Boffa Miskell

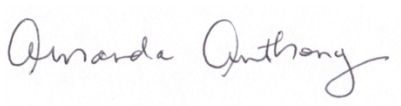
Nelson Airport Notice of Requirement Options Report

Landscape Effects Assessment
Prepared for Nelson Airport Limited

23 January 2023

Boffa Miskell is proudly a
Toitū net carbonzero certified consultancy

Document Quality Assurance

Bibliographic reference for citation: Boffa Miskell Limited 2023. *Nelson Airport Notice of Requirement Options Report: Landscape Effects Assessment*. Report prepared by Boffa Miskell Limited for Nelson Airport Limited.		
Prepared by:	Liz Gavin Senior Principal | Landscape Architect Boffa Miskell Limited	
	Amanda Anthony Senior Landscape Architect Boffa Miskell Limited	
Reviewed by:	Rhys Girvan Senior Principal | Landscape Architect Boffa Miskell Limited	
Status: [FINAL]	Revision / version: [4]	Issue date: 23 January 2023

Template revision: 20180621 0000

File ref: BM220983_Final_Nelson_Airport_Options_Report_20221214.docx

Cover photograph: View located on the northern NAL designation boundary, looking in an easterly direction, BML 2022.

CONTENTS

Appendices

Executive Summary

Nelson Airport Limited (**NAL**) is proposing to extend the existing airport runway to remove operational constraints experienced by existing aircraft and to support the operational needs of future aircraft types. This requires a proposed extension to NAL's existing designations under the Nelson Resource Management Plan (**NRMP)**. Two options have been proposed: Option A – northern extension and Option B – southern extension. This report assesses those options, having regard to the natural character, landscape and visual effects of each option. A Multi-Analysis Criteria (**MCA**) rating has also been included in the conclusion for each option to feed into the overall MCA report.

The Airport's existing operational area is zoned a combination of the Industrial Zone and Open Space Recreation Zone within the NRMP. Any extension to the designations will need to be considered within the broad context of the Resource Management Act 1991 (**RMA**) and associated statutory framework, including but not limited to the NRMP and the New Zealand Coastal Policy Statement 2010 (**NZCPS**).

Option A – northern extension is largely within the existing Airport designation area and extends north-east into the adjacent Nelson Golf Club landholding. With the northern extension, the Airport Perimeter Walk would likely be retained and realigned to provide a 'loop' track for public use and the Nelson Golf Club would need to be reconfigured and would reduce in size. The location of the northern RESA could potentially have consequences for the treatment and condition of the Maire Stream tributary.

Overall, Option A will generally be in character with the existing landscape and natural character values associated with the existing flat, open grassland apparent at the Golf Club - aside from earthworks to remove 'sand-dune' type landforms. The physical landscape will be slightly altered through an increase in pavement and any consequences associated with the Maire Stream tributary from the location of the RESA. In terms of natural character, the proposed northern runway extension area is in keeping with the existing modifications in the local area.

Option B – southern extension is also largely within the existing Airport designation area however partially extends north-east into the adjacent Nelson Golf Club landholding. It also extends to the south-west across Jenkins Creek and into the Waimea Estuary (within the coastal marine area). This option would be achieved by constructing a bridge across Jenkins Creek, onto NAL owned land on Monaco Peninsula and into Waimea Estuary. Option B would require 3.6 hectares (ha) of land reclamation in the Waimea Estuary to enable construction of the southern RESA, as well as provision of an alternative alignment of Point Road via a tunnel structure to provide vehicle and pedestrian access. The environment subject to Option B holds higher landscape, natural character and visual amenity values than Option A. As a result, the potential adverse landscape effects from the Option B extension area are substantially higher than Option A.

From a landscape perspective, Option A – northern extension is the preferred option due to the proposed location retaining a similar landscape character, even with the development associated with a runway extension and associated elements, that would be in keeping with the existing modified natural character and generally contained nature of the visual catchment. Potential mitigation and conditions of development as associated with the physical change required and encroachment of infrastructure / RESA towards the Maire Stream tributary, and potential loss of open space/recreation opportunities will need to be addressed as part of a more detailed landscape assessment of the preferred option. This would also be a core component of any Outline Plan lodged pursuant to s176A as associated implementing this designation, where successful through the Notice of Requirement approach.

1.0 Introduction

1.1 Scope of the report

Boffa Miskell Limited (**BML**) has been engaged by NAL to undertake a Natural Character and Landscape Effects Assessment (NCLEA) of the proposed alteration to NAL's existing designations to authorise an extension to the Airport's existing runway at Trent Drive, Nelson.

The Airport's existing operational area is zoned a combination of the Industrial Zone and Open Space Recreation Zone within the Nelson Resource Management Plan (NRMP). The Airport is also located within the broader context of the coastal environment which requires appropriate consideration of the New Zealand Coastal Policy Statement 2010 (NZCPS), specifically Policies 13 and 15 as associated with any extension into the CMA.

The following 'Options Report' assesses natural character, landscape and visual effects of both the proposed northern (Option A) and southern (Option B) extension options of the Airport's designation on the immediate and surrounding environments landscape character and values. This assessment has been undertaken to inform the Options Assessment (across a number of disciplines) required for the Notice of Requirement (NoR) and identify the preferred option from a landscape perspective. An assessment of the preferred option and mitigation required will be outlined in a separate report.

1.2 Project background

The initial 'Options Report' for the proposed extension to the Airport's designation dated February 2020 was prepared by Liz Gavin of Canopy Landscape Architects and was peer reviewed by Rhys Girvan of BML in June 2020 on behalf of Nelson City Council (NCC). Ms Gavin has since joined BML as a Senior Principal Landscape Planner.

This 'Options Report' is an updated version of that earlier Options Report and includes the findings of the BML peer review.

BML ecologists have also assisted NAL regarding the ecological constraints for both the northern and southern runway extension options. The Ecological Assessment[1] should be read in conjunction with this landscape report, specifically in relation to natural character abiotic and biotic attributes that relate to the Airport environs. This 'Options Report' refers to some of the findings identified within the ecological report where those findings have corresponding effects on natural character matters.

2.0 Assessment Methodology

This assessment follows the concepts and principles outlined in *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines*[2]. A full method is outlined in **Appendix 1** of this report. In summary, this options report will focus on natural character (characteristics and qualities), landscape (character and values) and visual matters (including the nature of potential effects in the context of the relevant statutory planning provisions), relating to the two runway extension options[3].

[1] Boffa Miskell (2022) Nelson Airport Designation Notice of Requirement, Ecological Assessment.
[2] *'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.*
[3] Refer to Section 3 of this report for the proposed options.

The effects ratings for each runway option are based upon a seven-point scale, which ranges from very low to very high. A **Graphic Supplement** has been included as **Appendix 3**, which includes a context map, zoning plan, landscape classification overlays, viewpoint map and Site photographs.

2.1 Assessment Process

The assessment involved the following tasks:

- Familiarisation of the runway extension options (i.e. the northern extension vs southern extension) and background documents;
- Review of the BML(2020) Peer Review of the Canopy (2020) Options Report.
- Desktop analysis of the extension options and surrounding landscape context, including a review of relevant information relating to natural character, landscape and visual aspects.
    - 2050 Airport Master Plan, prepared by Nelson Airport;
    - *Nelson Landscape Study: Landscape Character Assessment*, prepared by BML and Canopy Landscape Architects, dated March 2015;
    - *Nelson Landscape Study*: Landscape Evaluation, prepared by BML, dated November 2016; and
    - *Nelson Coastal Study: Natural Character of the Nelson Coastal Environment*, prepared by BML dated November 2016.
- Site visit: Liz Gavin of BML visited the existing airport and areas proposed to be subject to the two extension options on the 22nd January 2020, during overcast weather conditions to understand the context and nature of available views. Amanda Anthony of BML visited the existing airport and proposed extension areas on 21st November 2022, during overcast weather conditions. While on the site visit, the immediate surrounding area was also visited to understand the area's physical and visual relationship to nearby public and private locations. Representative public viewpoints were visited, and viewpoints are included in **Appendix 3: Graphic Supplement**. The extension options was also visited by Rhys Girvan of BML in May 2020 where additional viewpoints were visited. These have been included on Figures 11, 12, 20 and 21 in Graphic Supplement[4].
- Review of statutory provisions such as:
    - The Resource Management Act 1991 ("**RMA**") specifically Section 6a and 6b;
    - New Zealand Coastal Policy Statement 2010 ("**NZCPS**") specifically Policies 13 and 15; and
    - Relevant sections of the Nelson Resource Management Plan ("**NRMP**").
- Description of the runway extension 'Options'.
- Description of the existing environment including the landscape values and natural character values at a local level (Option A and Option B).
- Assessment of natural character, landscape and visual effects of the two runway extension Options.
- Recommendation of the preferred runway extension Option based on the potential landscape effects.

[4] Refer to Appendix 3.

3.0 The runway extension 'Options'

NAL is proposing to extend the existing airport runway to remove operational constraints experienced by existing aircraft and to support the potential operational needs of future aircraft types. This requires an extension to NAL's existing designations under the NRMP. Two options have been proposed and are detailed below. Refer to **Figure 7** in the Graphic Supplement for the proposed runway extensions and designation boundaries.

Option A: Northern Runway Extension

***Image 1**: Northern Runway Option A, source: Planz Consultants.*

Option A consists of extending the main runway length by 370m in a north-easterly direction from 1,347m to 1,510m (refer to **Image 1** above). The proposed northern option would extend the main sealed runway into the adjacent Nelson Golf Club. A 240m by 150m wide runway end safety area (RESA) would be created at each runway end, as required by Civil Aviation regulations. There would also be a parallel taxiway extension (500m) to the south to link the extension to the existing taxiway as shown below in **Image 2**.

It has been assumed the RESA to the north-east of the runway extension would be grassed and the south-western RESA would likely remain a mix of paved area and grass as shown above in **Image 1**. It is likely future edge lighting along the northern runway extension would extend along the sealed runway itself.

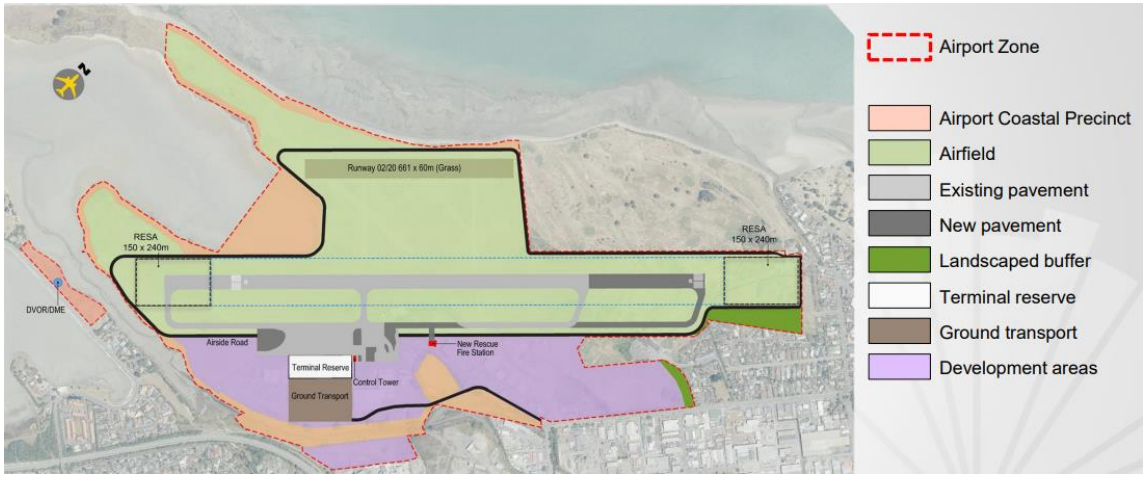


***Image 2**: Potential Operational Areas, sourced from 2050 Airport Master Plan*

Option B: Southern Runway Extension

Image 3*: Southern Runway Option B, source: Planz Consultants.*

Option B consists of extending the existing runway by 163m in a south-westerly direction which protrudes into the coastal marine area (CMA) (refer to **Image 3** above). This would be achieved by constructing a bridge across Jenkins Creek, onto NAL owned land on Monaco Peninsula and into Waimea Estuary.

As with Option A, a 240m long RESA would be created at each runway end. Option B would require reclamation of an additional 3.6 hectares (ha) in the Waimea Inlet to enable construction of the southern RESA, as well as provision of an alternative alignment of Point Road in a tunnel structure. The northern RESA would extend over the Nelson Golf Club. The proposed crossing of Jenkins Creek would likely involve a bridge structure of at least 220m in width. As above, formation of the runway would be a total length of 1,510m.

It has been assumed the proposed RESA to the north-east of the runway extension would be grassed and the south-western RESA would likely also be grassed. It is likely future edge lighting along the southern runway extension would extend along the sealed runway itself.

4.0 Existing Environment

For the purposes of this assessment (regarding both Option A and Option B) the following definition of landscape has been adopted from *Te Tangi a te Manu*. A full methodology statement is included within **Appendix 1** which details how the assessment was undertaken.

> ***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.* [5]

As part of the NRMP review, Boffa Miskell was engaged by Nelson City Council to undertake a landscape and coastal natural character study. The *Nelson Landscape Study*[6] was one of the studies prepared in 2016 which characterised Nelson into landscape character areas.

Option A – northern extension is within the Tahunanui landscape character area and Option B – southern extension is within the Tahunanui, and Waimea Estuary landscape character areas as identified in the *Nelson Landscape Study*. Refer to **Figure 3** in the Graphic Supplement for a map of the character areas. Below are broad descriptions for each character area from the *Nelson Landscape Study* as well as site-specific descriptions that relate to the Nelson Airport environs as well as for Option A – northern extension and Option B – southern extension.

[5] This definition focuses on the relationship between people and place (one of the two strands of meaning of 'landscape') and describing the three dimensions (physical, associative and perceptual) in ordinary terms.
[6] Boffa Miskell (2016) Nelson Landscape Study – Landscape Character Assessment pages 74 and 80.

4.1.1 Tahunanui Landscape Character Area[7]

***Image 4**: Tahunanui Landscape Character Area, source: Nelson Landscape Study, page 75.*

The Tahunanui character area is almost exclusively sand dune deposits forming a complex arrangement of spits, beach ridges, inter-dunal swamps and estuaries. Tahunanui forms the landward extent of 'Nelson's Beach' and retains a strong connection with Nelson's seaside identity. The character area is low lying and characterised by expansive modified dune fields which extend between the coast and an established urban edge. Beyond a sandy coastal edge, grass covers most of this character area. Small creeks with brackish water with coastal saltmarsh vegetation occur throughout this area. Nelson Airport, situated along the southern golf course boundary is located on an area of former dunes which have been heavily modified and introduces an open utilitarian character similar to the character of the adjoining golf course.

[7] Boffa Miskell (2016) Nelson Landscape Study – Landscape Character Assessment page 74.

4.1.2 Waimea Estuary Landscape Character Area[8]

***Image 5**: Waimea Estuary Landscape Character Area, source: Nelson Landscape Study, page 81.*

The landward margins of the Waimea Estuary character area (including the airport) have been significantly modified over the last 150 years. The landform of Waimea Estuary reflects a dynamic tidal pattern of water and mudflats. Along the edge of Waimea Estuary, rock lined embankments and retaining walls are common along residential property boundaries and reinforce the linearity and strong horizontal landform. As much of the coastal edge of this character area has been lined with rock riprap and adjoins a hard urban edge, much of the original indigenous vegetation along the margins of the estuary has been lost. Within the estuary, soft sediment communities are healthy and relatively diverse, containing animals such as polychaete worms, cockles and other small bivalves and supporting high numbers of invertebrates, fish and birds using the estuary. Some pockets of salt marsh vegetation have also been re-established including a shallow bay to the east of Monaco.

4.2 Site Description - Nelson Airport

Nelson Airport is centrally located between Nelson and Richmond, being 7 kms south-west of central Nelson and 7.5 kms north-east of Richmond town centre. The Airport is bound by Waimea Inlet to the southwest and Nelson Golf Club to the north. To the east is Bolt Road and Jenkins Creek. The southern extent of the Airport is bound by Jenkins Creek which flows westward into Waimea Inlet and the tidal flats of Waimea Inlet. Refer to **Figure 1** in the Graphic Supplement for the Airport location and surrounding context.

The wider landscape context surrounding the Airport includes Moturoa/Rabbit Island, Bell Island and Best Island to the west. The coastal waters of Waimea Inlet and specifically Blind Channel separates the Airport from Rabbit Island. Further north is Te Tai-o-Aorere/Tasman Bay and the coastal suburb of Tahunanui. The Annesbrook industrial area is located east of the Airport and extends to State Highway 6. The Tahunanui Port Hills and more distant Barnicoat Range act as an elevated backdrop east of the Airport. The Wharepapa/Arthur Range within Kahurangi National Park are visible west of the Airport in the distance, beyond the Waimea Estuary. The

[8] Boffa Miskell (2016) Nelson Landscape Study – Landscape Character Assessment page 80.

residential community of Monaco is located to the south on a peninsula landform that extends into Waimea Estuary.

The Airport and the immediate surrounding area are relatively low lying (approximately 5 meters above sea level), including Monaco Peninsula and the undulating coastal lands of the Nelson Golf Club. Other nearby landscape features include Maire Stream north of the Golf Club and Jenkins Creek south of the main Airport runway.

Due to Airport operations, the area is notably open and covered in low stature exotic grasslands as required for safety measures and easy maintenance. The main paved Airport runway is located centrally within the NAL designation and a smaller scale grassed runway is located at the western extent of the designation, near the coastline. The Airport terminal building, carpark and industrial buildings (airport hangers and large sheds) associated with airport activity are located east of the main runway on Trent Drive, Dakota Street and McLaren Drive.

There are several pedestrian and cycle access tracks within close proximity to the Airport. Namely, a pedestrian walkway follows the entire perimeter of the Airport (Airport Perimeter Walk) which also links to the Airport Peninsula Walk south-west of the Airport. A walking/cycle track also follows Jenkins Creek and loops around Monaco Peninsula south of the Airport. State Highway 6, Whakatu Drive, is located southeast of the Airport and provides the main transport link between Nelson and Richmond.

4.3 Option A – Northern Extension Site Description

Option A – northern extension is predominantly located within the existing Airport designation area and also extends north-east into the Nelson Golf Club landholding as well as into Maire Stream tributary. Refer to **Figures 6-7** in the Graphic Supplement for a map of Option A.

Beyond the existing Airport designation, the topography within the Golf Club is relatively flat with a mix of undulating, round and rolling landforms reminiscent of sand dunes found in coastal landscapes. It is unknown whether the landforms are manmade or part of the existing coastal landscape. The Option A extension area is predominately covered in grass and typical of a golf course design, displaying both open flat mown areas for fairways and greens surrounded by undulating landforms that create complexity throughout the course.

The Option A extension area is currently occupied by a number (1, 9, 10 and 18) of golf 'holes' as a component of the Nelson Golf Links owned and operated by the Golf Club. A collection of buildings used by the Golf Club (caretakers) are located at the north-west corner of the extension area which is accessed via Parkers Road. The Awatea Pump Station is currently under construction and borders Maire Stream. Directly north and east of the extension area is Maire Stream which flows into Waimea Inlet, residential dwellings and the Nelson Golf Clubhouse with associated carpark. The Great Taste Trail is currently under construction and will be located along the eastern boundary of the Option A between the Golf Club and Awatea Place.

Overall, the majority of the Option A extension area is similar in landscape character to the existing Airport designation due to the open nature of the Golf Club, exotic grass coverage and relatively flat topography.

4.4 Option B – Southern Extension Site Description

Option B – southern extension is also predominantly located within the existing Airport designation area however it extends north-east into the Nelson Golf Club landholding and south-west into the coastal marine area of Jenkins Creek/Waimea Estuary. Refer to **Figures 6-7** in the Graphic Supplement for a map of Option B.

The Waimea Estuary is a flat, expansive tidal system that fluctuates from sandy mudflats and channels at low tide to a full water body at high tide. The Option B extension area consists of a similar tidal system at Jenkins Creek and within the wider Waimea Estuary south of Point Road.

Option B spans across the tidal Jenkins Creek system and connects the existing Airport designation area with the Monaco Peninsula landform to the south. The topography of the Option B extension area varies from the tidal nature of Jenkins Creek/Waimea Estuary to approximately 5masl within the existing Airport designation area. The landward edges on either side of Jenkins Creek appear to be more natural in form whereas the southern extent of Point Road is more modified with a rock edge to protect the roading infrastructure that provides access to the residential area located on Monaco Peninsula.

The land cover of the Option B extension area varies from sandy mudflats with shallow water channels at low tide to a full water body at high tide. The land portion consists of a grassed embankment on Monaco peninsula and Point Road at a slightly lower elevation than the grassed embankment. The land edges are predominately covered in exotic grasses. However, the confluence of Jenkins Creek and Poorman Valley Stream displays a notable presence of native estuarine grasses, saltmarsh and tussock grasses.

The residential community of Monaco is located to the west and east of the Option B extension area on a peninsula landform that extends out into the Waimea Estuary. The neck (central portion) of the peninsula is zoned Open Space Recreation which forms an open grassy break between residential development that covers the remaining portion of the peninsula. Coastal context is strongly exhibited here due to the proximity to the estuary waters and potential of Point Road being inundated during king tides (especially at the southern extent).

The Option B extension area is utilised by water users for recreational pursuits (within Jenkins Creek and Waimea Estuary), road users of Point Road and pedestrian/cycle users along the shared path that follows Point Road. Several reserves are within close context, notably Monaco Reserve (which has a playground), Monaco Foreshore (which borders Point Road) and Poorman Valley Stream Esplanade. A walking/cycling track is located within these reserves which provides a connection from Jenkins Creek through to Monaco Peninsula. The Honest Lawyer Country Pub and Grand Arden Monaco Nelson hotel are located on Point Road, west of the Option B extension area.

Modifications along the coastal edge of Jenkins Creek (near residential development) and the Waimea Estuary (within the immediate context of Option B) consist of timber retaining walls, rock walls, boat ramps and jetties. The landscape character of the Option B extension area is within the coastal marine area (tidal waters of Jenkins Creek/Waimea Estuary) and as such varies to the existing Airport designation area.

4.5 Visual Catchment

To determine the visual catchment and viewing audience of the two runway extension options, a study of aerial photography including land use, landform and vegetation patterns was undertaken in addition to visiting the local areas surrounding Option A and Option B. Below is a description of the visual catchment and viewpoints are contained within the **Graphic Supplement (Appendix 3)**.

4.5.1 Option A – Northern Extension Visual Catchment

The Option A - northern extension visual catchment is predominately contained by the immediate low-lying areas in all directions; with long-distance views (approximately 1.8kms) available from the elevated Port Hills Ridge to the east. Refer to **Table 1** below for a detailed breakdown of viewing audiences and **Viewpoints 1-10 and 21-22** in Appendix 3, Graphic Supplement.

Table 1: Option A – Northern Extension Visual Catchment	
Visual Catchment	**Viewing Audiences**
Northern	– Private dwellings in the Tahunanui residential areas accessed by Parkers Road and Awatea Place. Views overlook the existing golf course and associated undulating landforms towards the Option A extension area. – Public users of the Nelson Golf Club have open views of the Option A extension area. – Public users of the Maire Stream tributary have open views of the golf course and towards the Option A extension area south of the stream. – Public users of the Tahunanui Beach foreshore reserve may have partial views of the Option A extension area due to intermittent low vegetation and low-lying topography. – Public, recreational users of the Airport Perimeter Walk have open views of the Option A extension area.
Southern	– Public, recreational users of the Airport Perimeter Walk.
Eastern	– Private residential dwellings accessed by Otterson Street, Chandler Street, and Golf Haven Way have varying views towards the Option A extension area. – Public users of the Nelson Golf Club have open views of the Option A extension area. – Public users in industrial areas accessed by McLaren Drive and Dakota Street. – Public, recreational users of the Great Taste Trail have open views of the Option A extension area. – Long-distance views from private residential dwellings located approximately 1.8kms on the elevated Port Hills Ridge have open views across the Option A extension area.
Western	– Public, recreational users of the Waimea Estuary and the Airport Perimeter Walk have limited views of the Option A extension area due to intervening landforms and vegetation within the Golf Club.

4.5.2 Option B – Southern Extension Visual Catchment

The Option B - southern extension visual catchment includes the Nelson Golf Club, Waimea Estuary, State Highway 6 (Whakatu Drive), Point Road, Monaco residential area, Monaco Peninsula, Jenkins Creek and the nearby walking/cycle track. Refer to **Table 2** below for a detailed breakdown of viewing audiences and **Viewpoints 11-22** within Appendix 3, Graphic Supplement.

Table 2: Option B – Southern Extension Visual Catchment

Visual Catchment	Viewing Audiences
Northern	– Private dwellings in the Tahunanui residential areas accessed by Parkers Road, Awatea Place, Otterson Street, Chandler Street, and Golf Haven Way. – Public, recreational users of the Nelson Golf Club and Airport Perimeter Walk have open views of the Option B extension area.
Eastern	– Private residential dwellings accessed from Point Road and Hoult Crescent. – Public users of SH 6 (Whakatu Drive) and Point Road. – Public users of the Honest Lawyer and Grand Arden Monaco accommodation. – Public recreational users of the walking/cycle track that follows Jenkins Creek and the foreshore adjacent to SH 6. – Long-distance views from private residential dwellings located approximately 1.8kms on the elevated Port Hills Ridge have open views across the Option B extension area.
Southern	– Public recreational users of Waimea Estuary and Airport Perimeter Walk.
Western	– Private residential dwellings accessed from Martin Street and Point Road. – Public recreational users of the Monaco Reserve, Monaco Peninsula and Waimea Estuary.

4.6 Landscape Values

As part of this landscape assessment, the existing landscape character, landscape values and natural character characteristics that relate to Option A and Option B have been identified first, followed by the relevant statutory provisions (Section 5). The landscape effects of Option A and Option B are described within Section 6.

Landscape values are the various reasons a landscape is valued—the aspects that are important or special or meaningful. Values may relate to each of a landscape's dimensions—or, more typically, the interaction between the dimensions. Values can relate to the landscape's physical condition, meanings associated with certain landscape attributes, and a landscape's aesthetic or perceptual qualities. Importantly, landscape values depend on certain physical attributes. Values are not attributes but are embodied in attributes.[9]

4.6.1 Option A – Northern Extension Landscape Values

The Option A extension area has not been identified as an Outstanding Natural Feature/Landscape or area of Outstanding Natural Character at the Regional or District scale. It also does not form part of any significant landscape / feature.

However, within the *Nelson Landscape Study*[10], the Tahunanui landscape character area (which Option A is located within) has been assessed as having a 'high' overall landscape value. The landscape values relating to a 'high' rating are listed on **Figure 4** within the Graphic Supplement and primarily relate to Tahunanui Beach rather than the Option A area.

At a more local (Option A) level, the following landscape values apply to the Option A extension area:

- The presence of the Maire Stream tributary, and associated implications in terms of the landform and riparian margins and its connection to the main Maire Stream that flows into Waimea Inlet creates a legible landscape feature.
- The Nelson Golf Club provides open space and recreational opportunities utilised by the community.
- The Airport Perimeter Walk provides recreational access to the Waimea Estuary coastline.
- The visibility of the coastline contributes to Nelson's identity as well as the nearby local area (Tahunanui and Monaco).
- The constant change and movement on the coast - with tides, weather and lighting conditions also contributes to visual variety within this landscape context.

4.6.2 Option B – Southern Extension Landscape Values

The Option B extension area has not been identified as an Outstanding Natural Feature/Landscape or area of Outstanding Natural Character at the Regional or District scale. However, the southern extent of Option B is within the coastal marine area (Jenkins Creek/Waimea Estuary) which has been recognised in the NRMP as holding riparian values of the coastal margins of Waimea Inlet as well as being within a Landscape Overlay (NRMP AP9.10). Refer to Section 5.3.2 of this report for further details.

Option B is within two landscape character areas identified in the *Nelson Landscape Study*[11]: the Tahunanui and Waimea Estuary landscape character areas. At a character area level, both landscape areas have been assessed as having a 'high' overall landscape value. The landscape values relating to 'high' ratings are listed on **Figure 4** within the Graphic Supplement.

[9] *'Te Tangi a te Manu, paragraph 5.06..*
[10] Boffa Miskell (2016) Nelson Landscape Study: Landscape Evaluation, page 44.
[11] Boffa Miskell (2016) Nelson Landscape Study: Landscape Evaluation, page 46.

At a more local (Option B) level, the following landscape values apply to the Option B extension area:

- Legible and dynamic pattern of water and exposed mudflats consistent with estuarine context, especially the tidal nature of Jenkins Creek/Waimea Estuary fluctuating from shallow water channels at low tide to full water bodies at high tide.
- Jenkins Creek and its estuarine flora flowing into the Waimea Estuary are a memorable element in the local coastal landscape.
- The transient nature of coastal processes and presence of coastal native fauna.
- The Nelson Golf Club provides open space and recreational opportunities utilised by the community.
- The Airport Perimeter Walk provides recreational access to the Waimea Estuary coastline.
- The waters associated with Jenkins Creek and Waimea Estuary are used for recreational pursuits by the local community.
- The visibility of the coastline contributes to Nelson's identity as well as the nearby local area (Tahunanui and Monaco).
- The constant change and movement on the coast - with tides, weather and lighting conditions also contributes to visual variety within this landscape context.

4.7 Natural Character

For the purposes of this assessment (regarding both Option A and Option B) the following definition of Natural Character has been adopted from *Te Tangi a te Manu*. A full methodology statement is included within **Appendix 1** which details how the assessment was undertaken.

Natural character has been interpreted as:

- The naturalness[12] or degree of modification of an area.
- An area's distinct combination of natural characteristics and qualities.

The Guidelines[13] adopt the interpretation that natural character is a type of character – the distinct combination of an area's natural characteristics and qualities,[14] and that naturalness is an attribute of that natural character.

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

As described previously, Boffa Miskell was engaged by Nelson City Council to undertake a landscape and coastal natural character study of the Nelson Region as a background document for the Whakamahere Whakatū Nelson Plan. The *Nelson Coastal Study, Natural Character of the Nelson Coastal Environment*[15] was prepared in 2016 which assessed natural character of the Nelson Region. **Image 6** below explains the difference between the Coastal Marine Area and Coastal Terrestrial Area.

[12] Naturalness in this context is defined as the extent to which natural processes, elements, and patterns occur and the relative absence of human elements such as structures and roads. It is a measure of the actual and apparent modification from a fully natural state.
[13] *'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'*, paragraph 9.04.
[14] Natural character is an attribute of places – it does not exist of itself. See for example the Port Gore decision, [2012] NZEnvC 072, paragraph 132.
[15] Boffa Miskell Limited (2016) Nelson Coastal Study: Natural Character of the Nelson Coastal Environment.

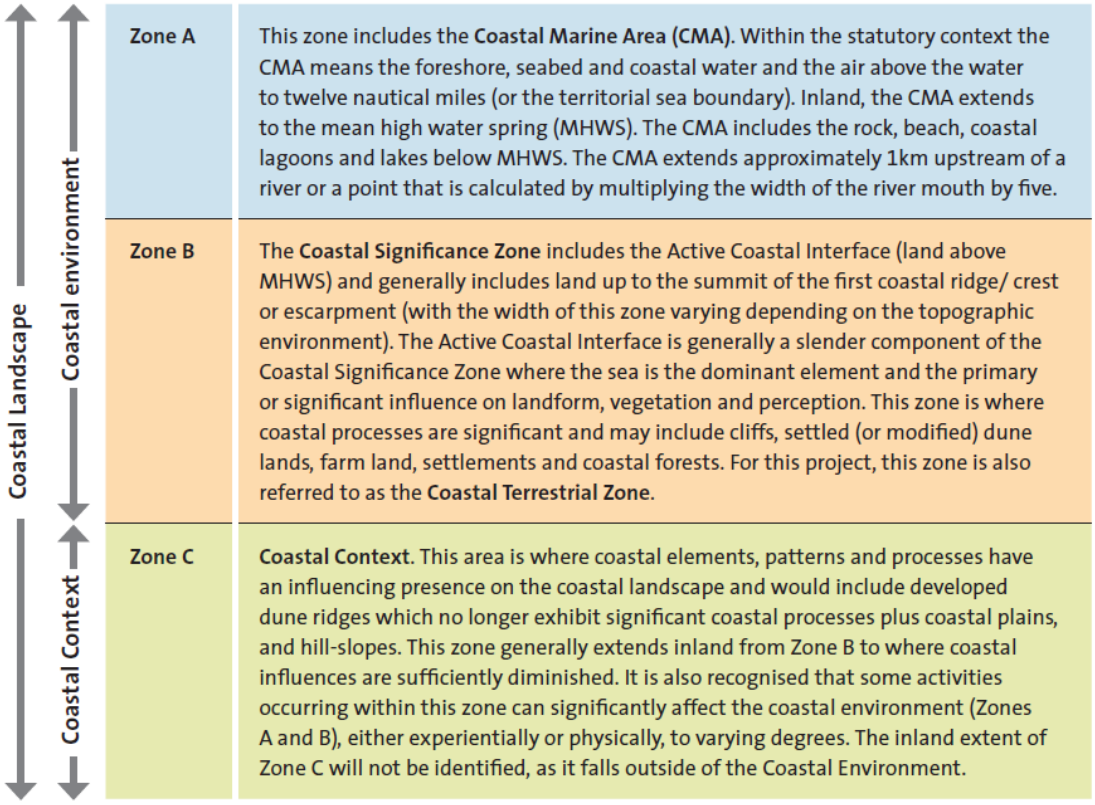


***Image 6**: Excerpt from the Nelson Coastal Study, The Coastal Environment – Zones of Significance, page 17.*

Image 7 below illustrates Option A is within Zone B – the Coastal Terrestrial Area and Option B is within both Zone A – Coastal Marine Area and Zone B – the Coastal Terrestrial Area.

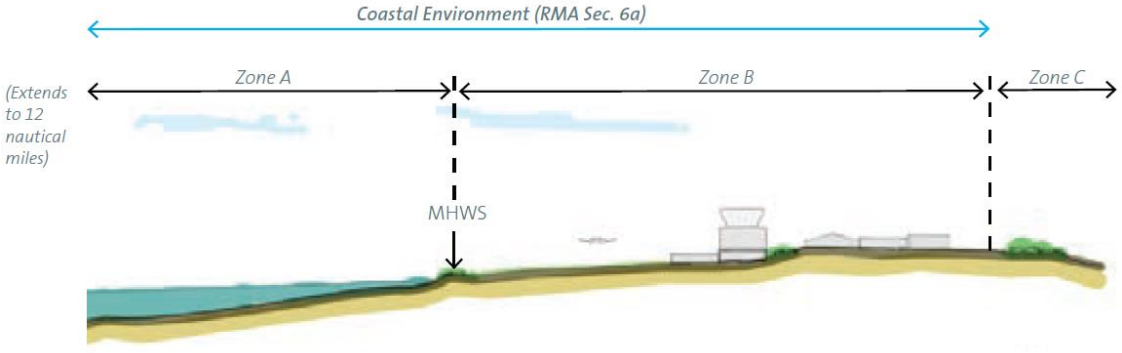


Illustration 10. Representative Coastal Environment Diagram of Tahunanui

***Image 7**: Excerpt from the Nelson Coastal Study, page 115.*

As part of this landscape assessment, the existing landscape character, landscape values and natural character characteristics that relate to Option A and Option B have been identified first, followed by the relevant statutory provisions. The landscape effects of Option A and Option B are described within Section 6.

4.7.1 Option A – Northern Extension Natural Character Characteristics

Within the *Nelson Coastal Study, Natural Character of the Nelson Coastal Environment*[16], Option A is located in Coastal Terrestrial Area (CTA) 10: Tahunanui. The Tahunanui CTA has been assessed as having an overall '**moderate-low**' level of natural character based on 'low' abiotic, 'moderate to low' biotic and 'moderate' experiential ratings. Refer to **Figure 5** in the Graphic Supplement for the mapped extent and evaluation. This is principally due to the high levels of modifications found within the vast majority of this CTA.

Key characteristics:

- The abiotic systems (landform and water) have been highly modified through the areas' use as a golf course, airport and residential development.
- The biotic systems, such as Maire Stream and its tributary displays indigenous intertidal saltmarsh vegetation and the presence of indigenous fauna (particularly īnanga) coveys a level of intactness relating to the natural ecological processes and elements at play.[17]
- The natural movement of the tidal Waimea Estuary waters contributes to the experience of the coastal location which is further accentuated by the feel of coastal wind, smell of the sea and aesthetic qualities of the coast.
- The presence of buildings, exotic plant species, infrastructure and modifications along the coastal edge reduce the level of naturalness to low.

At a local level, the Option A northern extension area is considered to have an overall '**moderate-low'** level of natural character, due to its highly modified abiotic systems, land use as an Airport/Golf Club, dominance of human structures and channelisation of the Maire Stream tributary.

4.7.2 Option B – Southern Extension Natural Character Characteristics

Within the *Nelson Coastal Study, Natural Character of the Nelson Coastal Environment*[18], Option B is located in Coastal Marine Area (CMA) C: Waimea and Coastal Terrestrial Area 10: Tahunanui. The Waimea CMA has been assessed as having a '**moderate**' level of natural character and as described previously the Tahunanui CTA has been assessed as having an overall '**moderate-low**' level of natural character. Refer to **Figure 5** in the Graphic Supplement for the mapped extent and evaluation.

While the Waimea CMA is important for many species (e.g. birds) it is also heavily modified. Modifications (including extensive shoreline harding, sewage treatment facility, reclamation, etc.) have attenuated the natural elements, patterns and processes significantly, with associated implications in terms of natural character.

Key characteristics:

- The confluence of Jenkins Creek and Poorman Valley Stream display intact ecological processes (and therefore associated natural character) as consistent with an estuarine environment.
- As contained within Appendix 4 (Marine ASCV overlay) of the NRMP, the Waimea Inlet has significant conservation value and is described as: *"Waimea Inlet is the largest barrier enclosed estuarine area in the South Island (approximately 3,455 ha). Despite a high level of human modification around its edges, Waimea Inlet has high biological values."* This recognition contributes to the Option B extension area's natural character value.
- The natural movement of the tidal Waimea Estuary waters contributes to the experience of the coastal location which is further accentuated by the feel of coastal wind, smell of the sea and ephemeral biotic activity such as the presence of native birds.

[16] Boffa Miskell Limited (2016). Nelson Coastal Study: Natural Character of the Nelson Coastal Environment.
[17] BML (2022), Ecological Assessment, page 25.
[18] Boffa Miskell Limited (2016). Nelson Coastal Study: Natural Character of the Nelson Coastal Environment.

- The presence of buildings, exotic plant species, infrastructure and modifications along the coastal edge (within the immediate context of Option B) reduce the level of perceived naturalness.

At a local level, the Option B southern extension area is considered to have an overall '**moderate'** level of natural character, due to the confluence of Jenkins Creek/Poorman Valley Stream and Waimea Estuary displaying relatively intact biotic systems that supports a wide range of native fauna. The experiential aspects of the freshwater and marine environments also add to the southern extent of Option B's natural character rating as the coastal influences of tidal patterns and processes are dominate.

5.0 Statutory Provisions

The following is a review of the provisions relevant to the assessment. The purpose of such a review is to help frame the natural character, landscape and visual amenity assessment. A planning assessment of the proposal is outside the scope of this report and will be carried out separately from this assessment. At the time of writing this report, the Nelson City Council has decided to pause the release of the Whakamahere Whakatū Nelson Plan due to the proposed changes related to the RMA.

5.1 Resource Management Act (RMA)

Under RMA s6(a), it is necessary to preserve the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and to protect them from inappropriate subdivision, use, and development.

Visual amenity aspects are a part of amenity values, and form part of the suite of Other Matters to consider under s7(c) of the RMA. Visual amenity values stem from the observer's appreciation of the pleasantness, aesthetic coherence and cultural and recreational attributes of an area.

There are no outstanding natural features or landscapes for which RMA s6(b) applies.

5.2 New Zealand Coastal Policy Statement 2010 (NZCPS)

Refer to Section 6.1 for a natural character effects assessment and Section 6.2 for a landscape effects assessment regarding both Option A and Option B. The Option A extension area would avoid significant adverse natural character and landscape effects (Policy 13 (1)(b) and 15 (b)); however, the Option B extension area may result in significant[19] adverse landscape effects for the reasons set out in Section 6.2 (Policy 15 (b)). Significant adverse natural character effects are likely to be avoided for Option B for the reasons set out in Section 6.1 (Policy 13 (1)(b).

Policy 13 (1)(a) of the NZCPS requires the avoidance of adverse effects on areas of outstanding natural character in the coastal environment. With regard to all other areas of natural character in the coastal environment, Policy 13 (1)(b) requires the avoidance of significant adverse effects and the avoidance, remedying or mitigation of other adverse effects.

Policy 14 of the NZCPS promotes restoration or rehabilitation of the natural character of the coastal environment through the identification of areas, policy direction or through imposing conditions on resource consents and designations.

[19] Refer to Appendix 1: Table 5.

Policy 15 (a) of the NZCPS requires the avoidance of adverse effects on outstanding natural features and outstanding natural landscapes in the coastal environment. Policy 15 (b) applies to other natural features and natural landscapes in the coastal environment and requires the avoidance of significant adverse effects and the avoidance, remedying or mitigation of other adverse effects.

5.3 Nelson Resource Management Plan (NRMP)

The existing Nelson Airport designation includes Industrial and Open Space Recreation Zones under the NRMP. That part of the Airport which is zoned Open Space Recreation is also notated as within the coastal environment overlay. Refer to **Figure 2** in the Graphic Supplement for a zoning plan.

The NRMP does provide recognition of the Waimea Coastal Environment through a combination of a Landscape Overlay (NRMP AP9.10) that identifies the significance of this coastal environment in terms of landscape. In conjunction provisions (such as Policy CM1.2) seek to avoid the adverse effects on the coastal environment and its values (which would extend to landscape values) from the adverse effects of use and development, as far as is practicable.

Due to Option A being in the coastal environment overlay[20] and Option B being within the coastal marine area[21], the following polices, and objectives have been considered. Refer to Section 6.1 for the natural character effects assessment of both options.

- ***Objective CM2****: The preservation of the natural character of the coastal environment, particularly at the land/sea interface, and including the maintenance of all values that contribute to natural character, and its protection from the adverse effects of use or development.*
- ***CM2.1 Natural Character****. Avoid the adverse effects of subdivision, use and development within those areas of the coastal environment which are predominantly in their natural state, and have natural character which has not been compromised.*
- ***Objective CM4****: The maintenance and enhancement of amenity values within the Coastal Marine Area.*
- ***Policy CM4.1****: Activities within the Coastal Marine Area should avoid significant adverse effects on amenity values and public safety.*
- ***Policy CM4.2****: Adverse effects of subdivision, use or development in the coastal environment should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects should be mitigated, and provision made for remedying those effects to the extent practicable.*

5.3.1 Option A – Northern Extension

The Option A extension area extends further in the Open Space Recreation Zone (than the existing Airport designation) and includes a small portion of the Residential Zone. Option A (extension area) is also within the broader coastal environment overlay[22]. The following objective and policy are relevant and have been considered:

- ***OS1****: Maintaining the social well-being and health of the community by recognising and enhancing opportunities for use of open space and recreation land.*
- ***Policy OS1.****1 The amenity provided by open space and recreation areas should be recognised and protected.*

[20] NRMP Map 17.

[21] NRMP Map 21.

[22] NRMP Map 17.

5.3.2 Option B – Southern Extension

The Option B extension area extends further in the Open Space Recreation Zone (than the existing Airport designation) towards the north and into the Marine ASCV overlay towards the south (Coastal Marine Area). Option B is also within the coastal environment. Below is a summary of other planning provisions, in addition to the above, that have been considered regarding Option B.

Chapter 13 (Coastal Marine Area) of the NRMP notes the following regarding ***CMd1.1 Eastern Waimea Inlet and Tahunanui Beach***:

- ***CMd1.1.i*** *The Waimea Inlet (3,455ha) is the largest enclosed estuary in the South Island, providing sheltered inter-tidal habitat for a diverse range of plant, invertebrate fish and bird life. Nelson Haven is of national significance for wildlife conservation. The Inlet is used for a range of recreational activities including boating, fishing, swimming, water skiing, duck shooting and walking. The margins of the Inlet have been modified by drainage and reclamation.*
- ***CMd1.1.ii*** *Tahunanui Beach, at the mouth of the Inlet, is Nelson's main bathing beach.*
- ***CMd1.1.iii*** *Approximately one third of Waimea Inlet is within Nelson District. The southern and western portions of the Inlet are administered by the Tasman District Council.*
- ***Policy CM1.2*** *adverse effects of subdivision, use and development. Adverse effects of subdivision, use or development in the coastal environment should, as far as practicable, be avoided. When complete avoidance is not practicable, the adverse effects should be mitigated and provision made for remedying these effects, to the extent practicable.*

Within Appendix 4 (Marine ASCV overlay) of the NRMP, Waimea Inlet is noted as holding national status and its known values are:

- *Waimea Inlet is the largest barrier enclosed estuarine area in the South Island (approximately 3,455 ha). Despite a high level of human modification around its edges, Waimea Inlet has high biological values. The inlet supports high numbers of wader species as well as various threatened or endangered species including white heron, banded rail, royal spoonbill and Australasian bittern.*

Appendix 6 (Riparian and Coastal Margin Overlays) of the NRMP, recognises the riparian values of the coastal margins of Waimea Inlet as having:

- Conservation values
- Access: *includes both people and wildlife. Public access in the form of public ownership, walkways, cycle ways and where appropriate residential roading are all values associated with access. Access for wildlife is provided through biodiversity corridors provided by riparian and coastal margins.*
- Hazard mitigation: *includes flooding, ponding and the low impact management of stormwater.*

Appendix 9 (Landscape Components and Views) of the NRMP covers parts of the Nelson landscape that are included within the landscape overlay because of the contribution they make to the city's identity and sense of place.

The southern extent of Option B is within **AP9.10 Coast from Whangamoa to Saxon Creek.**

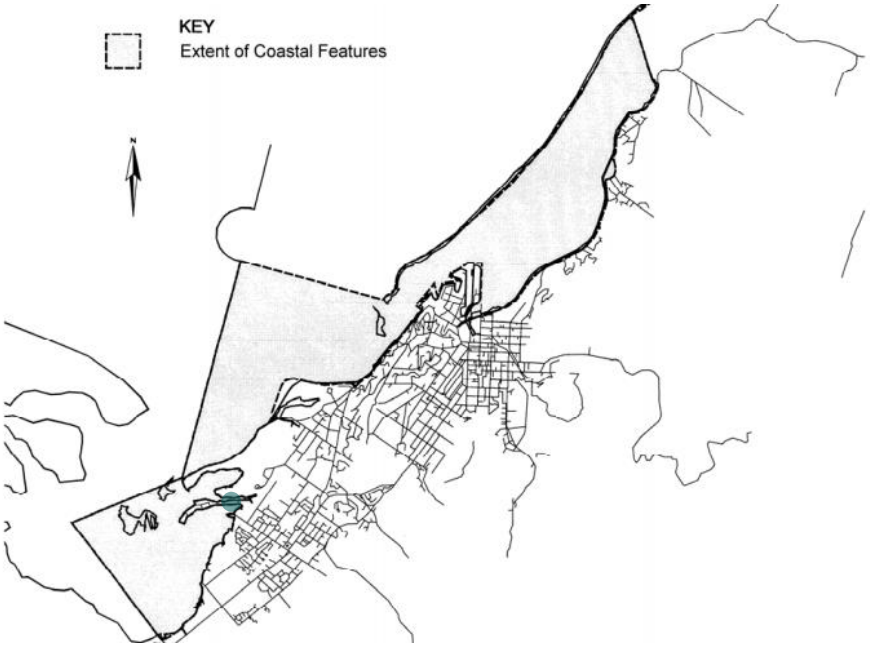


***Image 8**: Coastal features forming part of the Landscape Overlay, Appendix 9 NRMP.*

- ***AP9.10.i** This part of the landscape includes the coast and coastal features of Boulder Bank, Nelson Haven, the islands and rocks west of the Port, Tahunanui Beach, Blind Channel, Waimea Inlet, and the islands contained within it, Wakapuaka and Whangamoa estuaries (refer to **Image 8** above). These are largely shallow and tidal areas that are close to residential areas, the urban and industrial areas, and transport routes. They are open and exposed, and there is little vegetation cover. Land uses are mainly recreation and transport.*

- ***AP9.10.ii** The coast is valuable to the Nelson landscape setting because it complements the surrounding hills. It provides the city with a visual foreground, while the hills give it a background. The coast gives openness, visual release, an outward focus, and distant views to the city, while the hills give it containment, an inward focus, and middle distance views.*

- ***AP9.10.iii** The coast is highly visible from the settled parts of the city and from major transport routes. The coast contributes greatly to Nelson's identity - it is what makes the city unique. And the constant change and movement on the coast - with tides, weather and lighting conditions - contributes a great deal of visual variety to the city's landscape context.*

- ***AP9.10.iv** The Wakapuaka (Delaware Inlet) and Whangamoa estuaries, while comparatively isolated, are still largely unmodified. They will assume increasing importance over time as the use of these northern areas for recreational and other activities increases.*

- ***AP9.10.v** The edge between the sea and land is high in visual sensitivity, and the fine texture of the coastal landscape, resulting from the open water and mudflats and general lack of vegetation, gives it a low visual absorption capability. It is therefore vulnerable to most changes but especially to the addition of structures and to earthworks and interruptions on the water surface. It is important that the continuity of the coastal open space remains uninterrupted.*

6.0 Assessment of Effects of Option A and Option B

Landscape and visual impacts result from natural or induced change in the components, character or quality of the landscape. Usually these are the result of landform or vegetation modification or the introduction of new structures, facilities or activities. All these impacts are assessed to determine their effects on character and quality, amenity as well as on public and private views.

Below the assessment of potential effects is based on a combination of the landscape's sensitivity and visibility together with the nature and scale of the development proposal and the relevant statutory provisions.

Particular effects considered relate to the following:

- Natural Character effects,
- Landscape effects, and
- Visual amenity effects from public and private locations.

The principal elements of the proposal that will give rise to natural character, landscape and visual effects are:

1. Option A – Northern Extension:
    a. Earthworks required to form the flat runway extension which will change the existing undulating landscape character of the Nelson Golf Club.
    b. Potential consequences for Maire Stream tributary due to the northern RESA.
    c. Presence of aircrafts (and aircraft operations) closer to nearby residential areas within close proximity to the Option A extension area.

2. Option B – Southern Extension:
    a. Earthworks required to infill and create a bridge over Jenkins Creek which would extend south into Waimea Estuary.
    b. Reclamation of 3.6ha of the Waimea Estuary/seascape which would further reduce the natural coastal edge.
    c. Alternative structure/realignment of Point Road to maintain access to Monaco Peninsula for existing residents.

6.1 Natural Character Effects

In terms of natural character, the highest degree of naturalness occurs where there is the least amount of human induced modification. Introduced infrastructure, such as the proposed airport runway extension can, through modifying an environment, adversely change and alter the natural character of an area. The significance of this effect is dictated by the size, location and sensitivity of the receiving environment.

6.1.1 Option A Northern Extension Natural Character Effects

As described earlier in the report, at a 'character-area' level, the Tahunanui CTA (within which Option A is located) has been assessed as having '**moderate-low**' levels of natural character. This is principally due to the high levels of modifications found within the vast majority of this CTA. At a local (Option A) level, the natural character rating is also considered to be '**moderate-low'**, due to being highly modified with minimal intact abiotic and biotic systems apparent.

The extension to the existing designation necessary to provide for the northern runway extension (Option A) is a relatively modified environment due to airport operations. The approximate 600m long proposed designation extension area (which includes the runway extension and RESA) that protrudes north-east into the Nelson Golf Club is also considered to be relatively modified in terms of abiotic and biotic systems. This is based on the area being used as a golf course as largely devoid of natural character, presence of exotic species on native communities and the channelisation of the Maire Stream tributary. The nearby residential development adds a further layer of modification which has contributed to the degradation of the natural stream ecosystem resulting in a general absence of native flora that would be expected within this type of estuarine environment.

The experiential values are higher than the abiotic/biotic due to being within close proximity to the tidal waters of Waimea Estuary where coastal influences are apparent (notably coastal winds, smell of the sea and aesthetic qualities). The existing experience of being able to access the coastline via the Airport Perimeter Walk could be adversely affected by the northern extension. However, it is possible for the Airport Perimeter Walk to be realigned to provide public access to the coastal edge of the Waimea Estuary. Likewise, the recreational use of the golf course, at least it's scale, would be adversely affected by the northern airport designation as well.

When considering the relevant statutory framework, which seeks to avoid significant effects on natural character (and the coastal environment), Option A is considered more appropriate as the proposed extent of modifications could be absorbed into the relatively modified terrestrial landscape of the golf course which has been highly modified through landscape sculpting and exotic grasslands. The northern RESA location would potentially have consequences for the Maire Stream tributary. Based on this, the treatment of the Maire Stream tributary will require further assessment once the proposed extension location is known.

Overall, the proposed northern runway extension area is generally in keeping with the existing modifications in the local area. The overall 'moderate-low' level of natural character identified at a local (Option A) context is likely to reduce to 'low' based on the proposed northern runway extension given further modifications would be added into an already modified terrestrial environment. Based on the above, Option A is considered to have a **low (adverse)** effect on the natural character attributes at a local level.

6.1.2 Option B Southern Extension Natural Character Effects

As described previously Option B is located in the Waimea CMA and Tahunanui CTA. The Waimea CMA has been assessed as having a '**moderate**' level of natural character and the Tahunanui CTA has been assessed as having an overall '**moderate-low**' level of natural character within the *Nelson Coastal Study*[23]. Refer to **Figure 5** in the Graphic Supplement for the mapped extent and evaluation.

At a local level, the Option B southern extension area is considered to have an overall '**moderate'** level of natural character, due to the confluence of Jenkins Creek/Poorman Valley Stream and Waimea Estuary displaying relatively intact biotic systems that supports a wide range of native fauna. The experiential aspects of the freshwater and marine environments also add to the southern extent of Option B's natural character rating as the coastal influences of tidal patterns and processes are dominate.

The extension to the existing designation necessary to provide for the southern runway extension (Option B) is a relatively modified environment due to airport operations. However, the southern extent that protrudes into the CMA of Jenkins Creek and Waimea Estuary is the least modified component of Option B.

In order to provide for the southern runway extension and RESA as part of Option B several large-scale modifications are required to be implemented in the local context. Firstly, an approximate 3.6ha area of land reclamation is required to provide for the RESA. This area of reclamation requires bridging Jenkins Creek, extending through Monaco Peninsula and protruding into the Waimea Estuary by approximately 125m long and 220m wide. In doing so, a tunnel type structure would be required to continue vehicular and pedestrian access along Point Road.

While modifications along the coastal edge (within the immediate context of Option B) are apparent, notably rock revetment works, timber retaining walls, residential development and exotic vegetation, the proposed 3.6ha land reclamation works within the local context would adversely affect the natural character attributes that contribute to the areas 'moderate' rating.

The natural flow and tidal processes of Jenkins Creek would essentially be channelised and no longer display natural processes due to the proposed bridge for the RESA whereby reducing experiential aspects relating to natural character. The sinuous nature of the shallow water channel (at low tide) would be interrupted and dominated by a man-made structure within the coastal marine area. The Airport Perimeter Walk would also likely be severed due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area. While the Airport Perimeter Walk may be altered it would still provide access to the coastal edge of the Waimea Estuary, west of the existing Airport, generally retaining experiential aspects relating to natural character.

As described in Appendix 4 (Marine ASCV overlay) of the NRMP, the "*Waimea Inlet has high biological values despite a high level of human modification around its edges which supports a high number of wader species as well as various threatened or endangered species."* The proposed land reclamation that protrudes into the Waimea Estuary would introduce a man-made intervention at odds with the local marine abiotic systems due to the scale and shape of the proposal. The ephemeral biotic activity such as the presence of native birds could likely decrease in the local area due to the occupation of water and seabed space of the proposed reclaimed land.

When considering the relevant statutory framework, which seeks to avoid significant effects on natural character (and the coastal marine area), Option B is not considered appropriate as the proposed extent of modifications (approximate 3.6ha of land reclamation) would have an adverse effect / impact on natural coastal processes and ephemeral biotic activity in comparison

[23] Boffa Miskell Limited (2016). Nelson Coastal Study: Natural Character of the Nelson Coastal Environment.

to Option A. While Option B wouldn't reach the 'significant' adverse natural character effects threshold (NZCPS Policy 13(1)(B)), the values and overlays contained in the NRMP that apply to the area would not be preserved or maintained.

Based on the above, the 'moderate' rating of natural character at a local level is considered to decrease to 'low-moderate' due to the proposed 3.6ha land reclamation of the coastal marine area. The level of perceived naturalness associated with Jenkins Creek/Waimea Estuary (within the immediate context of Option B) would also reduce. Based on this, a **moderate-high (adverse)** effect is expected on the natural character attributes at a local level.

6.2 Landscape Effects

Landscape character is derived from the distinct and recognisable pattern of elements that occur consistently in a particular landscape. It reflects particular combinations of geology, landform, soils, vegetation, land use and features of human settlement. It creates the unique sense of place defining different areas of the landscape.

6.2.1 Option A - Northern Extension Landscape Effects

6.2.1.1 Physical Landscape Effects

The Option A extension area will require earthworks (the quantity is unknown at this stage) to be undertaken in order to create a level and even paved surface for the northern runway extension. The northern RESA will likely require the same treatment however it has been assumed that this area will be grassed rather than being paved. As previously described the Maire Stream tributary would need to be realigned to make way for the RESA. The existing physical landscape within the Nelson Golf Cub is relatively flat (within the Option A extension area) but also includes undulating landforms reminiscent of coastal sand dunes. While the proposal seeks to change the physical landscape from a rolling, undulating appearance to one of relatively flat topography, it is considered this change would be in keeping within the adjacent residential topography and not appear at odds with the surrounding landscape. However, the location of the northern RESA could potentially have consequences for the treatment and condition of the Maire Stream tributary.

6.2.1.2 Landscape Character Effects

Due to the existing Nelson Airport operations, the proposed Option A extension area is generally in character with the surrounding landscape. The flat, exotic grassland currently within the golf course will largely be retained through the RESA and grassed airfield surrounding the northern runway extension. The presence and visibility of aircrafts within this landscape is part of the existing environment, albeit they may appear at a different angle or slightly closer in view than previously, the existing activity is part of the existing landscape character.

The Option A extension area extends into the Open Space Recreation Zone which seeks to protect areas of open space which are of high value to the community primarily for open space and active recreation activities. OSd.2 within the NRMP describes the privately-owned Nelson Golf Club as having substantial public benefit. It is likely that the Airport Perimeter Walk would be retained and realigned to provide public access to the coastal edge of the Waimea Estuary. However, the Golf Club

would need to be reconfigured and its size would be reduced due to the northern runway extension.

Overall, Option A will generally be in character with the flat, open grassland apparent at the golf course aside from earthworks to remove 'sand-dune' type landforms. The physical landscape will be slightly altered through an increase in pavement and realignment of the Maire Stream tributary. Existing recreational opportunities will need to be adapted to a northern runway extension, however the 'open space' of a grassed airfield (RESA area) is likely to provide a similar amenity that is currently available to nearby residents. Based on the above, it is considered Option A will generate an overall **low-moderate (adverse)** effect on the physical landscape and existing landscape character.

6.2.2 Option B Southern Extension Landscape Effects

6.2.2.1 Physical Landscape Effects

The northern extent of the Option B extension area would require a minimal amount of earthworks to level the RESA area as the area is relatively flat already. This proposed change is in keeping with the surrounding topography aside from undulating landforms within the wider golf course.

The southern extent of the Option B extension area will require a substantial amount of earthworks to create the approximate 3.6ha area of land reclamation needed for the southern RESA. The introduction of a bridge across Jenkins Creek and tunnel structure for Point Road will further alter the existing physical landscape that varies from a sandy mudflat at low tide to a full water body at high tide. The legibility of the Monaco Peninsula will also be compromised due to the proposed land reclamation that would extend through it, diluting the coastal landform along with the adjacent coastal patterns and processes.

6.2.2.2 Landscape Character Effects

The northern extent of the Option B extension area will consist of a flat grassy space to accommodate the RESA. This is in character with the surrounding landscape and the change can be easily absorbed into the area.

The southern extent of the Option B extension area will vary considerably from the existing landscape/seascape character as a result of the 3.6ha land reclamation. At a local level, the dynamic and legible pattern of water, exposed mudflats displaying the tidal nature of Jenkins Creek would be bridged and essentially channelised. The sinuous nature of the shallow water channel within Jenkins Creek area may lose its memorability due to the man-made intervention that would clutter its open character and views out towards Waimea Estuary. To a similar effect, the proposed land reclamation within Waimea Estuary would also interrupt the open water space and limit access to this portion of the coastline.

The southern extent of Option B also provides recreational access along the coastline by way of the Airport Perimeter Walk, Jenkins Creek and Point Road. The proposed southern extension would reduce the public access to the coast in this area and therefore adversely affect the associative values held by the community. The Airport Perimeter Walk would also likely be severed due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area. While the Airport Perimeter Walk may be altered it would still provide access to the coastal edge of the Waimea Estuary, west of the existing Airport, generally retaining recreational use.

The marine seascape/landscape character of the Option B extension area is more vulnerable to change, specifically land reclamation that would interrupt legible coastal patterns, processes and elements and limit public access. The coastal waters and edges of the Waimea Estuary are also recognised in the NRMP by way of a Landscape Overlay, Marine ASCV overlay and Riparian and Coastal Margin Overlay. The Option B extension area would adversely affect the values (as outlined in Section 5.3.2) identified in the NRMP that apply to the local area with limited options to provide mitigation.

Based on the above, it is considered Option B southern runway extension will generate an overall **high (adverse)** effect on the physical, perceptual and associative landscape/seascape values within the immediate area surrounding the Option B extension area. There will be a permanent change to the landform and the legibility of the Monaco Peninsula landform that encroaches into the Waimea Estuary as well as limited public access to this portion of the coastline.

6.3 Visual Effects

Visual amenity effects are influenced by a number of factors including the nature of the proposal, the landscape absorption capability and the character of the area its surrounds. Visual amenity effects are also dependent on distance between the viewer and the proposal, the complexity of the intervening landscape and the nature of the view.

6.3.1 Option A - Northern Extension Visual Effects

The visual catchment for Option A - northern extension is generally contained to the local area with the exception of long-distance (approximate 1.8kms away), elevated views from the Port Hills Ridge. The viewing audiences range from private residential dwellings that border the Option A extension area to the north and east to public users that utilises the Nelson Golf Club, Airport Perimeter Walk and nearby road users.

Below is a summary of the visual effects associated with Option A – northern extension. A more detailed visibility analysis is contained in **Appendix 2, Table 1**. Refer to **Viewpoints 6, 11-22** within Appendix 3, Graphic Supplement for representative viewpoints relating to Option A.

Table 3: Visual Effects Summary – Option A Northern Extension	
Viewing Audience	**Visual Effect[24] and Nature of Effect[25]**
NORTHERN VIEWING CATCHMENT	
Private dwellings (nearby)	**L – H (adverse)**
Public users of the Nelson Golf Club and Clubhouse*	**M (adverse)**
Public users of the Airport Perimeter Walk**	**VL (adverse)**
EASTERN VIEWING CATCHMENT	
Private dwellings (nearby)	**L - H (adverse)**
Private dwellings on Port Hills Ridge (long-distance)	**VL – L (adverse)**
Public users of the Great Taste Trail	**VL (neutral)**
SOUTHERN VIEWING CATCHMENT	
Water users of Waimea Estuary/Jenkins Creek	**VL (neutral)**
Road users of SH 6 (northbound)	

[24] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (ML); Moderate (M); Moderate-High (MH); High (H); Very High (VH).

[25] Nature of Effect: Adverse, Neutral, Beneficial

Public users of the Airport Perimeter Walk	
Private dwellings on Monaco Peninsula	
WESTERN VIEWING CATCHMENT	
Water users of Waimea Estuary	**VL (neutral)**
Public users of the Airport Perimeter Walk	
**At the time of the assessment, there is uncertainty as to whether the residual land (left over as a result of the northern runway extension) currently used by the Nelson Golf Club would retain its use and still be able to operate as a golf course. Based on this, the recreational users have still been considered as part of the visual effects assessment.* ***For the purposes of this assessment, it has been assumed the Airport Perimeter Walk will be retained and realigned.*	

6.3.1.1 Visual Effects from private locations

Nearby residential dwellings overlooking the Option A extension area will have the highest visual effects due to aircrafts appearing at a different viewing angle, a larger extent of paving and longer length of runway lights. Generally, the visual amenity associated with the golf course (assuming the open nature of the residual area is retained) and associated open space values would remain however the land use would change, and / or the scale of Golf Club activities reduced.

More distant views from elevated dwellings on the Port Hills Ridge already have the airport as part of their view. The northern extension area will likely be unnoticeable from long distance views as it forms only a small portion of a much greater vista. Overall, visual effects on private viewing audiences range from **very low (neutral)** for residential dwellings on Monaco Peninsula to **moderate-high or high (adverse)** for those closer/adjacent to the northern extension.

6.3.1.2 Visual Effects from public locations

Views from the coastal edge will likely be screened due to the change in elevation and intervening topography. Viewing audiences from public roads are transient and therefore public views are primarily partial or glimpses rather than sustained. At the time of the assessment, there is uncertainty as to whether the residual land (left over as a result of the northern runway extension) currently used by the Nelson Golf Club would retain its use and still be able to operate as a golf course. Based on this, the recreational users have still been considered as part of the visual effects assessment. It has also been assumed the Airport Perimeter Walk will be realigned along the northern edge of the designation and recreational access will still be provided for. This is also relevant for the Great Taste Trail which is currently under construction (at the time of writing). While the trail has not opened yet, it has been assumed the trail will be realigned and users will experience a similar landscape character to what is currently existing, resulting in a neutral visual effect.

Overall, visual effects on public viewing audiences range from **very low (neutral)** to **moderate (adverse).** Visual effects are expected to reduce in level when viewed from a distance rather than within close proximity and within the immediate context of the extension.

Generally, the visual effects associated with the Option A extension area are relatively contained and experienced at a local level rather than part of the wider landscape.

6.3.2 Option B - Southern Extension Visual Effects

The visual catchment for the southern extension is generally contained to the local area with the exception of long-distance, elevated views from the Port Hills Ridge. The viewing audiences range from private residential dwellings that border Option B in all directions to public users that

utilises the Golf Club, Airport Perimeter Walk, Waimea Estuary, Jenkins Creek and nearby road users.

Below is a summary of the visual effects associated with Option B – southern extension. A more detailed visibility analysis is contained in **Appendix 2, Table 2**. Refer to **Viewpoints 1-10, 21-22** within Appendix 3, Graphic Supplement for representative viewpoints relating to Option B.

Table 4: Visual Effects Summary – Option B Southern Extension	
Viewing Audience	**Visual Effect[26] and Nature of Effect[27]**
NORTHERN VIEWING CATCHMENT	
Private dwellings near northern RESA (accessed from Parkers Road)	**L (adverse)**
Public users of the Nelson Golf Club and Clubhouse*	**LM (adverse)**
Public users of the Airport Perimeter Walk**	**LM (adverse)**
EASTERN VIEWING CATCHMENT	
Private dwellings near northern RESA (accessed from Golf Haven Way)	**LM (adverse)**
Private dwellings and businesses near southern RESA (accessed from Point Road and Hoult Crescent)	**H (adverse)**
Private dwelling on Port Hills Ridge (long-distance)	**L (adverse)**
Water users of Jenkins Creek and Waimea Estuary (local area)	**H (adverse)**
Road users of Point Road	**H (adverse)**
Public users of walking/cycle track along Jenkins Creek (which connects to Point Road)	**LM – MH (adverse)**
SOUTHERN VIEWING CATCHMENT	
Water users of Waimea Estuary/Jenkins Creek (local area)	**H (adverse)**
Road users of SH 6 (northbound)	**VL - L (adverse)**
Public users of the Airport Perimeter Walk**	**LM (adverse)**
WESTERN VIEWING CATCHMENT	
Private dwellings on Monaco Peninsula (in the immediate context)	**H (adverse)**
Public users of Monaco Reserve	**M (adverse)**
Road users of Point Road	**H (adverse)**
Water users of Waimea Estuary (local area)	**H (adverse)**
**At the time of the assessment, there is uncertainty as to whether the residual land (left over as a result of the southern runway extension) currently used by the Nelson Golf Club would retain its use and still be able to operate as a golf course. Based on this, the recreational users have still been considered as part of the visual effects assessment.* ***As a result of the southern runway extension, the Airport Perimeter Walk would likely be severed due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area and potentially realigned along the northern extent.*	

6.3.2.1 Visual Effects from private locations

Nearby residential dwellings overlooking the Option B extension area will have the highest visual effects due to the 3.6ha land reclamation within the coastal marine area. This man-made intervention will appear at odds with the existing landscape character and detract from the visual amenity and natural character attributes experienced along this coastal edge. While the airport operations form a part of the existing environment, the bridging of Jenkins Creek and

[26] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (ML); Moderate (M); Moderate-High (MH); High (H); Very High (VH).

[27] Nature of Effect: Adverse, Neutral, Beneficial

land reclamation extending into Waimea Estuary will create a major change in views at a local level for the nearby private dwellings.

The visual effects on private viewing audiences ranges from **low (adverse)** for residential dwellings north of the Golf Club near the RESA; to **high (adverse)** for those closer to the southern extension on Monaco Peninsula.

6.3.2.2 Visual Effects from public locations

Visual effects on public viewing audiences range from **low**-**moderate (adverse)** to **high (adverse)** for users of nearby reserves, roads and water space. Visual effects are expected to reduce in level when viewed from a distance rather than within close proximity and within the immediate context of the extension.

The Option B extension area would also be at odds with NRMP ***AP9.10.v*** which states, "*The edge between the sea and land is high in visual sensitivity, and the fine texture of the coastal landscape, resulting from the open water and mudflats and general lack of vegetation, gives it a low visual absorption capability. It is therefore vulnerable to most changes but especially to the addition of structures and to earthworks and interruptions on the water surface. It is important that the continuity of the coastal open space remains uninterrupted."*

Overall, Option B - southern extension is open to a wider viewing audience including views from State Highway 6, recreation areas, businesses as well as residential dwellings on the eastern edge of the Monaco Peninsula. The introduction of a 3.6ha area of land reclamation extending beyond the existing coastline (south of Point Road) will appear out of context and incompatible with the existing tidal processes and general coastal environment of the Waimea Estuary from both public and private locations.

7.0 Conclusion

Tables 6 and 7 below provide a summary of anticipated landscape effects for both Option A – northern extension and Option B – southern extension. A Multi-Analysis Criteria (MCA) rating has also been included below for each option to feed into the overall MCA report. The scoring system of +3 (significant positive effect) to 0 (neutral / change) to -3 (significant adverse effect) has been applied to the 7-point scale of effects ratings (refer to **Table 5** below) described in **Appendix 1**. Due to the assessment only considering the potential landscape effects without mitigation, positive effects have not been identified.

Table 5: MCA scoring system							
7-point scale of effects	Very Low (adverse/neutral)	Low (adverse)	Low-Moderate (adverse)	Moderate (adverse)	Moderate-High (adverse)	High (adverse)	Very High (adverse)
MCA rating	0	-1		-2		-3	

7.1.1 Option A - Northern Extension Conclusion

Option A – northern extension is considered to be the preferred option as result of the potential landscape effects. This is based on the relatively small scale and level of change to the landscape of the northern runway extension and the overall effects being relatively localised. The flat nature of the topography aids in absorbing the horizontal form of the runway extension and airport operations already form part of the existing environment. The natural character is that of a highly modified environment located within a coastal context. The visual catchment is generally contained to the localised area and there are more options to provide mitigation in order to lower the overall level of effects. The physical change required to Maire Stream tributary and potential loss of open space/recreation opportunities will need to be addressed as part of a more detailed landscape assessment of the preferred option.

Table 6: Option A – Northern Extension Summary of Effects			
Effect Type		**Local Visual Effect[28] and Nature of Effect[29] (without mitigation)**	**MCA rating**
Natural Character		L (adverse)	-1
Landscape (physical & character)		LM (adverse)	-1
Visual			
Northern	Private	L – H (adverse)	-1
	Public	VL – M (adverse)	-1
Eastern	Private (nearby)	L - H (adverse)	-2
	Private (over 1.8kms)	VL – L (adverse)	0
	Public	VL (neutral)[30]	0
Southern	Private	VL (neutral)	0
	Public	VL (neutral)	0
Western	Public	VL (neutral)	0
***Note**: The above summary of effects is primarily concentrated to a local scale surrounding the Option A extension area. It is expected that the level of effects will reduce with distance from Option A.*			

[28] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (LM); Moderate (M); Moderate-High (MH); High (H); Very High (VH).
[29] Nature of Effect: Adverse, Neutral, Beneficial
[30] In this case, a Very Low (neutral) effect equates to a no-change scenario. The activity would be consistent with (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values.

7.1.2 Option B - Southern Extension Conclusion

Option B – southern extension is not recommended as the preferred option based on its landscape, natural character and visual amenity values that are recognised at a national level (Waimea Estuary) as well at a district scale that will be adversely affected by the southern runway extension. The coastal waters and edges of the Waimea Estuary are recognised in the NRMP by way of a Landscape Overlay, Marine ASCV overlay and Riparian and Coastal Margin Overlay with limited options to provide mitigation due to the nature of the extension.

The proposed 3.6ha land reclamation would result in the loss of Monaco Peninsula's legibility as a feature, as well as a general loss of legibility of the wider coastline landform. The physical and perceptual values associated with legible coastal processes, patterns and elements would also be reduced through introduced hard structures and modification in the coastal marine area. The southern extent of Option B also provides recreational access along the coastline by way of the Jenkins Creek and Point Road. The proposed southern extension would reduce the public access to the coast in this area and therefore adversely affect the associative values held by the community. The Airport Perimeter Walk would also likely be severed due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area.

The natural flow and tidal processes of Jenkins Creek would essentially be channelised and no longer display natural processes due to the proposed bridge for the RESA. The sinuous nature of the shallow water channel (at low tide) would be interrupted and dominated by a man-made structure within the coastal marine area.

Option B also has a wider visual catchment than Option A which would affect a wider viewing audience, ranging from private dwellings, recreational users of walking/cycling tracks, road users of Point Road and water users of Jenkins Creek/Waimea Estuary.

Overall, Option B is not considered to be an appropriate option for a runway extension from a landscape perspective, based on the reasons listed above and throughout the report.

Table 7: Option B – Southern Extension Summary of Effects

Effect Type		**Local Visual Effect[31] and Nature of Effect[32] (without mitigation)**	**MCA rating**
Natural Character		M – H (adverse)	-2
Landscape (physical & character)		H (adverse)	-3
Visual			
Northern	Private	L (adverse)	-1
	Public	L - M (adverse)	-1
Eastern	Private (nearby)	LM – H (adverse)	-2
	Private (over 1.8kms)	L (adverse)	-1
	Public	LM – H (adverse)	-2
Southern	Public	L – H (adverse)	-2
Western	Private	H (adverse)	-3
	Public	M to H (adverse)	-2
***Note**: The above summary of effects is primarily concentrated to a local scale surrounding the Option B extension area. It is expected that the level of effects will reduce with distance from Option B.*			

[31] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (LM); Moderate (M); Moderate-High (MH); High (H); Very High (VH).

[32] Nature of Effect: Adverse, Neutral, Beneficial

Appendix 1: Natural Character and Landscape Effects Assessment Method

26 August 2022

Introduction

The Natural Character and Landscape Effects Assessment (NCLEA) process provides a framework for assessing and identifying the nature and level of likely effects that may result from a proposed development. Such effects can occur in relation to changes to physical elements, changes in the existing character or condition of the landscape and the associated experiences of such change. In addition, the landscape assessment method includes an iterative design development processes, which seeks to avoid, remedy or mitigate adverse effects (see **Figure 1**).

This outline of the landscape and visual effects assessment methodology has been undertaken with reference to the **Te Tangi A Te Manu: Aotearoa New Zealand Landscape Assessment Guidelines** and its signposts to examples of best practice, which include the **Quality Planning Landscape Guidance Note**[33] and the **UK guidelines for landscape and visual impact assessment**[34]**.**

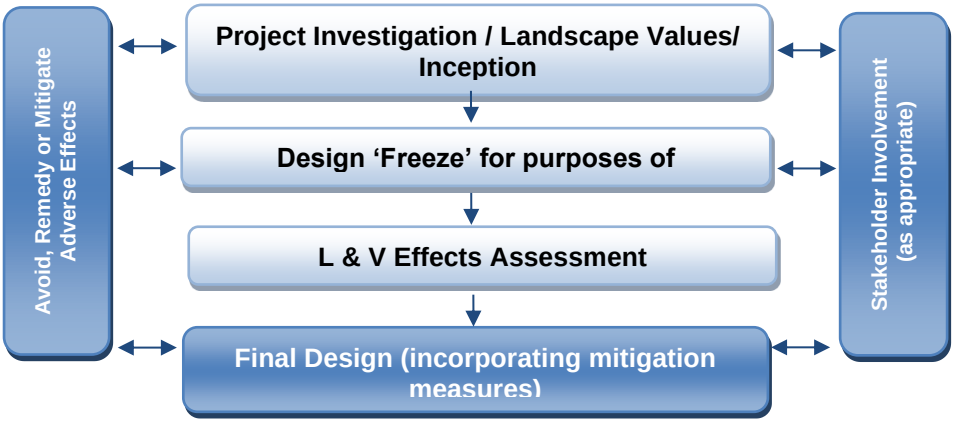


***Figure 1**: Design feedback loop*

When undertaking any landscape assessment, it is important that a **structured and consistent approach** is used to ensure that **findings are clear and objective**. Judgement should be based on skills and experience and be supported by explicit evidence and reasoned argument.

While natural character, landscape and visual effects assessments are closely related, they form separate procedures. Natural character effects consider the characteristics and qualities and associated degree of modification relating specifically to waterbodies and their margins, including the coastal environment. The assessment of the potential effects on landscape considers effects on landscape character and values. The assessment of visual effects considers how changes to the physical landscape affect the viewing audience. The types of effects can be summarised as follows:

Natural Character effects: *Change in the characteristics or qualities including the level of naturalness*

Landscape effects: *Change in the physical landscape, which may affect its characteristics and values*

Visual effects: *Consequences of change on landscape values as experienced in views including visual amenity*

[33] http://www.qualityplanning.org.nz/index.php/planning-tools/land/landscape
[34] Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)

The policy context, existing landscape resource and locations from which a development or change is visible, all inform the 'baseline' for landscape and visual effects assessments. To assess effects, the first step requires identification of the landscape's **character** and **values** including the **attributes** on which such values depend. This requires that the landscape is first **described**, including an understanding of relevant physical, sensory and associative landscape dimensions. This process, known as landscape characterisation, is the basic tool for understanding landscape character and may involve subdividing the landscape into character areas or types. The condition of the landscape (i.e. the state of an individual area of landscape or landscape feature) should also be described together with, a judgement made on the value or importance of the potentially affected landscape.

Natural Character Effects

In terms of the RMA, natural character specifically relates to the coastal environment as well as freshwater bodies and their margins. The RMA provides no definition of natural character. RMA, section 6(a) considers natural character as a matter of national importance:

> *…the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.*

Natural character comprises the natural elements, patterns and processes of the coastal environment, waterbodies and their margins, and how they are perceived and experienced. This assessment interprets natural character as being the degree of naturalness consistent with the following definition:

> *Natural character is a term used to describe the naturalness of waterbodies and their margins. The degree or level of natural character depends on:*
>
> - *The extent to which natural elements, patterns and processes occur;*
> - *The nature and extent of modifications to the ecosystems and landscape/seascape;*
> - *The highest degree of natural character (greatest naturalness) occurs where there is least modification; and*
> - *The effect of different types of modification upon the natural character of an area varies with the context and may be perceived differently by different parts of the community.*

The process to assess natural character involves an understanding of the many systems and attributes that contribute to waterbodies and their margins, including biophysical and experiential factors. This can be supported through the input of technical disciplines such as marine, aquatic and terrestrial ecology, and landscape architecture.

Defining the level of natural character

The level of natural character is assessed in relation to a seven-point scale. The diagram below illustrates the relationship between the degree of naturalness and degree of modification. A high level of natural character means the waterbody is less modified and vice versa.

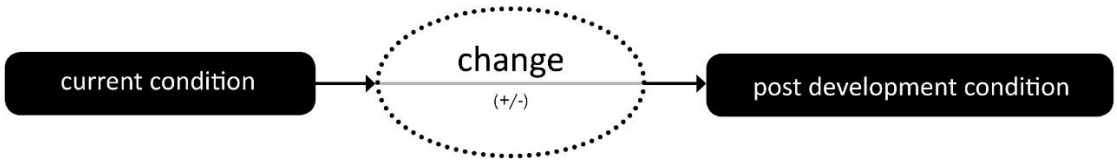
Very High	High	Moderate - High	Moderate	Moderate - Low	Low	Very Low

Scale of assessment

When defining levels of natural character, it is important to clearly identify the spatial scale considered. The scale at which natural character is assessed will typically depend on the study area or likely impacts and nature of a proposed development. Within a district or region-wide study, assessment scales may be divided into broader areas which consider an overall section of coastline or river with similar characteristics, and finer more detailed 'component' scales considering separate more local parts, such as specific bays, reaches or escarpments. The assessment of natural character effects has therefore considered the change to attributes which indicate levels of natural character at a defined scale.

Effects on Natural Character

An assessment of the effects on natural character of an activity involves consideration of the proposed changes to the current condition compared to the existing. This can be negative or positive.



The natural character effects assessment involves the following steps;

- assessing the existing level of natural character;
- assessing the level of natural character anticipated (post construction); and
- considering the significance of the change

Landscape Effects

Assessing landscape effects requires an understanding of the landscape resource and the magnitude of change which results from a proposed activity to determine the overall level of landscape effects.

Landscape Resource

Assessing the sensitivity of the landscape resource considers the key characteristics and qualities. This involves an understanding of both the ability of an area of landscape to absorb change and the value of the landscape.

Ability of an area to absorb change

This will vary upon the following factors:

- Physical elements such as topography / hydrology / soils / vegetation;
- Existing land use;
- The pattern and scale of the landscape;
- Visual enclosure / openness of views and distribution of the viewing audience;
- The zoning of the land and its associated anticipated level of development;
- The scope for mitigation, appropriate to the existing landscape.

The ability of an area of landscape to absorb change takes account of both the attributes of the receiving environment and the characteristics of the proposed development. It considers the ability of a specific type of change occurring without generating adverse effects and/or achievement of landscape planning policies and strategies.

The value of the Landscape

Landscape value derives from the importance that people and communities, including tangata whenua, attach to particular landscapes and landscape attributes. This may include the classification of Outstanding Natural Feature or Landscape (ONFL) (RMA s.6(b)) based on important physical, sensory and associative landscape

attributes, which have potential to be affected by a proposed development. A landscape can have value even if it is not recognised as being an ONFL.

Magnitude of Landscape Change

The magnitude of landscape change judges the amount of change that is likely to occur to areas of landscape, landscape features, or key landscape attributes. In undertaking this assessment, it is important that the size or scale of the change is considered within the geographical extent of the area influenced and the duration of change, including whether the change is reversible. In some situations, the loss /change or enhancement to existing landscape elements such as vegetation or earthworks should also be quantified.

When assessing the level of landscape effects, it is important to be clear about what factors have been considered when making professional judgements. This can include consideration of any benefits which result from a proposed development. **Table 1** below helps to explain this process. The tabulating of effects is only intended to inform overall judgements.

Contributing Factors		Higher	Lower
Landscape (sensitivity)	**Ability to absorb change**	The landscape context has limited existing landscape detractors which make it highly vulnerable to the type of change resulting from the proposed development.	The landscape context has many detractors and can easily accommodate the proposed development without undue consequences to landscape character.
	The value of the landscape	The landscape includes important biophysical, sensory and shared and recognised attributes. The landscape requires protection as a matter of national importance (ONF/L).	The landscape lacks any important biophysical, sensory or shared and recognised attributes. The landscape is of low or local importance.
Magnitude of Change	**Size or scale**	Total loss or addition of key features or elements. Major changes in the key characteristics of the landscape, including significant aesthetic or perceptual elements.	The majority of key features or elements are retained. Key characteristics of the landscape remain intact with limited aesthetic or perceptual change apparent.
	Geographical extent	Wider landscape scale.	Site scale, immediate setting.
	Duration and reversibility	Permanent. Long term (over 10 years).	Reversible. Short Term (0-5 years).

***Table 1**: Determining the level of landscape effects*

Visual Effects

Visual effects are a subset of landscape effects. They are consequences of change on landscape values as experienced in views. To assess the visual effects of a proposed development in a landscape, a visual baseline must first be defined. The visual 'baseline' forms a technical exercise which identifies the area where the development may be visible, the potential viewing audience, and the key representative public viewpoints from which visual effects are assessed.

The Sensitivity of the viewing audience

The sensitivity of the viewing audience is assessed in terms of assessing the likely response of the viewing audience to change and understanding the value attached to views.

Likely response of the viewing audience to change

Appraising the likely response of the viewing audience to change is determined by assessing the occupation or activity of people experiencing the view at particular locations and the extent to which their interest or activity may be focussed on views of the surrounding landscape. This relies on a landscape architect's judgement in respect of visual amenity and the reaction of people who may be affected by a proposal. This should also recognise that people more susceptible to change generally include: residents at home, people engaged in outdoor recreation whose attention or interest is likely to be focussed on the landscape and on particular views; visitors to heritage assets or other important visitor attractions; and communities where views contribute to the wider landscape setting.

Value attached to views

The value or importance attached to particular views may be determined with respect to its popularity or numbers of people affected or reference to planning instruments such as viewshafts or view corridors. Important viewpoints are also likely to appear in guide books or tourist maps and may include facilities provided for its enjoyment. There may also be references to this in literature or art, which also acknowledge a level of recognition and importance.

Magnitude of Visual Change

The assessment of visual effects also considers the potential magnitude of change which will result from views of a proposed development. This takes account of the size or scale of the effect, the geographical extent of views and the duration of visual change, which may distinguish between temporary (often associated with construction) and permanent effects where relevant. Preparation of any simulations of visual change to assist this process should be guided by best practice as identified by the NZILA[35].

When determining the overall level of visual effect, the nature of the viewing audience is considered together with the magnitude of change resulting from the proposed development. **Table 2** has been prepared to help guide this process:

Contributing Factors		Higher	Lower	Examples
The Viewing Audience (sensitivity)	**Ability to absorb change**	Views from dwellings and recreation areas where attention is typically focussed on the landscape.	Views from places of employment and other places where the focus is typically incidental to its landscape context. Views from transport corridors.	Dwellings, places of work, transport corridors, public tracks
	Value attached to views	Viewpoint is recognised by the community such as an important view shaft, identification on tourist maps or in art and literature. High visitor numbers.	Viewpoint is not typically recognised or valued by the community. Infrequent visitor numbers.	Acknowledged viewshafts, Lookouts
Magnitude of Change	**Size or scale**	Loss or addition of key features in the view. High degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Full view of the proposed development.	Most key features of views retained. Low degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture. Glimpse / no view of the proposed development.	- Higher contrast/ Lower contrast. - Open views, Partial views, Glimpse views (or filtered); No views (or obscured)
	Geographical extent	Front on views. Near distance views; Change visible across a wide area.	Oblique views. Long distance views. Small portion of change visible.	- Front or Oblique views. - Near distant, Middle distant and Long distant views
	Duration and reversibility	Permanent. Long term (over 15 years).	Transient / temporary. Short Term (0-5 years).	- Permanent (fixed), Transitory (moving)

***Table 2**: Determining the level of visual effects*

Nature of Effects

In combination with assessing the level of effects, the landscape and visual effects assessment also considers the nature of effects in terms of whether this will be positive (beneficial) or negative (adverse) in the context within which it occurs. Neutral effects can also occur where landscape or visual change is benign.

It should also be noted that a change in a landscape does not, of itself, necessarily constitute an adverse landscape or visual effect. Landscape is dynamic and is constantly changing over time in both subtle and more dramatic transformational ways; these changes are both natural and human induced. What is important in managing landscape change is that adverse effects are avoided or sufficiently mitigated to ameliorate the effects of the change in land use. The aim is to provide a high amenity environment through appropriate design outcomes.

[35] Best Practice Guide: Visual Simulations BPG 10.2, NZILA

This assessment of the nature effects can be further guided by **Table 3** set out below:

Nature of effect	Use and Definition
Adverse (negative):	The activity would be out of scale with the landscape or at odds with the local pattern and landform which results in a reduction in landscape and / or visual amenity values
Neutral (benign):	The activity would be consistent with (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values
Beneficial (positive):	The activity would enhance the landscape and / or visual amenity through removal or restoration of existing degraded landscape activities and / or addition of positive elements or features

***Table 3**: Determining the Nature of Effects*

Cumulative Effects

This can include effects of the same type of development (e.g. bridges) or the combined effect of all past, present and approved future development[36] of varying types, taking account of both the permitted baseline and receiving environment. Cumulative effects can also be positive, negative or benign.

Cumulative Landscape Effects

Cumulative landscape effects can include additional or combined changes in components of the landscape and changes in the overall landscape character. The extent within which cumulative landscape effects are assessed can cover the entire landscape character area within which the proposal is located, or alternatively, the zone of visual influence from which the proposal can be observed.

Cumulative Visual Effects

Cumulative visual effects can occur in combination (seen together in the same view), in succession (where the observer needs to turn their head) or sequentially (with a time lapse between instances where proposals are visible when moving through a landscape). Further visualisations may be required to indicate the change in view compared with the appearance of the project on its own.

Determining the nature and level of cumulative landscape and visual effects should adopt the same approach as the project assessment in describing both the nature of the viewing audience and magnitude of change leading to a final judgement. Mitigation may require broader consideration which may extend beyond the geographical extent of the project being assessed.

Determining the Overall Level of Effects

The landscape and visual effects assessment conclude with an overall assessment of the likely level of landscape and visual effects. This step also takes account of the nature of effects and the effectiveness of any proposed mitigation. The process can be illustrated in Figure 2:

***Figure 2**: Assessment process*

This step informs an overall judgement identifying what level of effects are likely to be generated as indicated in **Table 4** below. This table which can be used to guide the level of natural character, landscape and visual effects uses an adapted seven-point scale derived from Te Tangi A Te Manu.

[36] The life of the statutory planning document or unimplemented resource consents.

Effect Rating	Use and Definition
Very High:	Total loss of key elements / features / characteristics, i.e. amounts to a complete change of landscape character and in views.
High:	Major modification or loss of most key elements / features / characteristics, i.e. little of the pre-development landscape character remains and a major change in views. *Concise Oxford English Dictionary Definition* *High: adjective- Great in amount, value, size, or intensity.*
Moderate- High:	Modifications of several key elements / features / characteristics of the baseline, i.e. the pre-development landscape character remains evident but materially changed and prominent in views.
Moderate:	Partial loss of or modification to key elements / features / characteristics of the baseline, i.e. new elements may be prominent in views but not necessarily uncharacteristic within the receiving landscape. *Concise Oxford English Dictionary Definition* *Moderate: adjective- average in amount, intensity, quality or degree*
Low – Moderate:	Minor loss of or modification to one or more key elements / features / characteristics, i.e. new elements are not prominent within views or uncharacteristic within the receiving landscape.
Low:	Little material loss of or modification to key elements / features / characteristics. i.e. modification or change is not uncharacteristic or prominent in views and absorbed within the receiving landscape. *Concise Oxford English Dictionary Definition* *Low: adjective- **1.** Below average in amount, extent, or intensity.*
Very Low:	Negligible loss of or modification to key elements/ features/ characteristics of the baseline, i.e. approximating a 'no change' situation and a negligible change in views.

***Table 4**: Determining the overall level of landscape and visual effects*

Determination of "minor"

Decision makers determining whether a resource consent application should be notified must also assess whether the effect on a person is less than minor[37] or an adverse effect on the environment is no more than minor[38]. Likewise, when assessing a non-complying activity, consent can only be granted if the s104D 'gateway test' is satisfied. This test requires the decision maker to be assured that the adverse effects of the activity on the environment will be 'minor' or not be contrary to the objectives and policies of the relevant planning documents.

These assessments will generally involve a broader consideration of the effects of the activity, beyond the landscape and visual effects. Through this broader consideration, guidance may be sought on whether the likely effects on the landscape or effects on a person are considered in relation to 'minor'. It must also be stressed that more than minor effects on individual elements or viewpoints does not necessarily equate to more than minor landscape effects. In relation to this assessment, moderate-low level effects would generally equate to 'minor' (see **Table 5**). Where low effects occur, it may be necessary to assess whether this is minor.

The third row highlights the word 'significant'. The term 'significant adverse effects' applies to particular RMA situations, namely as a threshold for the requirement to consider alternative sites, routes, and methods for Notices of Requirement under RMA s171(1)(b), the requirements to consider alternatives in AEEs under s6(1)(a) of the 4th Schedule. It may also be relevant to tests under other statutory documents such as for considering effects on natural character of the coastal environment under the NZ Coastal Policy Statement (NZCPS) Policy 13 (1)(b) and 15(b).

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

less than minor	minor	more than minor	
			significant[39]

***Table 5**: Determining adverse effects for notification determination, non-complying activities and significance*

[37] RMA, Section 95E

[38] RMA Section 95D

[39] To be used only about Policy 13(1)(b) and Policy 15(b) of the New Zealand Coastal Policy Statement (NZCPS), where the test is 'to avoid significant adverse effects'.

Appendix 2: Visibility Analysis

Table 1: Visual Effects – Option A Northern Extension			
Viewing Audience	**Nature of the View & Distance from Option A**	**Visual Effect[40] and Nature of Effect[41]**	**Description**
Note: *The Nelson Airport and airport operations (including planes in the air and within close proximity to residential dwellings) form part of the existing environment. The visual effects below are based on a worse-case scenario and do not include any mitigation measures. A more detailed visibility analysis will be undertaken as part of the preferred option assessment.*			
NORTHERN VIEWING CATCHMENT			
Private dwellings accessed from Parker Road and Awatea Place	Open to partial views From 50m (RESA) From 355m (runway)	**L - H** **(adverse)**	The undulating landscape would essentially be levelled and flatten off to provide for the runway extension, modifying the existing physical 'sand-dune' type landscape. Change in land use and potentially reduced visual amenity values through planes appearing at a different viewing angle. The runway extension would also continue the existing lighting along its length which may adversely affect the existing outlook at night.
Public users of the Nelson Golf Club and Clubhouse*	Open to partial views	**M** **(adverse)**	The undulating landscape would essentially be levelled and flatten off to provide for the runway extension, modifying the existing physical 'sand-dune' type landscape.
Users of the Airport Perimeter Walk	Open to partial views	**VL** **(adverse)**	Users of this walking track, experience the airport operations as the existing environment and chose to use this track to access the coastline or for recreational access. Extending the runway is likely to result in a no-change scenario as the recreational access would likely be retained.
EASTERN VIEWING CATCHMENT			
Private dwellings adjoining the southeast runway boundary accessed from Otterson Street, Chandler Street and Golf Haven Way	Open to partial views From 25m (RESA) From 130m (runway)	**L - H** **(adverse)**	The undulating landscape would essentially be levelled and flatten off to provide for the runway extension, modifying the existing physical 'sand-dune' type landscape. Change in land use and potentially reduced visual amenity values through planes appearing at a different viewing angle. The runway extension would also continue the existing lighting along its length which may adversely affect the existing outlook at night. While views and visibility will vary.

[40] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (ML); Moderate (M); Moderate-High (MH); High (H); Very High (VH).

[41] Nature of Effect: Adverse, Neutral, Beneficial

Users of the Great Taste Trail	Open views	**VL** **(neutral)**	The Great Taste Trail is currently being constructed and extends along the proposed eastern designation boundary adjoining existing residential dwellings (Otterson Street and Chandler Street). It has yet to open however, open views towards the northern RESA will be available. Given its proximity to existing residential development, the Golf Club and the nearby airport operations, a very low (neutral) visual effect is expected based on the existing landscape character generally being retained through the grassed RESA area.
Private dwellings on Port Hills Ridge	Open to partial views Over 1.8kms	**VL - L** **(adverse)**	Due to the elevated location of these dwellings, open to partial views across the Airport and Waimea Estuary are experienced. However, given the viewing distance is over 1.8kms from the proposed extension areas and it forms only a small portion in the mid-distance of the wide expansive view, the change in view is not expected to generate adverse visual effects more than low.
SOUTHERN VIEWING CATCHMENT			
Water users of Waimea Estuary/Jenkins Creek	Open views Distance varies	**VL** **(neutral)**	Views remain unchanged due to the proposed RESA area being within the existing Airport runway, essentially a no change scenario.
Users of SH 6 (northbound)	Glimpsed to no view Distance varies	**VL** **(neutral)**	
Users of the Airport Perimeter Walk	Open to no view Distance varies	**VL** **(neutral)**	
Private dwellings on Monaco Peninsula	Open to no view Distance varies	**VL** **(neutral)**	
WESTERN VIEWING CATCHMENT			
Water users of Waimea Estuary	Open to no view Distance varies	**VL** **(neutral)**	Limited views available given the undulating 'sand-dune' type landscape (Golf Course) in the foreground, and the topographical screening from the elevation change between the water and terrestrial edge when on the water.
Users of the Airport Perimeter Walk	Open to no view Distance varies	**VL** **(neutral)**	
At the time of the assessment, there is uncertainty as to whether the residual land (left over as a result of the northern runway extension) currently used by the Nelson Golf Club would retain its use and still be able to operate as a golf course. Based on this, the recreational users have still been considered as part of the visual effects assessment.* * For the purposes of this assessment, it has been assumed the Airport Perimeter Walk will be retained and realigned.*			

Table 2: Visual Effects – Option B Southern Extension			
Viewing Audience	**Nature of the View & Distance from Option B**	**Visual Effect[42] and Nature of Effect[43]**	**Description**
Note: *The Nelson Airport and airport operations (including planes in the air and within close proximity to residential dwellings) form part of the existing environment. The visual effects below are based on a worse-case scenario and do not include any mitigation measures.*			
NORTHERN VIEWING CATCHMENT			
Private dwellings accessed from Parker Road and Awatea Place	Open to partial views From 430m (RESA)	**L** **(adverse)**	Due to the RESA required north of the runway, a change in the physical landscape may be apparent in southerly aspect however given the foreground undulations of the Golf Course, the levelled nature of the RESA may not be noticeable.
Public users of the Nelson Golf Club and Clubhouse*	Open views Distance varies	**LM** **(adverse)**	Due to the transient nature of Golf Course users, the RESA that will extend into the existing Golf Course may appear inconsistent but not overly out of context given the existing Airport operations.
Public users of the Airport Perimeter Walk	Open views Distance varies	**LM** **(adverse)**	As a result of the southern runway extension, the Airport Perimeter Walk would likely be severed at the southern extent due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area. At the northern extent, the walking track would likely be realigned.
EASTERN VIEWING CATCHMENT			
Private dwellings accessed from Otterson Street adjoining the northern end of the RESA, Chandler Street and Golf Haven Way	Open to partial views From 105m (RESA)	**LM** **(adverse)**	Due to the RESA required north of the runway, a change in the physical landscape will be apparent, which will essentially level a portion of the Golf Course. However, given the landscape context this change in physical landscape will not appear out of context.
Point Road and Hoult Crescent residential dwellings	Open to partial views From 70m (RESA) From 120m (runway)	**H** **(adverse)**	Aircraft are already a part of the receiving environment; however, the magnitude of change will result in high visual effects on eastern coastal edge of estuary and Monaco; and Jenkins residences looking toward extension due to proximity of planes and reduced amenity value of reclaimed land and the proximity of the viewer to the effect.

[42] Based on a seven-point scale: Very Low (VL); Low (L) Low-Moderate (ML); Moderate (M); Moderate-High (MH); High (H); Very High (VH).

[43] Nature of Effect: Adverse, Neutral, Beneficial

			Change in the natural edge of the estuary coastline. Reduced natural outlook. Change to visual character of Monaco peninsula landform due to the bridging required over Jenkins Creek. Adverse effect on the perceived naturalness of Jenkins Creek. Change to the legibility of the natural shape and form of the Monaco peninsula due to the bridging required over Jenkins Creek. Adverse effects of lighting potentially required by the Airport.
Private dwellings on Port Hills Ridge	Open to partial views Over 1.8kms	**L** **(adverse)**	Due to the elevated location of these dwellings, open views across the Airport and Waimea Estuary are experienced. However, given the viewing distance over 1.8kms from the southern extension and it forms only a small portion of the view, the change in view is not expected to generate adverse visual effects more than low.
Users of Jenkins Creek	Open views Distance varies	**H** **(adverse)**	Changing the natural edge of the estuary coastline will reduce the natural outlook and perceived naturalness of Jenkins Creek. The legibility of the natural shape and form of the Monaco Peninsula will also undergo a change due to the bridging required over Jenkins Creek. Aircrafts are already part of the receiving environment; however, based on the extent of required earthworks to create the RESA adverse visual effects are expected and vary with proximity to the reclamation of 3.6ha of land.
Users of walking/cycle path between Jenkins Creek and Point Road	Open to glimpsed views Distance varies	**LM - MH** **(adverse)**	
Users of Point Road	Open views Distance varies	**H** **(adverse)**	
The Honest Lawyer Country Pub	Open views 260m	**H** **(adverse)**	
Grand Arden Monaco	Open to partial views 300m	**H** **(adverse)**	
SOUTHERN VIEWING CATCHMENT			
Water users of Waimea Estuary (within immediate context)	Varies	**H** **(adverse)**	Change in the perceived natural edge of the estuary coastline and in size of the estuary surface. Jenkins Creek will be bridged and be absorbed into a 3.6ha area of land reclamation, further accentuating modifications of the coastal edge and forming one landmass. Change to the legibility of the natural shape and form of the Monaco peninsula due to the bridging required over Jenkins Creek.

Users of SH 6 (northbound)	Glimpsed to no view Distance varies	**VL-L** **(adverse)**	Users of SH 6 may experience a change in the perceived natural edge of the estuary coastline and overall size of the estuary surface due to the 3.6ha of proposed reclamation area. However, the road users are likely to be travelling at a speed of 100km/hour and would only experience glimpsed views (if any) of the southern extension due to the fast travel and extent of established vegetation along the estuary edge which mostly screens views towards the Airport.
Users of the Airport Perimeter Walk	Open to no view Distance varies	**LM** **(adverse)**	As a result of the southern runway extension, the Airport Perimeter Walk would likely be severed at the southern extent due to the runway extension bridging Jenkins Creek. The 'loop' track would at best be left as a 'U' shape with either end terminating at the Jenkins Creek land reclamation area. At the northern extent, the walking track would likely be realigned.
WESTERN VIEWING CATCHMENT			
Monaco Reserve	Open to no view 130m	**M** **(adverse)**	Users of Monaco Reserve are transient and use the reserve knowing it is in close proximity to the airport. Aircrafts are already part of the visual experience, and this would not be changing.
Users of Point Road	Open view Borders the extension area	**H** **(adverse)**	Users of Point Road are considered to be transient in nature and passing through. The proposed modification to the road would be very apparent require a potential realignment.
Residential dwellings accessed from Point Road and Martin Street	Open to no view Distance varies	**H** **(adverse)**	Aircraft are already a part of the receiving environment; however, the magnitude of change will result in high visual effects on eastern coastal edge of estuary and Monaco; and Jenkins residences looking toward extension due to proximity of planes and reduced amenity value of reclaimed land. Change in the natural edge of the estuary coastline. Reduced natural outlook. Change to visual character of Monaco peninsula landform due to the bridging required over Jenkins Creek. Adverse effect on the perceived naturalness of Jenkins Creek.
***At the time of the assessment, there is uncertainty as to whether the residual land (left over as a result of the southern runway extension) currently used by the Nelson Golf Club would retain its use and still be able to operate as a golf course. Based on this, the recreational users have still been considered as part of the visual effects assessment.*			

Appendix 3: Graphic Supplement

Boffa Miskell

APPENDIX 3
NELSON AIRPORT NOTICE OF REQUIREMENT OPTIONS REPORT
GRAPHIC SUPPLEMENT
DECEMBER 2022

Table of Contents

PRINT A3 landscape double-sided

COVER IMAGE: View of the Nelson Airport and Nelson Golf Club from the Port Hills Ridge.

LEFT IMAGE: View near Jenkins Creek looking towards the southern extension area of the Airport.

File Ref: BM220983.aprx / BM220983_01_AirportContext_A3L

Boffa Miskell

www.boffamiskell.co.nz

0 760 m

1:30,000 @ A3

Data Sources: Eagle Technology, Land Information New Zealand

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

- Existing NRMP DAA1 Designation
- Option A - Northern Extension
- Option B - Southern Extension

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

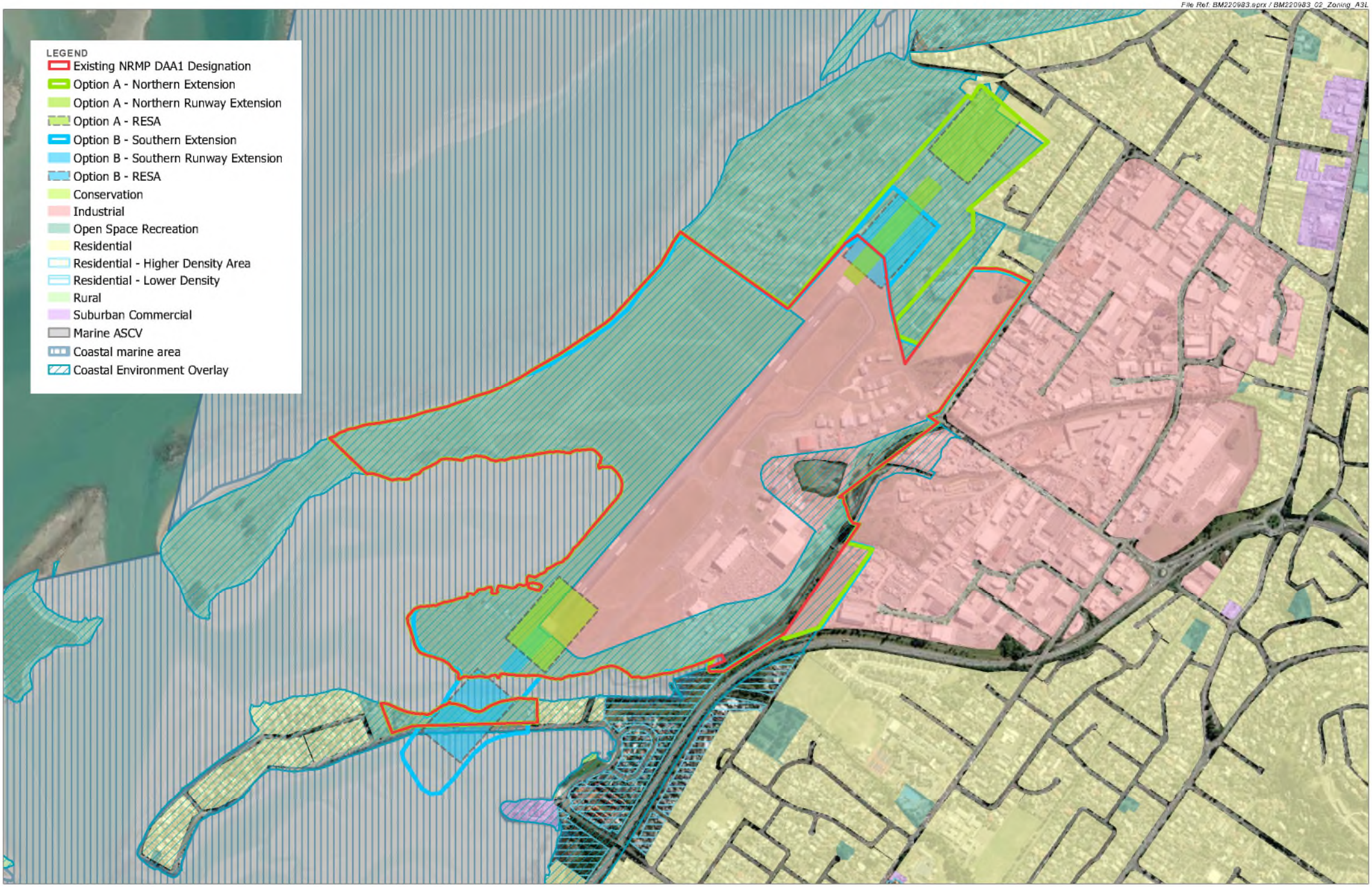
Airport Context

Date: 03 December 2022 | Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: KMa | Checked: AAn

Figure 1



Boffa Miskell

www.boffamiskell.co.nz

0 240 m

1:10,000 @ A3

Data Sources: Maxar

Projection: NZGD 2000 New Zealand Transverse Mercator

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

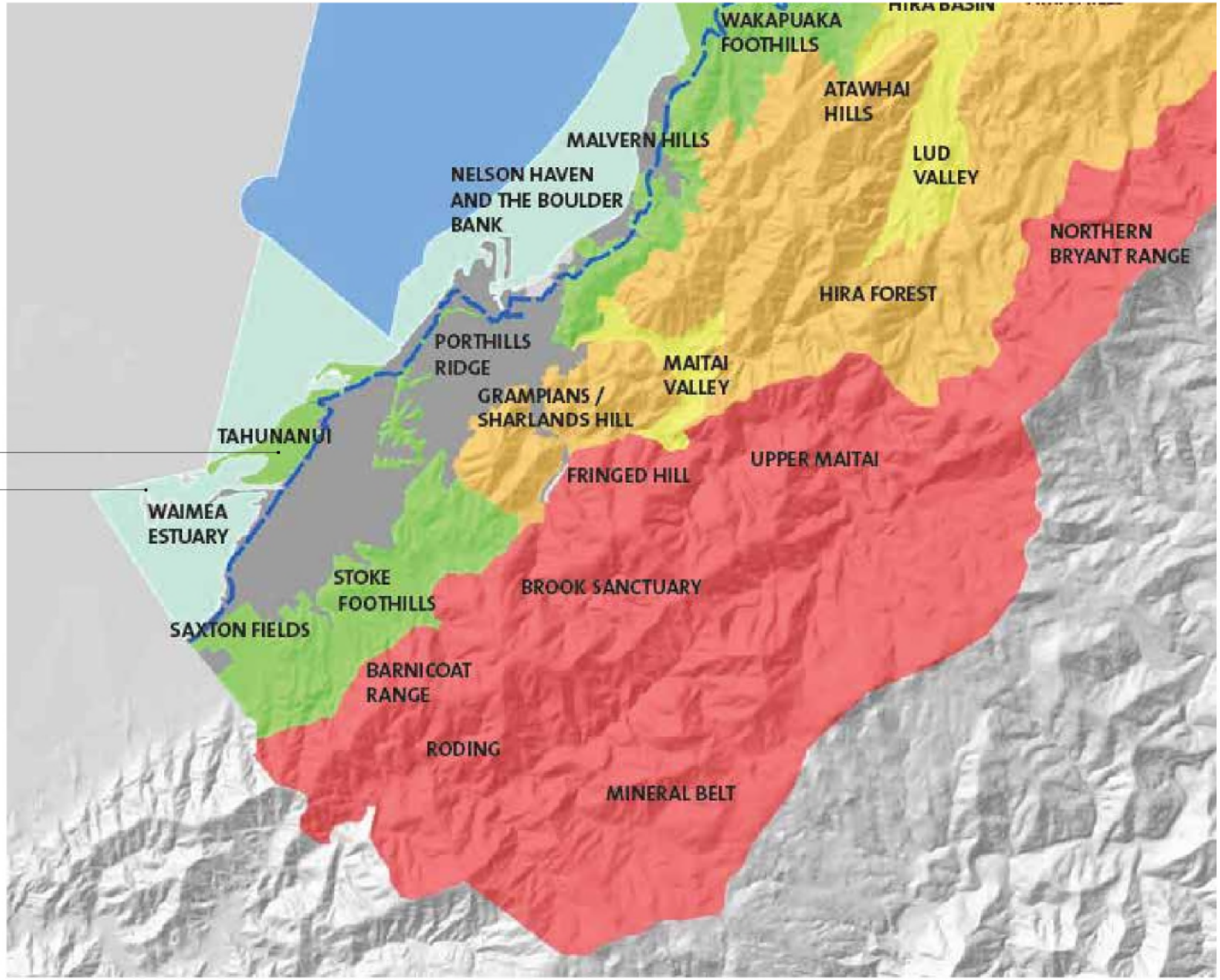
Zoning

Date: 03 December 2022 | Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: KMa | Checked: AAn

Figure 2



Boffa Miskell

www.boffamiskell.co.nz

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Landscape Character Areas

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 3

Landscape / Seascape Character Areas	Landscape values	Overall Landscape Value	Potential Sensitivities	Potential Threats	Development Considerations
Waimea Estuary	**Biophysical** • The eastern edge of the largest enclosed estuary in the South Island • Predominately degraded plant communities on account of the high levels of adjoining urban development • Threatened coastal plant species found on Saxton Island **Sensory** • Legible coastal processes within the estuary framed by a predominately urban hard edge • Adjoining development enclosing the estuary has reduced the overall sense of naturalness whilst retaining relatively higher levels of perceived naturalness on islands • Limited moorings and jetties disrupt an open an expansive seaside character • The constant change and movement on the coast - with tides, weather, lighting conditions - contributes a great deal of visual variety to the city's landscape context **Associative** • Important recreational area for boating with footpaths and jetties along the coastal edge • Waimea Estuary was rich in mahinga kai, rongoā and weaving and building materials	**High**	• Impacts on biophysical values associated with legible coastal features • Sensory impacts on a coherent seaside character and important transient values	• Measures to control effects of sea level rise and scarring from erosion • Intensification of boat moorings and jetties • Introduction of prominent utility structures • Greater intensity of recreational pursuits	• With the exception of Saxton Island, most of this character area is in public ownership which lessens their threat of inappropriate development
Tahunanui	**Biophysical** • Modified coastal vegetation patterns with areas of Dune System and salt marsh retained along the Tahunanui Back Beach • The Tahunanui Back Beach provides an important habitat for the carabid ground beetle **Sensory** • Coastal processes remain legible along the coastal edge with shifting patterns of sand and coastal erosion along Tahunanui Back Beach • Large areas of coast line have been reinforced with rock rip-rap which reduces the overall level of naturalness • Tahunanui Beach forms an iconic area of Nelson's coastline • Areas of open space bordered by peripheral commercial and recreation buildings retain coherent coastal edge character • The constant change and movement on the coast - with tides, weather and lighting conditions - contributes a great deal of visual variety to the city's landscape context **Associative** • Very important recreation area commonly referred to as 'Nelson's beach' • Important heritage associations indicating early Maori settlement and associated cultural and spiritual values	**High**	• Impacts on biophysical values associated with sensitive dune systems and coastal habitats • Impacts on a coherent open space character and associated recreation value connected with Nelson's seaside identity	• Intensification of commercial and recreation use Coastal erosion impacts and potential protection mechanisms	• With the exception of the airport and golf course most of this area is in public ownership which lessens the threat of inappropriate development

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Landscape Values

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

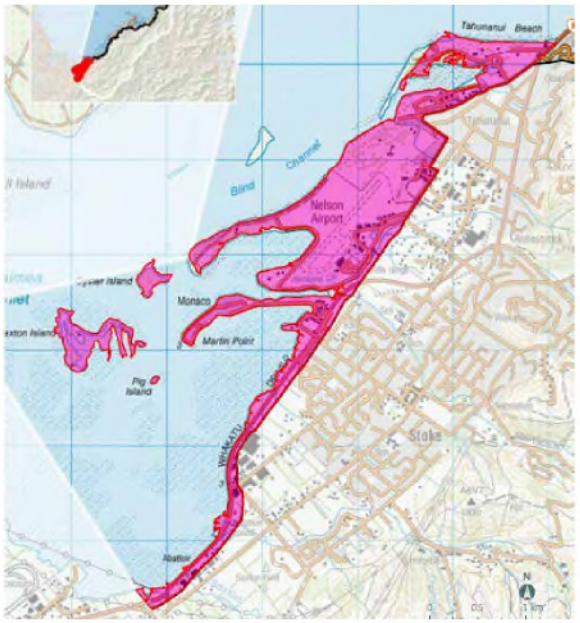
Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 4

COASTAL MARINE AREA C:

Waimea

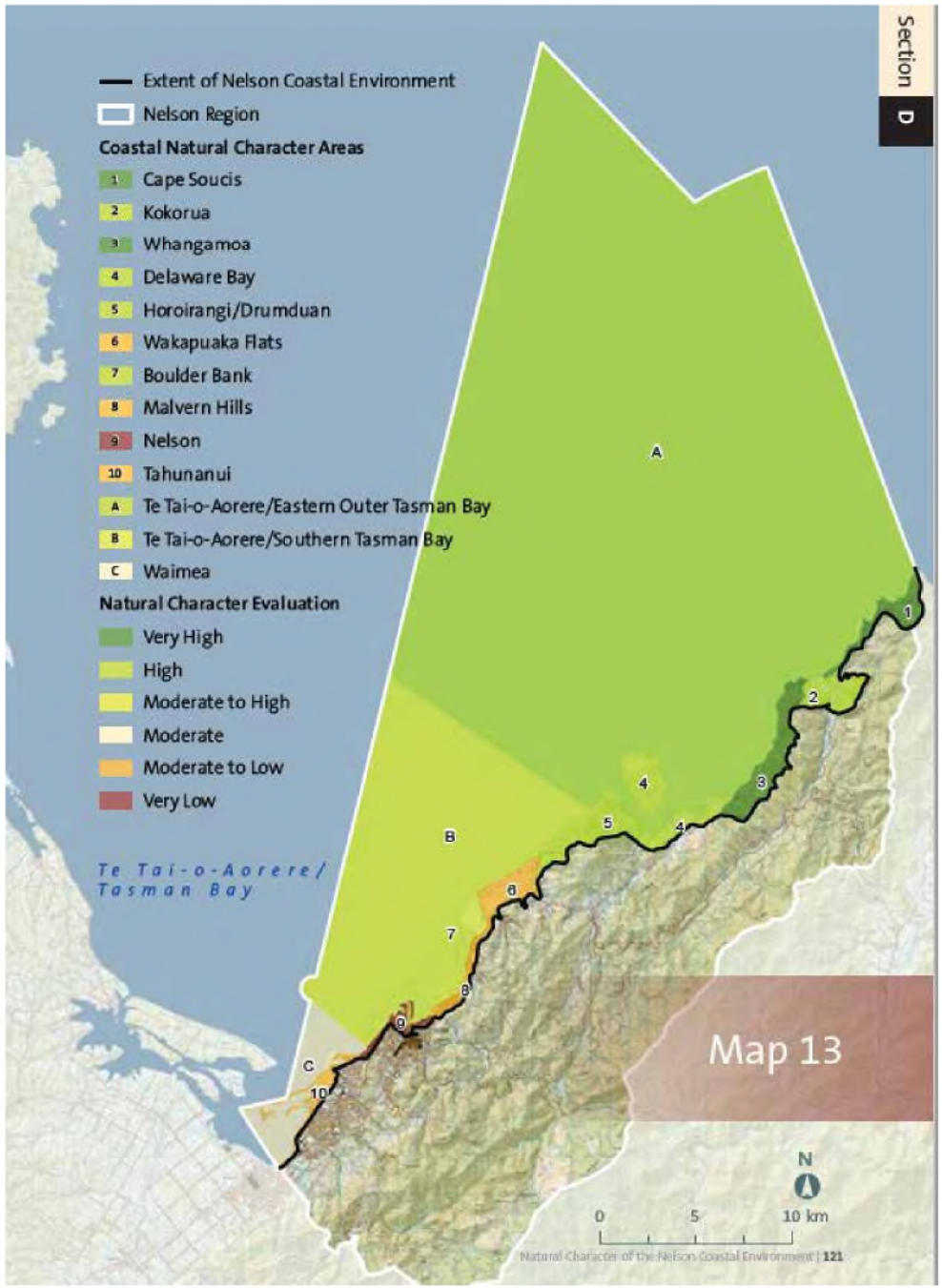
Values at Level 3			
Degree of Natural Character	Natural Character Attributes		
	Abiotic	Biotic	Experiential
Very High			
High		✓	
Moderate to High			✓
Moderate			
Moderate to Low	✓		
Low			
Very Low			
	Overall Natural Character Rating		Moderate



COASTAL TERRESTRIAL AREA 10:

Tahunanui

Values at Level 3			
Degree of Natural Character	Natural Character Attributes		
	Abiotic	Biotic	Experiential
Very High			
High			
Moderate to High			
Moderate			✓
Moderate to Low		✓	
Low	✓		
Very Low			
	Overall Natural Character Rating		Moderate -Low



Boffa Miskell

www.boffamiskell.co.nz

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Coastal Natural Character Areas & Evaluation

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 5

File Ref: BM220983.aprx / BM220983_03_ViewpointLocation_A3L

Boffa Miskell

www.boffamiskell.co.nz

0 240 m

1:10,000 @ A3

Data Sources: LINZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors., Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, Maxar

Projection: NZGD 2000 New Zealand Transverse Mercator

1 Viewpoint Location

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoint Location Map

Date: 03 December 2022 | Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: KMa | Checked: AAn

Figure 6

File Ref: BM220983.aprx / BM220983_04_Options_A3L

Boffa Miskell

www.boffamiskell.co.nz

0 240 m

1:10,000 @ A3

Data Sources: Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors., Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors

Projection: NZGD 2000 New Zealand Transverse Mercator

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Extension Options

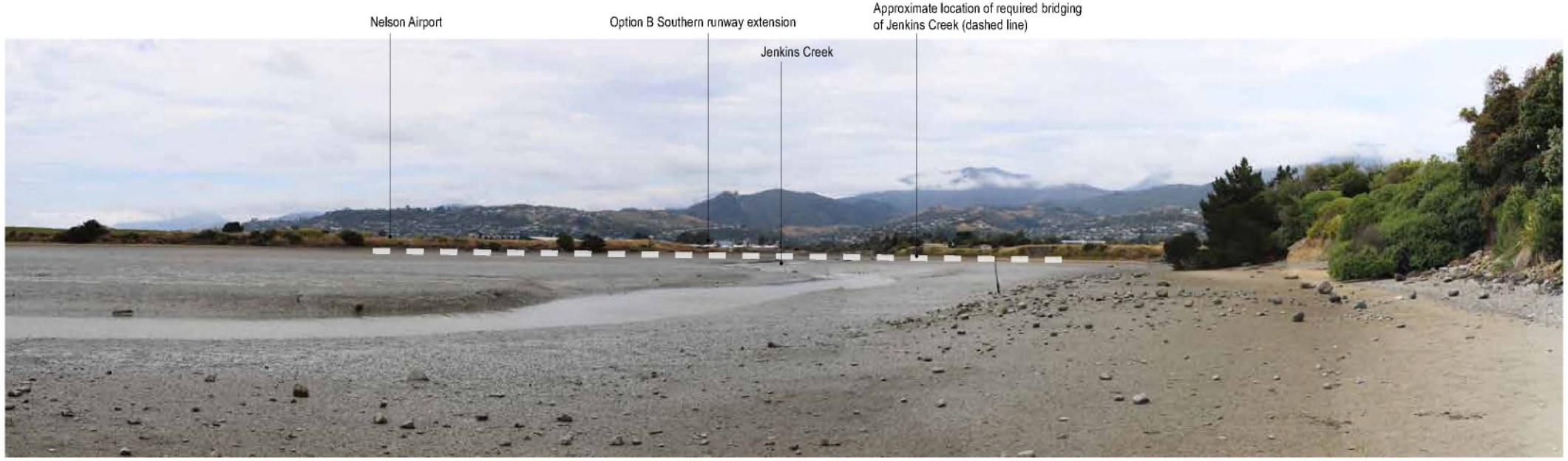
Date: 03 December 2022 | Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: KMa | Checked: AAn

Figure 7

VIEWPOINT 1: View from Point Road, looking north across the Waimea Estuary towards Point Road and the southern extent of Nelson Airport.



VIEWPOINT 2: Looking across where Jenkins Creek enters Waimea Estuary from Monaco Peninsula, with the Airport behind. Option B would extend out across the estuary in the distance.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

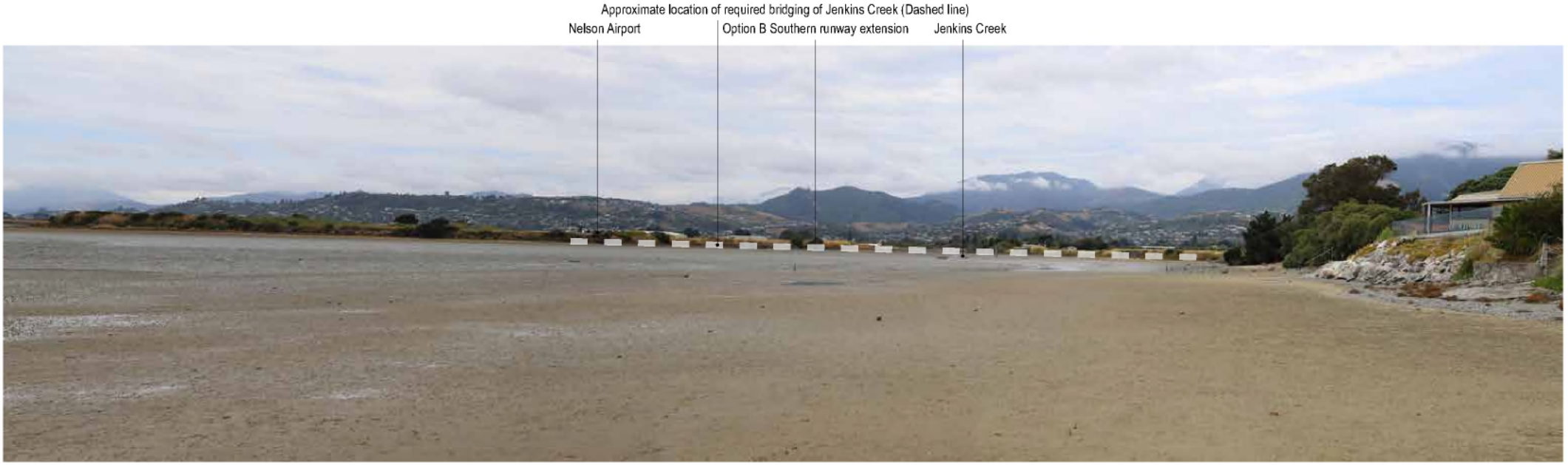
Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 8



VIEWPOINT 3: View from within the Waimea Estuary, looking south-east towards Jenkins Creek and Monaco Peninsula, with the Nelson Airport in the distance.

VIEWPOINT 4: View from Point Road (on Monaco Peninsula) looking south across the proposed Option B - Southern extension area.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 9

VIEWPOINT 5: View from Monaco Peninsula looking north-east across Waimea Estuary and the Airport Peninsula Esplanade.

VIEWPOINT 5 continued: View from Monaco Peninsula looking north-east towards the southern extent of the existing Nelson Airport.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 10

VIEWPOINT 6: View from the Airport Perimeter Walk overlooking Jenkins Creek and Option B extension area.

VIEWPOINT 7: View from the walking/cycling path between Jenkins Creek and Point Road. The vegetation screens most of the Option B extension area.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 11

VIEWPOINT 8: View from shared path alongside Jenkins Creek, looking in a westerly direction towards the Nelson Airport and Option B extension area.

VIEWPOINT 9: View from the shared path looking north across Waimea Estuary, towards Monaco Peninsula and the Option B extension area.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 12

VIEWPOINT 10: View from the shared path, looking north across Waimea Estuary, with Monaco Peninsula on the left, and the Port Hills Ridge on the right.

VIEWPOINT 11: View located within the existing Airport designation area looking north towards the Nelson Golf Club.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 13

VIEWPOINT 12: View within existing Airport designation, looking north towards the northern extent of the existing runway, with the Nelson Golf Club in the background.

VIEWPOINT 13: View located on the northern boundary of the existing Airport designation looking north towards the Nelson Golf Club.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 14

VIEWPOINT 14: View located on northern boundary of existing Airport designation looking south-west towards the northern extent of the existing runway and Option A & Option B RESA.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 15

VIEWPOINT 15: View located on northern Airport designation boundary looking north towards the Nelson Golf Club and Option A/Option B RESA.

VIEWPOINT 15 continued

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 16

VIEWPOINT 16: View from the end of Awatea Place looking in a southerly direction towards the Golf Club and Airport. Residents have a mixture of open views and fencing/screening along Nelson Golf Club boundary.

VIEWPOINT 16 continued: Looking towards the northern extent of the runway and Option A RESA.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 17

VIEWPOINT 17: View from northern extent of Golf Club (foreground) looking in a southerly direction towards Option A.

VIEWPOINT 18: View from northern extent of the Golf Club looking in a northerly view towards dwellings with the slightly undulating topography obstructing the view.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 18

VIEWPOINT 19: View from the northern extent of the Golf Club (and near Maire Stream) looking in a southerly direction. Undulating topography obstructs views of Golf Club and the Airport.

VIEWPOINT 19 continued

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 19

VIEWPOINT 20: View looking north towards the houses on Parker Street that overlook the Golf Club across the Maire Stream.

VIEWPOINT 21: View from the elevated houses on Enner Glynn Spur, located on Panorama Drive, approximately 3kms south-east of the Nelson Airport.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

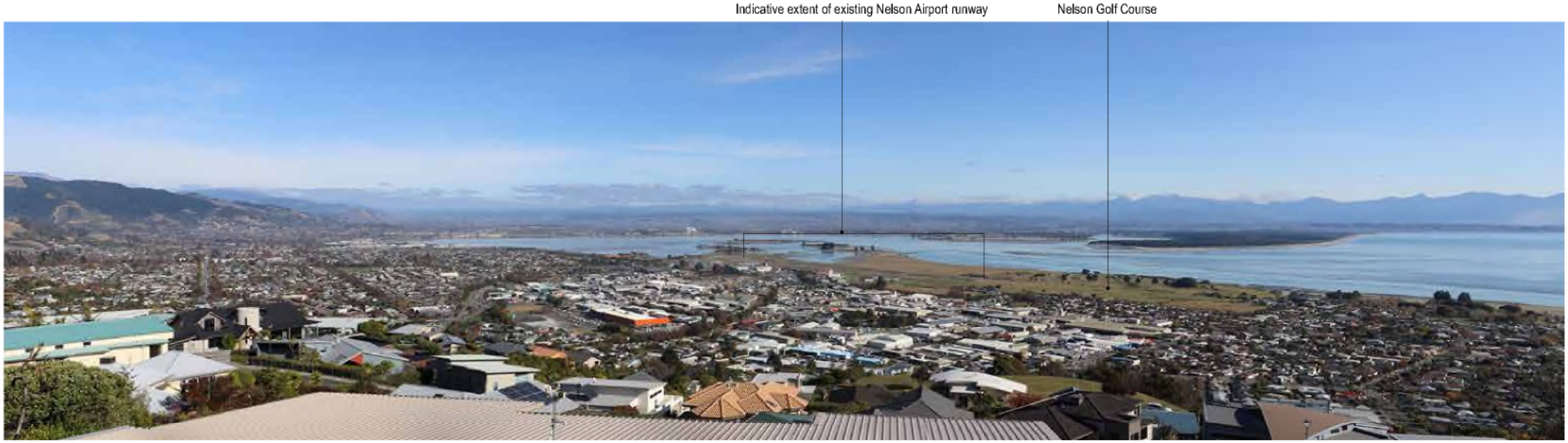
Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 20



VIEWPOINT 22: View from the Port Hills Ridge, approximately 1.9kms east of the , looking in a westerly direction towards the Nelson Airport.

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

Date of Photography: January & May 2020

Horizontal Field of View	: 90°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 20 cm	

NELSON AIRPORT RUNWAY EXTENSION OPTIONS, NELSON

Viewpoints

Date: October 2022 Revision: 0

Plan prepared for Nelson Airport Limited by Boffa Miskell Limited

Project Manager: liz.gavin@boffamiskell.co.nz | Drawn: AAn | Checked: LGa

Figure 21

About Boffa Miskell

Boffa Miskell is a leading New Zealand professional services consultancy with offices in Whangarei, Auckland, Hamilton, Tauranga, Wellington, Nelson, Christchurch, Dunedin, and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural heritage, graphics and mapping. Over the past four decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

Landscape Effects Multi-Criteria Assessment

Attachment A –MCA Landscape

Options Assessment Scoring

For the purposes of inputting into the overall Multi-Analysis Criteria (MCA), a rating has been applied to each criterion using a scoring system of +3 (significant positive effect) to 0 (neutral / change) to -3 (significant adverse effect) (refer to **Table 1** below).

Table 1

Effects / Outcome criteria	Scoring
Significant adverse effect / substantial negative effect on the project outcome	-3
Moderate / Major adverse effect	-2
Minor adverse effect	-1
Neutral / no change	0
Minor positive effect	1
Moderate / Major positive effect	2
Significant positive effect / achievement of project outcome.	3

Landscape Criteria	**Option A - Northern Extension Option**		**Option B – Southern Extension Option**	
Natural Character	-1	The flat nature of the topography aids in absorbing the horizontal form of the runway extension and the form and functions of the airport operations already form part of the existing environment. The natural character is that of a highly modified environment located within a coastal context. The loss of abiotic and biotic systems from the Maire Stream tributary will have a moderate (adverse)effect on the natural character values of the tributary. Overall effects at Waimea Estuary scale are low-moderate (adverse).	-2	Natural character and visual amenity values that are recognised at a national level (Waimea Estuary) as well at a district scale that will be adversely affected by the southern runway extension.
Landscape (Physical and Character)	-1	Will generally be in character with the flat, open grassland apparent at the golf course, aside from modest earthworks to remove 'sand-dune'	-3	The southern extent of the Option B extension area will require a substantial amount of earthworks to create the approximate 3.6ha area of land reclamation needed for the

		type landforms, and also to pipe the Maire Stream Tributary. The physical landscape will be slightly altered through an increase in pavement and realignment of the Maire Stream tributary. This will result in a loss of this feature and its attributes from the landscape at site level. This loss results in a moderate(adverse) effect on this landscape feature. Existing recreational opportunities (walkway, golf course configuration) will need to be adapted to a northern runway extension. Overall landscape effects are low-moderate (adverse).		southern RESA. The introduction of a bridge across Jenkins Creek and tunnel structure for Point Road will further alter the existing physical landscape that varies from a sandy mudflat at low tide to a full water body at high tide. The legibility of Monaco. Peninsula will also be compromised.
Visual Effects		The visual catchment is generally contained to the localised area and there are more options to provide mitigation in order to lower the overall level of effects.		Has a wide visual catchment, which would affect a wider viewing audience, ranging from private dwellings, recreational users of walking/cycling tracks, road users of Point Road and water users of Jenkins Creek/Waimea Estuary. The visual catchment is generally contained to the localised area.
Northern				
Public	-1		-1	
Private	-1		-1	
Eastern				
Private (adjoining)	-2		-2	
Private (further afield)	0		-1	
Public	0		-2	
Southern				
Private (adjoining)	0		-	
Private (further afield)	-		-	
Public	0		-2	
Western				
Private (adjoining)	-		-3	
Public	0		-2	

In summary, the northern extension option is recommended based on landscape, visual amenity and natural character values. This is based on the relatively small scale and modest level of change to the landscape of the northern runway extension and the overall effects being relatively localised in nature and minor in effect. The flat nature of the topography aids in absorbing the horizontal form of the runway extension and airport operations already form part of the existing environment. The natural character is that of a highly modified environment located within a coastal context. The visual catchment is generally contained to the localised area. The physical change required to Maire Stream tributary and potential loss of open space/recreation opportunities will need to be addressed in any subsequent Outline Plan under s176A of the Resource Management Act.

The southern option is not recommended due to effects on landscape, visual amenity and natural character values, given the substantial nature of impacts as recognised at a national level (Waimea Estuary) as well at a

district scale that would be adversely affected. The proposed 3.6ha land reclamation would result in the loss of Monaco Peninsula's legibility as a feature, as well as a general loss of legibility of the wider coastline landform. The physical and perceptual values associated with legible coastal processes, patterns and elements would also be reduced through introduced hard structures and modification in the coastal marine area. The natural flow and tidal processes of Jenkins Creek would essentially be channelised and no longer display natural processes due to the proposed bridge for the RESA. The sinuous nature of the shallow water channel (at low tide) would be interrupted and dominated by a man-made structure within the coastal marine area. While Option B wouldn't reach the 'significant' adverse natural character effects threshold (NZCPS Policy 13(1)(B)), the values and overlays contained in the NRMP that apply to the area would not be preserved or maintained.