverse

Isthmus

October 2024

Appendix A: Definitions, NZILA Ratings Scale; LVA Methodology.

LVA Approach and Methodology

The following sets out the approach and methodology used in this assessment of effects.

Approach

Natural Character

Refer below to Definitions, for the definition of natural character used in this assessment.

This assessment considers that natural character is a "type" of character, contributing to the overall landscape character of an area. Natural features (such as vegetation or natural landforms) and the qualities and characteristics they include contribute to both the natural character and landscape character of an area.

Assessment of effects from the proposal on existing natural features (such as vegetation and natural landforms) is provided in this report under the heading of natural character and is not considered again within the assessment of landscape effects. This is to avoid repetition and assessment 'double up' in effects ratings (i.e. effects on natural landscape and natural features are considered once, rather than under both headings of Natural Character, and Landscape).[65]

Natural character includes both natural science matters and perceptual matters.[66] As such, effects on ecology and habitat will contribute to overall natural character effects. The effects ratings in this assessment include consideration of findings from ecology specialists,[67] to reach a conclusion on the overall level of natural character effects from the proposal.

Landscape

The assessment of landscape effects in this report focuses on effects on urban aspects of the landscape. Effects on natural landscape and features are considered under the heading of Natural character (for the reasons outlined above, under the heading Natural Character).

For this site, potential landscape effects will relate to public access to/along the coastal edge.

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[65] Te Tangi a te Manu, the NZILA landscape assessment guidelines, (2022), outline that assessment methodology should be tailored to the needs of each assessment. The approach for this assessment recognises that at this site landscape character is closely linked to natural character, and is adopted to avoid "double-counting" of effects on existing natural features (such as vegetation).

[66] As outlined in Te Tangi a te Manu, the Aotearoa New Zealand Landscape Assessment Guidelines (2022) adopted by Tuia Pito Ora, the New Zealand Institute of Landscape Architects (NZILA).

[67] This is in line with best practice as outlined in Te Tangi a te Manu, the landscape assessment guidelines provided by Tuia Pito Ora, the New Zealand Institute of Landscape Architects.

Visual Amenity

The assessment of visual amenity effects considers effects on both natural character (including the natural landscape) and urban landscape, as both aspects of landscape contribute to the views and features that people value.

Cultural matters

Cultural landscape values relating to the project area are part of overall landscape values.[68] We note that as landscape architects, we are unable to assess cultural values without input from mana whenua.

Construction (temporary effects)

These are considered as temporary effects arising from construction activities and the establishment of temporary works or storage areas and not present at the end of the construction period.[69]

Assessment Methodology

The methodology used to consider potential natural character, landscape, visual amenity and construction effects of the proposal has followed best practice guidance set out in Te Tangi a te Manu, and has included the following:

- Review of the proposal plans and documents, including relevant planning provisions;[70]
- A desk-top evaluation of the proposal's visual catchment, including identification of the locations and audiences likely to gain views of the site and proposal;
- Site visits to understand the site and context, and the visual catchment. Photos were taken (from publicly accessible locations), to understand views of the proposal likely to be gained by surrounding audiences;
- Evaluation of the site and context, including consideration of the existing levels of natural character and the characteristics and qualities which contribute to that;

[68] As outlined in Te Tangi a te Manu, the assessment guidlines provided by Tuia Pito Ora, the New Zealand Institute of Landscape Architects (NZILA).
[69] Where the duration of an effect extends beyond the construction period, that is considered under the assessment of natural character, landscape or visual amenity effects (as appropriate).
[70] As provided by Mitchell Daysh, the project planning team.

- An outline of the proposal and identification of components likely to generate long-term/permanent and temporary natural character, landscape and visual effects;

- An assessment of the effects of the proposal on the existing natural character, landscape and visual amenity at the site (including effects on the immediate surrounding context);

- An assessment of the temporary effects on natural character, landscape and visual amenity effects from construction of the proposal (temporary effects from temporary work areas and activities); and

- Recommendations and Conclusions.

In line with the NZILA assessment recommended best practice methodology, a 7-point scale (as set out below) has been used to rate the effects:

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

Effects relate to both nature and extent – that is, qualitative matters. The 7-point scale is used to provide a summary rating of effect, as a useful tool of analysis. For the purpose of decision making and to confirm appropriate mitigation recommendations, the ratings provided need to be considered alongside the qualitative description of the effects.

Effects may be adverse, neutral, or positive.

Definitions & Explanations – Te Tangi a te Manu

This assessment uses the following definitions/explanations of **natural character** and **landscape**, taken from Te Tangi a Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines (July 2022), as recently updated by Tuia Pito Ora, New Zealand Institute of Landscape Architects (NZILA):

Natural Character

"Natural character is the distinct combination of an area's natural characteristics and qualities, including degree of naturalness."

"Natural character is an outcome of physical environment and perception. Perception is influenced by what we know of an area's natural characteristics and qualities (including input from natural sciences) and how we experience them."

Naturalness

"Naturalness" is a measure of the actual and apparent modification from a fully natural state."

Natural character is a type of character – the distinct combination of an area's natural characteristics and qualities. Naturalness is an attribute of that natural character.

As a measure of the extent of modification present, *naturalness* is quantitative.

As a distinct combination of natural characteristics and qualities, (including naturalness), the consideration of natural *character* is qualitative.

This assessment considers the specific character coming out of the combination of characteristics and qualities (biophysical and perceptual), including the naturalness/degree of modification in the area.

Landscape

"Landscape embodies the relationship between people and place. It is the character of an area, how the area is experienced and perceived, and the meanings associated with it."

Landscape is an integrating concept. While landscape draws strands from diverse sources (natural

sciences, humanities, cultural perspectives), it is perceived and experienced as a unified phenomenon. It is an integrated whole. It is more than a summary of data – the whole is greater than the sum of the parts.

Landscapes have physical, associative, and perceptual dimensions.

Amenity Values

The RMA defines "amenity values" as "those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes."

NZILA Ratings Scale

The 7-point rating scale recommended by Tuia Pito Ora, the New Zealand Institute of Landscape Architects, is a follows:

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

The scale is used to assess the existing levels of naturalness in an area (refer above to Natural Character), as part of a natural character assessment.

It is also used to rate effects on landscape values from development proposals.

Effects can be adverse, neutral, or positive.

The following provides a comparison of the relationship between the NZILA 7-point rating scale, and RMA terminology, as set out in the NZILA assessment guidelines, Te Tangi a te Manu: