

DEPARTMENT OF CONSERVATION

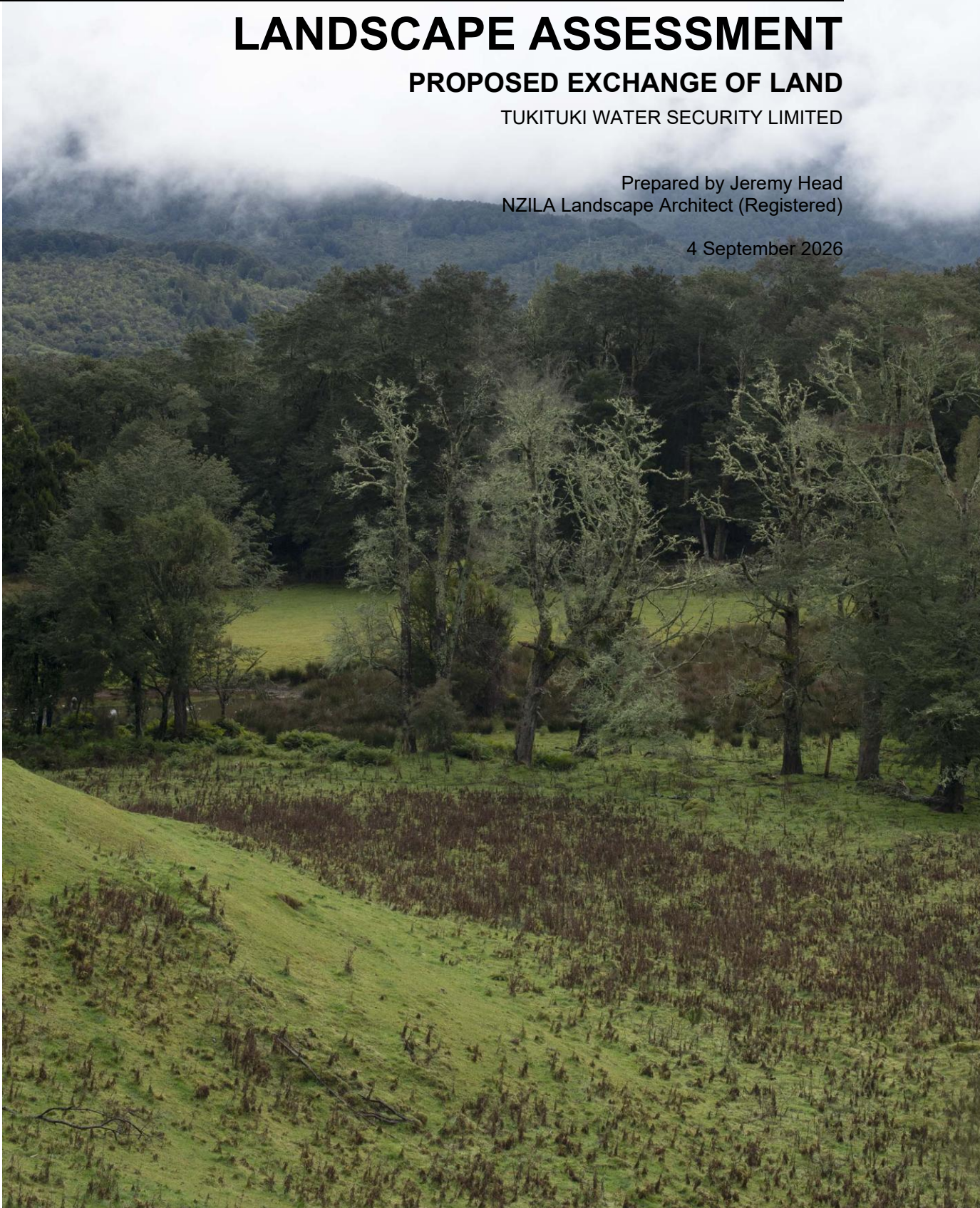
LANDSCAPE ASSESSMENT

PROPOSED EXCHANGE OF LAND

TUKITUKI WATER SECURITY LIMITED

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Executive Summary

This report provides an independent landscape assessment to inform the Director-General of Conservation's Section 35 land exchange report under the Fast-track Approvals Act 2024 for the proposed Tukituki Water Security Limited land exchange. The assessment compares the existing landscape values of the approximately 170 ha Smedley Exchange Block (SEB), which would be transferred to the Department of Conservation (DOC), with three DOC land parcels totalling approximately 29.7 ha that would be surrendered as part of the exchange.

The assessment considers existing landscape character and values compared and contrasted when the Applicant's proposed direct and indirect improvements to the SEB ('Scenario 2') are considered. The assessment does not evaluate the wider landscape effects of the dam and reservoir development itself, although it acknowledges certain ecological and recreational changes associated with the future reservoir where these influence the landscape values of the exchanged land.

The assessment has been undertaken in accordance with *Te Tangi a te Manu Aotearoa New Zealand Landscape Assessment Guidelines* and is informed by desktop analysis, field investigation, statutory document review, aerial imagery, and specialist ecological, planning, heritage and recreation advice.

The SEB occupies part of the southern Wakarara Range and contains a mix of indigenous forest, regenerating vegetation, wetlands, streams and extensive grazed pasture. The block benefits from being directly adjacent to the Gwavas Conservation Area, includes parts of an Outstanding Natural Feature/Landscape (ONF/L), and contains three Significant Natural Areas (SNAs). These features provide important landscape, ecological and associative values. However, substantial areas remain modified by historical logging, pastoral farming, stock access and ongoing vegetation degradation, reducing overall naturalness and landscape quality.

The three DOC 'Give' parcels possess distinctly different landscape characteristics. The Dutch Creek parcel comprises a highly natural and largely intact indigenous stream corridor associated with the Ruahine foothills and ONF/L7. The Island Block is a relatively intact forest remnant at the confluence of Dutch Creek and the Mākārora River, while the SNA Block contains remnant riparian forest, braided river habitats and significant geomorphological features, albeit within a more modified setting. These parcels represent a riparian and river-margin landscape typology that retains strong natural processes, legibility and ecological connections.

The comparative assessment concludes that the SEB currently exhibits a Moderate level of landscape character and a Low-moderate waterways value, resulting in an overall Moderate combined landscape value. With an assumed successful implementation of the Applicant's proposed direct improvements, including stock removal, fencing, pest control and restoration planting, the SEB could improve to a Moderate-high landscape value with associated improvements to waterways values; however, its overall combined landscape value would remain Moderate due to the continued presence of approximately 45 ha of retired pasture and associated management liabilities. A key driver of this finding is the retention of

approximately 45 ha of retired pasture and rank grass that is not proposed to be actively restored and is likely to become an ongoing weed management liability for DOC.

By contrast, the DOC 'Give' parcels range from Low to Low-Moderate (SNA Block), Moderate-High (Island Block) and High (Dutch Creek), with Dutch Creek representing the highest-value landscape resource involved in the exchange.

From a landscape perspective, the assessment finds that the exchange would result in a **net loss of landscape value to DOC at the time of transfer**. While DOC would receive a significantly larger land area, the landscape quality and intactness of the SEB are not equivalent to those of the land being relinquished. The Dutch Creek parcel in particular contains a healthy stream environment, strong terrestrial-freshwater ecological relationships, high levels of naturalness and landscape character, and forms part of a broader outstanding landscape context. The SEB, despite its larger size and future potential, remains substantially modified and will require sustained management intervention before meaningful improvement can be realised.

The assessment also identifies management risks associated with the SEB following transfer to DOC. Without ongoing and adequately resourced pest animal and pest plant control, large areas of retired pasture are likely to become increasingly dominated by weeds and invasive species, creating long-term management liabilities and potentially threatening existing indigenous vegetation. While the Applicant's proposed enhancement programme is positive - assuming it is successful, key implementation details remain undefined and the anticipated five-year management period is considered short given the scale of ecological and landscape restoration required. Long-term management over several decades is likely to be necessary to achieve the desired outcomes.

Overall, the assessment concludes that the SEB offers landscape restoration opportunities and strategic benefits through increased protected land area and adjacency to existing conservation land. However, when comparing current landscape character, naturalness, waterway values and ecological integrity, the DOC land parcels proposed for surrender generally possess higher existing landscape values than the land proposed to be acquired. Accordingly, the proposed exchange results in a net reduction in existing landscape quality for DOC, with any future gains dependent upon the successful implementation and long-term maintenance of enhancement and restoration measures.

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1. Introduction

I have been requested to provide expert advice on behalf of the Director-General of Conservation for his section 35 land exchange report required to be prepared under the Fast-Track Approvals Act 2024, for the Tukituki Water Security Limited land exchange application.

The purpose of this report is to comparatively assess the existing landscape values of the various land parcels comprising the land exchange – the approximately 170 hectare Smedley Exchange Block (SEB) which DOC would receive (the DOC ‘Get’ block) and the three separate land parcels totalling 29.7 hectares that DOC would surrender (the DOC ‘Give’ blocks). The assessment of the SEB also considers proposed direct improvements.

This report will include an assessment of the different land parcels’ existing landscape characteristics and values (which also includes how they appear). This report does not provide any assessment of effects of the substantive application which seeks to construct a dam and reservoir to implement the Tukituki Water Security Project. This report does however acknowledge that the land exchange will only take place if the substantive application to construct a dam and reservoir is approved, and when that occurs and the dam and reservoir are constructed, there will be some change to landscape values of the SEB compared with its current condition.

Two scenarios have been considered in preparing advice on this application:

Scenario 1 considers the landscape value of the SEB as it is now which comprises the majority of the body of this report (pp 1 – 30).

Scenario 2 considers the landscape value of the SEB, should the land exchange go ahead. This scenario includes any relevant mitigation that relates to the land that would be received by DOC, and any positive or negative impacts of inundation, where they relate to that land. These positive or negative impacts are essentially driven by changes to ecological and recreation values. An evaluation of the changes to landscape values under Scenario 2 are discussed at the end of this report from p 30.

The Application site is in Hawke’s Bay region near Wakarara and is approximately 50 km to the west of Hastings and 7 kms northwest of the confluence of the Mākāroro and Waipawa Rivers.

The Application site is both within the ‘*Mountainlands Place*’ in the 1994 Hawke’s Bay Conservation Management Strategy (HBCMS) and the ‘*Central Spine Place*’ in the 2019 Wellington Conservation Management Strategy (WCMS).

The Application site also straddles the Central Hawke’s Bay District and Hastings District where the zoning is Rural in both. In the Central Hawke’s Bay District, the DOC ‘Get’ block partly includes an ONL/F overlay and several Significant Natural Areas (SNAs). Other relevant overlays include a Waterbodies (Rivers) and Priority Waterbodies (the Mākāroro River is adjacent to two of the three DOC ‘Give’ blocks). Two SNAs (SNA-2 and SNA-6) overlay or partly overlay two of the three DOC ‘Give’ blocks.

In the Hastings District Plan, one of the three DOC 'Give' blocks partly includes an ONF/L overlay. Both district plans include faultlines under some land parcels and in both district plans, the Application site includes a Statutory Acknowledgement Areas overlay.

Whilst it is acknowledged this is not an Environment Court Proceeding, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in the preparation of this report. Unless I state otherwise, this advice is within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

This report is to be read alongside the separate set of A3 graphic attachments which are referred to throughout.

The SEB DOC 'Get' land parcel covers approximately 170 hectares and the three DOC 'Give' land parcels which partly include marginal strips along the Mākāroro River and Dutch Creek (which forms a tributary to the Mākāroro River) cover approximately 29.7 hectares (**Attachment 1**).

This report will include a discussion on the:

- Methodological approach used in rating overall landscape value.
- How each land parcel reflects the various landscape descriptions in the CMS's and two district plans.
- What the valued physical, perceptive and associative landscape attributes are in each land parcel.
- Levels of landscape character in each land parcel, including waterways.
- Landscape context, fit, and how this may influence each land parcel, including edge effects.
- The extent of visibility of each land parcel.
- Ongoing management.

The various statutory provisions relevant to the Application site are discussed in **Section 4** of this report. This assessment is to be read in association with DOC's Section 35 land exchange report that provides greater detail on the background, and specifics of the land exchange Application, including information provided by other DOC experts.

2. Methodology

The methodology for assessment is based on Te Tangi a te Manu Aotearoa New Zealand landscape Assessment Guidelines¹ ('Te Tangi a te Manu') and utilises information obtained from both desktop study and site / site context investigation through field study.

The desktop study information has been utilised to help describe the landscape characteristics of the four land parcels and the contextual landscape and to evaluate the key landscape-related issues of the land exchange.

¹ Lister, G., de Lambert, R., and Tichener, A. (2022). *Te Tangi a te Manu Aotearoa New Zealand Landscape Assessment Guidelines*. Tuia Pito Ora New Zealand Institute of Landscape Architects.

A site visit was undertaken over several hours on 16 June 2026 along with five other DOC experts to observe the SEB (**Attachments 3 and 6 - 9**). The three DOC 'Give' land parcels could not be accessed due to high river flows. Nor could these areas be seen from the SEB. Dutch Creek was visited separately by DOC's ecological experts on 1 September 2026 in favourable conditions. These findings have been incorporated into this landscape assessment.

During fieldwork on 16 June, the weather was poor but visibility was sufficient enough to enable a satisfactory understanding of the SEB's character. The landscape character and any valued attributes of the SEB land were essentially ground-truthed following earlier desktop study. A photographic record from key landscape overview locations and field notes were taken at the time. With regards to describing the landscape of the DOC 'Give' land parcels, I rely on the other DOC experts' reporting (as described below) and drone imagery provided by the Applicant. For ease of referencing, the three DOC 'Give' land parcels are referred to in this report as: 'Dutch Creek', 'SNA Block' and 'Island Block' (**Attachments 2, 4 and 10 - 12**).

The recognised NZILA seven-point scale of effects has been used in this landscape assessment to attribute values to the various stated attributes for each land parcel and to be able to determine an overall landscape value for each land parcel. Attributes may be positive or negative (**Figure 1**).



Figure 1: Seven-point scale from Te Tangi a te Manu Aotearoa New Zealand Landscape Assessment Guidelines, July 2022.

Other DOC experts' reporting (below), including from experts who attended the site visit has been relied on to help inform this landscape assessment. Several of these DOC experts also appraised an earlier draft of this report and provided input where relevant to their areas of expertise.

Relevant DOC reports include:

- Ecology (Nick Goldwater, Sarah Budd and Richard Storey)
- Heritage (Richard Nester)
- Recreation (Michael Harbrow)
- Planning (Giles Boundy)

3. A Description of the Landscape Setting

Location / Topography

The Application site is made up of four separate land parcels. The SEB is located on the southern end of the Wakarara Range and to the west of this landform, two smaller land parcels are situated on lower lying alluvial valley fill. The fourth 'Dutch Creek' land parcel occupies part of the steeply incised river margin above and including Dutch Creek.

Overall elevation ranges between approximately 450 and 770 masl.

The Application site is part of Hawke's Bay's lowland landscapes - here, located eastwards of the Ruahine Range. The landform components of the Application site vary considerably between rolling to steeply rolling hills, dissected with steep and narrow valleys contrasted with flat alluvial terraces associated with active rivers. The Application site can be accessed via SH50 and Smedley Road which terminates at the Smedley Station farm base, after which the various land parcels of the Application must be accessed via farm vehicle. Part of the Application site is on the west side of Dutch Creek which can only be accessed when the Mākāroro River is in low flow.

Geology

At a nationwide level, the Application site is within the 'East Coast Hills Land Type'² where the underlying geology is largely sedimentary. This land type is mobile in places and prone to mass movement - evident where much of the land surface includes landslides overlapping older landslides. More stable limestone areas are also found within the land type. The SEB is underlain with "...*well-bedded sandstone and mudstone and thick-bedded sandstone and rare conglomerate, basalt and limestone.*" Whereas the DOC land parcels adjacent to the Mākāroro River are on alluvial deposits comprised of "...*gravel, sand, silt and mud, forming alluvial terraces.*" And above the true right margin above Dutch Creek the DOC land parcel comprises "...*sandstone, siltstone and minor shell lenses.*"³

Vegetation

The project area is within the broader Ruahine Ecological District ('ED') which covers a broad altitudinal range and includes a cool, humid and high-rainfall climate. Partly because of this, the ED includes a high proportion of native cover compared with other EDs in the region. Snowgrass and red tussock alpine communities occur at higher altitudes, with mountain beech present on the upper slopes. Black beech and broadleaved forest are common at lower elevations including where the Application site is located. In these lower, more accessible areas, historic vegetation clearance has occurred enabling native logging on DOC land and conversion to plantation forestry and various farming activities including pastoral which has substantially reduced the native vegetation cover.

² Landtyping.nz

³ Geology of the Hawke's Bay Area (Institute of Geological & Nuclear Sciences 1:250,000 Geological Map 8).

Recreation

The recreation values of both the DOC-Give and DOC-Get parcels are relatively low because neither area contains established recreation infrastructure such as tracks, huts, campsites, or formal visitor facilities. However, both parcels sit within a broader landscape that supports a range of outdoor recreation activities. The DOC-Give land contributes primarily to existing fishing, hunting, tramping, mountain biking and four-wheel-drive experiences occurring in the wider Mākārora/Wakarara area, while the DOC-Get land currently supports little to no public recreation use. Some recreational activities are undertaken by Smedley Station staff and cadets.

Heritage

It is understood that there are no known or publicly recorded archaeological sites nor any known DOC managed heritage sites postdating 1900 within the Application site. However unrecorded sites and values associated with intangible values or waahi tapu may exist. The SEB is considered to hold some heritage value attributed to its long and continued history associated with agricultural training in New Zealand.

4. Statutory

Hawke's Bay Conservation Management Strategy

In the Hawke's Bay Conservation Management Strategy (HBCMS) the Application site sits within the '*Mountainlands Place*'. The HBCMS includes the following descriptions for this area:

Under 'Introduction'...

"The Kaweka and Ruahine Forest Parks and surrounding areas are part of the chain of axial mountain ranges running through the North Island. The ranges are characteristically steep and rugged, with deeply incised river valleys and extensive areas of indigenous vegetation ranging from alpine grasslands and herbfields through subalpine shrublands to beech, kamahi and podocarp-broadleaved forests.... The Ruahine and Kaweka Forest Parks and surrounding lands have important natural, soil and water conservation, cultural and landscape values. Together with neighbouring protected mountain lands they form an almost continuous chain of protected habitats along the central North Island ranges."

And under 'Vegetation'...

"Vegetation ranges from alpine grasslands and herbfields, down through subalpine shrublands, to beech or kamahi dominated forests, and to podocarp/broadleaved forest types at lower altitudes.... Large areas of the vegetation of both parks and surrounding lands have been extensively modified by natural events in the past and more recently by the influence of introduced plants and animals."

Of relevance to the Application site, the CMS also notes that a number of important vegetation types remain under-represented outside the formal protected areas, including

lower altitude forests and landscapes surrounding Ruahine Forest Park, podocarp forests and mixed beech associations and secondary vegetation or natural non-forest ecosystems.

And under 'Threats/Issues'...

Habitat degradation from introduced animals

"The major threats to natural values remain introduced animals (both browsers and predators), introduced plants ... and fire...Deer numbers are still too high almost everywhere to allow adequate recovery of forests following natural damage."

Wilding conifers and invasive plants

"The main weed threat is from wilding pines, particularly Pinus contorta in Kaweka Forest Park... Pine species were originally introduced for erosion control purposes but have spread throughout the subalpine shrublands and tussock grasslands in many areas."

Fire risk

"Important wetland areas and red tussock grasslands on private lands in the northern Ruahine Ranges are also threatened by fire, stock grazing and trail bikes."

Lack of protection of key habitats outside the parks

The CMS identifies a number of important unprotected habitats and landscapes that remain vulnerable, including: Ngamatea East Swamp, Mokai Patea Range, No Mans Bog and Pohokura Lakes, regenerating forest areas; Owhaoko, the Waikotore Catchment, Mount Aorangi, and wetland areas on the Mangaohane Plateau.

Integrated land management

A particularly relevant Mountainlands objective states:

"To seek an integrated approach to land management, irrespective of ownership, in co-operation with other landowners and local authorities."

Landscape, Landform and Scenic Values

While there is no single threat section headed 'landscape', the Mountainlands place description repeatedly emphasises the significance of landscape values: *"The mountainlands provide an alluring backdrop to the developed lowlands...The Ruahine and Kaweka Forest Parks and surrounding lands have important ... landscape values...Areas with important natural values remain unprotected and vulnerable in the mountainlands."*

While the Hawke's Bay Conservancy Management Strategy is now more than 30 years old, many of the themes identified for the Mountainlands place remain evident today. The CMS emphasises the importance of the Ruahine and Kaweka ranges for their indigenous vegetation, landscape character, soil and water conservation functions, and habitat continuity. It also identifies ongoing threats from browsing animals, wilding conifers, fire, and the lack of protection for significant habitats beyond existing protected areas. Notably, the CMS advocates an integrated approach to land management and greater protection of important natural areas irrespective of land tenure. These themes broadly accord with observations made during fieldwork and are relevant to consideration of the proposed land

exchange, which has the potential to strengthen protection and management of important natural and landscape values.

Wellington Conservation Management Strategy

In the Wellington Conservation Management Strategy (WCMS) part of the Application site appears to just fall within the *‘Central Spine Place’*. The boundary appears to extend eastward to Dutch Creek and southward to the Mākāroro River. As such, the Dutch Creek and ‘SNA Block’ land parcels will be at least partly within this place. These areas on the edge of the place are not discussed in the text specifically. The main topic of discussion centres around the Ruahine Forest Park. However, some aspects of the WCMS are relevant and would still apply to Dutch Creek and its margins in particular:

Under 5.1: ‘Description’... *“Central Spine Place is made up of the Ruahine, Tararua, Remutaka, and Aorangi forest parks (the forest parks)... and a number of public conservation lands and waters next to the forest parks”*. This would include Dutch Creek and the Mākāroro River and their margins that are within DOC ‘Give’ land.

The mountainous backdrop (that also descends down to Dutch Creek) is described as: *“...characteristically steep and rugged, with sharp-crested ridges and steep sided valleys typical of a deeply dissected landscape. They encompass mountainous landscapes containing extensive tracts of relatively unmodified indigenous vegetation, including emergent podocarps, kohekohe, beech forests...”*

Under 5.2: ‘Outcome’... *“Central Spine Place is valued for its spectacular natural features and expansive landscapes. Communities value the ecosystem services provided by this Place. Geological features remain in their natural state....”*

And under 5.3.2 ‘Natural Values’... *“The forest parks are valued for their indigenous forest habitats, including podocarp.... and beech and fuchsia forests. These habitats support a large diversity of plants and animals... These forest habitats and vegetation contribute to the flow of clean water, identified in the ecosystem services above.”* And additionally; *“Central Spine Place has many significant landscapes, namely the Ruahine... ranges... These landscapes provide the neighbouring communities and visitors with an immense forested skyline and mountain range backdrop...”*

Though the WCMS largely refers to the areas west of the Application site, in particular Ruahine Forest Park, aspects still apply to the land exchange application – particularly to the Dutch Creek land parcel which is at the eastern edge and toe of the Ruahine Ranges. The ‘SNA Block’ while inside ‘Central Spine Place’ has been partly fragmented from it in terms of plantation forestry to its north on the terrace above, and so is isolated to a degree from the more natural landscape areas discussed in the WCMS.

Central Hawke’s Bay District Plan

The Application site is within the General Rural Zone (GRUZ). Part of the SEB land (DOC-‘Get’ land parcel) extends onto an Outstanding Natural Feature (ONFL-1 Wakarara Range). The district plan states: *“The Wakarara Range ONF comprises the southern extension of the Wakarara Range and south of the Gwavas Conservation Area, most of which lies in*

Hastings District to the north. It is characterised by rolling to steep hills with regenerating native vegetation.”⁴ Landscape values are described as: “High landscape and visual values derived from the regenerating indigenous vegetation cover over the eroded landform pattern.”⁵ And: “Contrast with the surrounding areas of pasture and pine forest increases the value of such remnant areas of regeneration.”⁶

Central Hawke’s Bay District Outstanding Natural Landscape Assessment

The Central Hawke’s Bay District Outstanding Natural Landscape Assessment source report⁷ that recommended areas be included as ONLFs included the following valued attributes for the ‘Wakarara Range ONF-1’:

Ecology

- Regenerating indigenous podocarp forest in various stages after 50 – 80 years with Titoki, Mahoe, Pigeonwood, Hinau and Supplejack.
- Younger growth on the southern slopes towards the Mākāroro River where more intense grazing is present.
- Manuka and emergent podocarps beginning to dominate on south facing, moister slopes and are reaching the tops of most ridges and spurs.
- Some wilding conifers present.
- Includes a 76ha QEII covenanted area.

Hydrology

- Indigenous land cover contributes to water quality and quantity in tributaries to the Mākāroro River, with the river itself considered an ONF.

Perceptual / Memory

- Regenerating indigenous forest.
- Landform includes a series of ridges, side spurs and steep narrow floored valleys. This contrasts with gentler surrounding landform and typical pasture landcover.
- Appears highly natural and undeveloped.
- Isolation and wildness and separation from more modified lands to the east.

⁴ Central Hawke’s Bay District Plan, Part 2 – District-Wide Matters; Natural Environment Values (NFL-SCHED6).

⁵ Ibid.

⁶ Ibid.

⁷ ‘Central Hawke’s Bay District Outstanding Natural Landscape Assessment’ prepared by Hudson Associates (May 2019).

Legibility / Expressiveness

- Geomorphology is expressed through landform including a series of ridges, side spurs and narrow floored steep V-shaped valleys.
- The dissected landform expresses drainage patterns and regenerating vegetative cover.
- Where vegetation cover is dense, the area appears untamed.
- Moister, south-facing slopes include more plant species diversity.

Transient

- Secluded, quiet and enclosed bush environment, with bird song and the sounds of waterways.

Aesthetic

- High, due to the pattern of the hills and valleys, the general seclusion and quality of the regenerating indigenous vegetation cover.
- Contrast with the developed rural productive farmland to the east and commercial forestry to the northeast.

Naturalness

- Natural landscape, unmodified landform, dense indigenous vegetation including extensive areas of regenerating podocarp forest – some of which is advanced.
- Quality and stage of forest regeneration.

Associative / Shared and Recognised

- Similar vegetation cover and characteristics to the north in Hastings District which includes an ONL overlay (ONFL7).

Recreational

- Common access to the area via the Historic mill site at Wakarara [crossing the Mākāroro River] moving northwards up the valley to Leatherwood Road and accessing the Poutaki DOC hut.
- Hunting (pigs and deer), tramping, mountain biking.

Historical

- Earlier indigenous forest removal for milling (e.g. Historic mill at Wakarara).

Tangata Whenua

- Walking route used by Māori used the valley west of Wakarara Range alternatively named Ngawhakarara. This route traversed the southern edge of the ONF connecting with the Motu o Puka Pā site on the Mākāroro River.

Key Characteristics

- 'High' landscape and visual values derived from the regenerating indigenous vegetation over the eroded landform pattern.
- Indigenous vegetation contrasts with pasture and pine forest which accentuates the qualities of the former.

Potential Issues

- Clearance or degradation of indigenous vegetation.
- Damage to flora and fauna by pests or grazing.
- Establishment of exotic plant species including along stream margins.
- Large scale earthworks and built development.

In addition to ONF-1 discussed above, five Significant Natural Areas (SNAs) are mapped within the Application site. These are as follows with a summary of their vegetation and site type⁸:

SNA-2 (DOC-'Give' 'SNA Block') *"Broadleaved - Kanuka treeland / Indigenous dominated vegetation present on land of high Threatened Environment Class."*

SNA-6 (partly DOC-'Give' 'SNA Block' and 'Island Block' land parcels) *"Mākāroro River channel" Site Type: "Braided channels are known and potential habitat for threatened biodiversity throughout CHDC. Mixed exotic and native vegetation dominates riparian margins. Braided rivers are a rare ecosystem type in the North Island."*

SNA-7 (DOC-'Get' 'SEB') *"Beech-Podocarp-Kanuka-Manuka / Site remains significant due to vegetation types present, and the size of the area. Confidence high, site visit required to determine correct vegetation type."*

SNA-10 (DOC-'Get' 'SEB') *"Rimu-Tawa-Kamahahi forest / Underrepresented vegetation type in varied LENZ threatened land (threat class 1 and 2)."*

SNA-97 (DOC-'Get' 'SEB') *"Rimu-Tawa-Kamahahi forest / Underrepresented vegetation type some of which is land classed as 2 in LENZ threatened environment."*

Operative Hastings District Plan

The Application site is within the Rural Zone (RZ) in the Operative Hastings District Plan (OHDP). Part of the DOC-'Give' land parcel alongside Dutch Creek extends into an Outstanding Natural Feature/Landscape (ONFL7 on the Wakarara Range).

⁸ Central Hawke's Bay District Plan, Part 2 – District-Wide Matters; Natural Environment Values (ECO-SCHED5).

An earlier iteration of the Hastings District Plan (Operative 10 June 2003) under 'Introduction' stated: *"Within the axial ranges the native bush reinforces its separate identity, wilderness character and ecological values. Within other landscape units, native vegetation plays a minor landscape role as remnants of earlier landscapes. Small stands of bush provide interest and relief amidst modified landscapes. They are also significant as remnant habitats and genetic pools."*

A report prepared by Boffa Miskell in 2013 'Review of Landscape Areas and Implications for Plan Review' for Hastings District Council partly included reviewing a 1996 landscape assessment by Isthmus Group, also for Hastings District Council titled 'Outstanding Natural Landscapes Report'. Boffa Miskell state in their later report: *"The 1996 [Isthmus] Landscape Assessment identified 8 broad landscape units and identified 74 selected features and landscapes. The assessment provided comprehensive descriptions of the wider landscape and of the natural and cultural influences that formed its character."*

The Isthmus report has not been reviewed as part of this landscape assessment as it was not available. Nonetheless, the Boffa Miskell report largely upheld its findings, which are relied on.

Part of the 2013 report recommended some changes to mapping of ONLFs. These reports have recommended and underpin the inclusion of ONFL7 in the district plan mapping.

The Boffa Miskell report identified 'key landscape areas' including:

- *"the rugged Kaweka and Ruahine Ranges with native bush and vegetation to the north and west"*

In addition, the Boffa Miskell report provided a high-level overview, spatially identifying eight separate landscape types. The Application site is within the 'Central Ranges' Landscape Type.

The current OHDP does not describe the various landscapes in the district, but does include the following 'place-specific management issues' for ONFL7 'Kaweka and Ruahine Ranges' in Appendix 43: Outstanding Natural Features and Landscapes:

"ONFL7 There is minimal risk to this landscape as much of the land resides within DoC estate, however productive forestry and adjoining land use change can affect the intactness of the native bush cover. Fragmentation of the contiguous bush network, for both biophysical and sensory attributes, must be managed carefully.

Loss of contiguous bush cover from land use change.

Retain mature and 'untouched' vegetation cover.

Maintenance of a dominant 'regional' skyline."

5. Landscape Assessment

As mentioned in Section 2 of this report, the assessment methodology follows best practice guidance set out in Te Tangi a te Manu. To reiterate:

*"[landscape] Character is an expression of the landscape's collective attributes. Values are the reasons a landscape is valued. Values, though, are embodied in attributes. Effects are consequences for a landscape's values resulting from changes to attributes. The landscape's values are managed through managing such attributes."*⁹

"Landscape character is each landscape's distinct combination of physical, associative, and perceptual attributes. A landscape's character entails:

- both tangible and intangible attributes and*
- the attributes in combination (as a whole) and*
- especially the combination that makes a place distinct.*

Character

*The **distinctive nature** of something.*

The quality of being individual in an interesting or unusual way.

*The particular **combination** of qualities in a ...place that makes (it) different from others.*

*...all the **qualities** that make...a place...**distinct** from other ... places. If something has a particular character, it has a particular quality."*¹⁰

*"Landscape character is more than its physical elements. Character encompasses everything about a landscape—its physical, associative, and perceptual dimensions.... 'attributes' means the same as 'characteristics and qualities'."*¹¹

Smedley Exchange Block (SEB) DOC 'Get' land parcel (170ha)

Physical Attributes

This land parcel occupies part of the southern tip of the Wakarara Range. An unnamed stream and tributary to the Mākāroto River bisect the land parcel flowing west to east. To the north of this stream, the land parcel is open and partly surrounded with a belt of fenced indigenous forest with black beech as the dominant canopy cover. Emergent podocarps are largely absent.

At the northern end of the SEB a patch of open pasture is proposed to be transferred to Kaweka Gwavas Forestry with a narrow corridor cleared to provide physical access to the

⁹ Te Tangi a te Manu [5.02].

¹⁰ Te Tangi a te Manu [5.04].

¹¹ Te Tangi a te Manu [5.05].

Gwavas Conservation Area to the north (**Attachment 3**). This corridor would require the removal of part of the highest value beech/podocarp – ecologically considered a ‘*chronically threatened land environment*’. This forest area includes young rimu and mature black beech.

A small unfenced approximately 2,100 m² ephemerally wet shallow basin is also near the northern end of the SEB (**Cover image, Attachment 7**) dominated by indigenous rushes, with occasional cabbage trees, fringed with several remnant kahikatea, rimu, and black beech on higher ground.

The SEB has a reasonably good edge-to-core ratio. A large part of the land parcel’s northern edge abuts the Gwavas Conservation Area and an ONFL. However, a large part of the SEB is currently open and grazed. Overt ecological pest plants have been kept in check by grazing stock and the land parcel does not directly abut plantation forest reducing wilding spread. Nor is the area easily accessible to the public via roads. However, native forested areas throughout the SEB (fenced and unfenced) are browsed by deer, which has resulted in a depleted understorey where palatable broadleaved species appear to be sparse.

The terrain is mostly rolling to very steeply rolling where ridgelines undulate and include sharp ‘creases’ above steep side flanks. The narrow and V-shaped Donovan Gully extends into the land parcel and provides the main farm access via a dirt track. In the west the land parcel stops at the top of a steep scarp above the Mākāroro River.

Six wetland areas are present in the SEB, five in Donovan Gully. These five are small, modified and are understood to be of low quality - typical of a pastoral landscape where stock pugging has created open wetland areas. If stock is removed as is proposed these areas would likely revert back to streams.

As mentioned above, a large part of the land parcel is currently in open pasture and grazed by stock. Some of this area includes obvious slips and scars understood to be largely caused by *Severe Tropical Cyclone Gabrielle* which badly affected the area during February 2023. Some of these erosion scars have been exacerbated by ongoing fluvial erosion and to a lesser extent by tracks and stock movement. The underlying strata is predominantly mixed sedimentary sandstone and mudstone – particularly prone to mass movement. Scarring is largely, but not in all cases, in areas that have been denuded of vegetation - historically for logging, and more recently for pastoral farming. Some isolated areas of emergent limestone and basalt were observed during fieldwork.

Part of the SEB includes an ONFL¹² overlay and three SNAs¹³ are present, the widely held values of which have been included and described above. Observations made during fieldwork broadly accord with these descriptions for the ONF/L and SNA related parts of the SEB. However, this appraisal is based on how these areas appeared from a single site visit. It was impossible to assess the entirety of the land parcel due to time constraints and weather. Additional information following DOC expert review of the Applicant’s terrestrial, freshwater ecological reports and DOC’s own ecologists’ reporting has influenced the assessment of current landscape values of this land parcel discussed next.

¹² ONF/L 7

¹³ SNA-7, SNA-10 and SNA-97.

While the land parcel includes several standard post and wire / mesh stock fences, stock have access to parts of the land parcel, including areas that have ONF/L and SNA overlays, and as such, much of the native understorey is now understood to be browsed, noting that deer (and to a lesser extent, pigs) are also having significant adverse effect on palatable plant species. Some areas are more densely vegetated than others, which may deter stock from entering.

Perceptual Attributes

The SEB is not widely visible to the public from the surrounding landscape due to its relative isolation from settled areas, well inland from the highly productive rural landscape further east towards Hastings. Nor are neighbouring settled areas visible from within the SEB. The area is well separated from the Smedley Station farm base area which further contributes to its feeling of isolation.

The land parcel extends into and from within, appears contiguous with the large ONLF located further north on the Wakarara Range. In non-ONLF areas within the land parcel, patches of indigenous vegetation remain, however their ecological condition has been compromised by deer browsing and stock access in places. Some areas have been afforded SNA protection. But for the most part the land parcel exhibits obvious traits of being historically and extensively logged and cleared for pastoral farming. With the exception of scattered, standalone mature kahikatea and rimu, emergent, old podocarp trees are largely absent from forested habitats (they have been logged out). However, mature black beech forest and treeland is common, particularly in the north of the site, and includes trees up to 20-25 metres in height.

Part of the land parcel is in open pasture which provides a distinct contrast with forested areas. And so the land parcel is perceived as a transition of sorts between less modified indigenous forest cover to the north and essentially pastoral farmland to the south. The contrast between the two land cover types is a positive aspect as it accentuates the qualities of each. Textured forest versus well-managed grassland monoculture. Where present, fencelines / stock exclusion further amplifies this contrast.

In places, the steepness of the terrain, coupled with recent and not so recent landslides and slips is a visual reminder of the physical vulnerability of the landscape, visibly exposing its soft substrates, and how that vulnerability is further exacerbated with further modification to the land – such as through vegetation clearance and the introduction of stock. Stock moving through areas of indigenous vegetation also detracts from perceptual values, as it will be perceived as degrading the forest understorey and physically damaging the ground. It is also acknowledged that deer browse contributes to impeding indigenous regeneration throughout the site.

Other than fencelines and farm tracks, natural elements, patterns and processes prevail. The SEB therefore exhibits a moderate level of naturalness overall, increasing to moderate-high within larger indigenous forest areas adjoining the Gwavas Conservation Area. While natural landforms and indigenous vegetation remain prominent, naturalness is reduced by

historic logging, extensive pastoral modification, stock access, deer browse, modified wetlands, and the presence of approximately 45 ha of pasture.

Associative Attributes

The parts of the SEB which have ONF/L and SNA overlays have, by definition, greater shared and recognised values than if they did not. The land parcel is part of the wider Smedley Station - the first farm in New Zealand to offer a cadetship training young farmers which continues now. Other than these landscape protection overlays and the cadetship programme and its role for general farming use, there are no other specific cultural or historic associations present in the SEB.

‘SNA Block’, ‘Island Block’ and ‘Dutch Creek’ DOC ‘Give’ land parcels (Total 29.7ha)

These DOC ‘Give’ areas include three physically separate land parcels. Two are associated with the Mākāroro River channel and one includes part of Dutch Creek and its margins and several tributaries. As already mentioned, these areas were not able to be accessed during June 2026 fieldwork, nor were visible from afar. On 1 September, Dutch Creek was visited by DOC ecologists and so the following landscape comments considers the ecologist’s findings. Otherwise, this appraisal includes observing high resolution drone images provided by the Applicant (**Attachments 10 - 12**). These images include the waterways in low / normal flows. The three DOC ‘Give’ land parcels are described separately below.

Both the ‘SNA Block’ and ‘Island Block’ land parcels are within or adjacent to the active braided Mākāroro riverbed on alluvial deposits comprising gravel, sand, silt and mud¹⁴.

‘SNA Block’

Physical Attributes

The ‘SNA Block’ includes two SNA overlays (SNA-2¹⁵ and SNA-6¹⁶), although the latter is largely associated with the Mākāroro River active channel / river margin adjacent to the land parcel. A Statutory Acknowledgement Areas overlay also applies¹⁷. This land parcel occupies variable terrain and includes a steep / vertical scarp between approximately 10 and 35 m high where the Mākāroro River has cut in to the sedimentary substrate on the outside of the bend. This sharp drop off separates the braided riverbed below from the neighbouring land above which is in plantation forestry and has been recently harvested. Otherwise, the western and eastern ends of the land parcel grade down to the riverbed in a less abrupt manner. Towards the eastern end of the land parcel part of the heavily vegetated river margin is outside the land parcel.

¹⁴ Geology of the Hawke’s Bay Area (Institute of Geological & Nuclear Sciences 1:250,000 Geological Map 8).

¹⁵ SNA-2: Broadleaved - Kanuka treeland; “Indigenous dominated vegetation present on land of high Threatened Environment Class.”

¹⁶ SNA-6 “Braided channels are known and potential habitat for threatened biodiversity throughout CHDC. Mixed exotic and native vegetation dominates riparian margins. Braided rivers are a rare ecosystem type in the North Island.”

¹⁷ SA-17 “Waipawa River and its Tributaries within the Heretaunga Tamatea Area of Interest.”

Judging by the stature of the vegetation cover, a large part of the western half of the land parcel at lower elevations appears to include an ephemerally active or recently active floodplain. An unnamed tributary passing through the plantation forestry area above has down cut through the terrace discharging out onto the riverbed near the western end of the land parcel.

Based on interpretation of Google Earth imagery and drone imagery - it appears that vegetation cover is varied and includes dense mixed podocarp forest in the eastern half and more open sporadic mixed tree and scrub cover in the western end of the land parcel, for the most part confined to elevations above high river flows. Large patches of cabbage trees are evident. As mentioned, the eastern end appears more physically intact where it is elevated above the river, while the western end includes evidence of gravel braids and open gravel areas interspersed with what appears to be dead or dying trees and fallen trees. The fallen trees appear to be eucalypts possibly knocked over in Cyclone Gabrielle or deliberately felled. Many are still standing, although appear in poor health. Vegetation cover on the lower active riverbed appears to include willow and other exotic riparian scrub and weeds, including pampas grass. Large swathes of rank pasture grass are also present. Due to the proximity of plantation forestry to the north, it is likely that wilding pines will also be present inside the land parcel.

Human induced modifications appear minimal, limited to a cleared, open area in the eastern end which is central to two rough access tracks after crossing the river when possible. A powerline is visible in the area. The area is not farmed.

Perceptual Attributes

This land parcel is visible from farmland-based viewpoints to the south of the Mākāroro River and possibly from Wakarara Road. The area will also be visible from the Historic mill site, which is publicly accessible by road. The area would be perceived as part of the less modified river channel on the true left margin, above which the plantation monoculture will be visible, accentuating contrast. The tall, exposed scarp would be of particular note as it demonstrates the river's erosional down-cutting processes and as such contributes a legible landform component in the land parcel, separating out the different terrace levels.

Indigenous vegetation cover is more advanced and intact in the land parcel's eastern end. This would provide a clue as to how the river margins and terraces would once have appeared. In times of high river flow and flood, some of the land parcel would be inundated, and as such would alter in its visible extent, possibly even as waters receded exposing change in the riverine vegetation patterns.

Associative Attributes

The land parcel has an SNA overlay and as such will have greater shared and recognised values than if it did not. The less steep eastern end of the land parcel is more accessible from the riverbed at times of low flow and as such tracks have been formed through the land parcel between the river bed and the plantation on the terrace above. As such the land parcel will have a small associative value for those who use it as a 'gateway' of sorts, and who will pass through and enjoy the more mature and dense vegetation cover in this end of

the land parcel seen close up. Largely due to its small size, there are no other specific cultural or historic associations present in the land parcel.

‘Island Block’

Physical Attributes

The ‘Island Block’ is roughly circular and appears as an ‘island’ of sorts, in that it is surrounded by the Mākāroro River, Dutch Creek and what looks like an abandoned or ephemeral river channel on its eastern side. In the Central Hawke’s Bay District Plan and Hastings District Plan, the land parcel is not separated from the Mākāroro River channel. As such, and within Central Hawke’s Bay District, the land parcel therefore forms part of an SNA overlay (SNA-6).

The terrain rises very quickly above the riverbed and includes a very tall exposed and bare scarp face that orientates north. The ‘island’ does not appear to be influenced by high river flows, other than its lower edges possibly.

Vegetation cover appears to be dense and intact and appears to be dominated by mature black beech. Weed species are not obvious, and if present would likely be confined to the ‘ephemeral’ channel on the eastern flank, and possibly the land parcel’s lower extremities which may include willow and other weed species that could have spread downstream.

Due to its steepness and inaccessibility, human induced modifications appear to be absent, other than historic logging to remove all large podocarps. The area does not appear to include any tracks or structures.

Perceptual Attributes

Like the ‘SNA Block’ described above, this land parcel is also visible from farmland-based viewpoints to the south of the Mākāroro River and from Wakarara Road which has a nearby hairpin bend. The area will also be visible from the Historic mill site which is publicly available by road. The area would be perceived as a natural extension of what once would have been contiguous native forest descending from the Wakarara Range to the Mākāroro River and along the river. As such it will be perceived as a relatively intact remnant of sorts, and as such will have value. Plantation forestry visible above it will only serve to accentuate the positive contrast between intact native forest and plantation monoculture. The entirety of the land parcel is fully vegetated including mature black beech forest. The exception is the exposed scarp, which displays the substrates of the parcel. An ephemeral stream passes around the north side of the land parcel, accentuating its ‘island-like’ status, its inaccessibility and therefore one reason why the land parcel remains highly natural. In addition, the location of the land parcel and its form highlights the confluence of Dutch Creek with the Mākāroro River at a natural ‘gorge’ of sorts.

The land parcel and its possibly more resistant substrate have pushed the Mākāroro River south and away from the land parcel. This provides the land parcel with a sense of legible ‘solidity’ within the ever-changing riverine environment, and as such, has value.

Associative Attributes

This land parcel appears to be inaccessible or perhaps shows no obvious signs of being accessed. As such, any shared and recognised value will be from its outward appearance. Due to its small size and location, there are no other specific cultural or historic associations present in the land parcel.

When the ‘SNA Block’ and ‘Island Block’ land parcels are considered together

The two land parcels are physically separated from one another by approximately 500 m of variably modified land and the ever-changing braided Mākāro River corridor. The Mākāro River corridor is a regionally significant 4WD opportunity, accessible from the Wakarara Road end or surrounding private land¹⁸.

As a ‘pair’, these two land parcels contribute little in terms of broad landscape connections and pattern and are now disjointed largely due to vegetation clearance and conversion to plantation forestry, which has largely cut off their vegetated context above, although as individuals they retain value as ‘islands’ of sorts. They are now remnants of what once would have been an extensive riparian forest supporting rich levels of biota alongside one of Hawke’s Bay Region’s rare and valued braided rivers. Now, however, both land parcels are somewhat devalued by adjacent large-scale plantation forestry to their north, their relative isolation, and pastoral land use activity to their south over the river. Both these extensive modifications to the landscape have cleared extensive areas of indigenous forest cover both above the river and along its margins, which these land parcels would once have been an integral part of.

In terms of geomorphological processes, the ‘SNA Block’ displays clear evidence of the river’s erosive properties, which energy focussed on the outside of the bend, resulting in a steep scarp. By contrast, the ‘Island Block’ appears more as a ‘bulwark’ against the Mākāro River, which has been pushed southwards.

The exposed very steep scarp faces in both land parcels contribute strongly to their valued attributes, as these landform components articulate the geological underlayers and geomorphological processes very well.

‘Dutch Creek’

Physical Attributes

This land parcel is fully within Hastings District where it is mostly overlain by an ONF/L (Outstanding Natural Landscape Area – ‘Kaweka and Ruahine Ranges’) which partly stops at the Dutch Creek watercourse itself. As such, part of the land parcel is at the edge of a landscape that has been determined to be outstanding.

Dutch Creek itself is in most instances deeply to very deeply incised within tall, steep exposed banks and scarps. The creek tightly meanders leaving open and relatively broad stony or grassy terraces on the insides of the loops, and steep eroded faces on the higher-

¹⁸ Statement of Advice (Recreation) for DOC by M. Harbrow 31 July 2026 [23].

energy erosive outsides of the loops. An intact and florally diverse oxbow wetland is present in the lower reach where it forms part of a terrestrial-freshwater ecological sequence.

Dutch Creek has many tributaries in both the Ruahine and Wakarara Ranges comprising quite a large catchment. Dutch Creek in turn is a tributary to the Mākāroro River.

This land parcel extends from a stretch of the waterway up to the 500 m contour more or less which means the land parcel partly overlaps several tributaries. The underlying substrate which is visibly exposed in many areas is 'sandstone and siltstone with minor shell lenses'¹⁹. Landslides are evident in places, possibly caused by Cyclone Gabrielle where vegetative material including large tree trunks remain in the creek bed below largely exposed cliffs regenerating with ground cover plants.

Vegetation cover density and diversity generally increase the further upstream where large emergent podocarps and black beech form the canopy. Vegetation overhangs the stream in many places. In the central section of the land parcel and separately towards the confluence with the Mākāroro River plantation forestry is close to both sides of the creek where native vegetation cover is open and scrubby.

Due to the proximity of plantation forestry particularly to the east, wilding pines are present inside the land parcel, some of which are now 'old man pines'. Willow, lupins and other exotic weed species have invaded into the land parcel at its southern end. Throughout the land parcel, dead and dying trees are seen sporadically still standing.

Apart from historical logging and localised influences associated with adjacent plantation forestry, browsing pressure, and exotic weed species, the land parcel retains a largely intact indigenous character.

Perceptual Attributes

While there are several gravel roads and two public tracks²⁰ at higher elevations on both sides of Dutch Creek, the land parcel will likely not be visible due to intervening abundant, tall vegetation (both native and plantation forest). Where visible, such as from the air, or perhaps from the east when the plantation forestry has been harvested, the land parcel would not be perceived as being any different either from the ONF/L land above it or from adjacent land that is not outstanding but appears no different to it.

The deeply incised Dutch Creek waterway itself is the most noticeable and unique local landscape element, mostly experienced when in the creek corridor itself along with its varied sounds depending on flow rate and where waters pass over boulder substrates or debris.

The land parcel is perceived as being highly natural and remote – particularly the further north within it as the separation distance from the modified landscape to the south of Mākāroro River grows. A feeling of isolation will be acute due to the narrowness of the corridor, its steep sides and its many turns, negating long-distance views up and down it.

¹⁹ Geology of the Hawke's Bay Area (Institute of Geological & Nuclear Sciences 1:250,000 Geological Map 8).

²⁰ Yeomans Track (west side) and Poutaki Track (east side).

Indigenous vegetation is relatively intact, more so the further north one travels up the creek and so the land parcel is perceived as highly natural despite localised evidence of historical logging, adjacent plantation forestry and exotic species in lower reaches.

The general steep-sided nature of the slot-like corridor, and the presence of recent landslides and debris piles/dams in places is a visual reminder of the physical vulnerability of the landscape, where its soft substrates appear as bright scars, rapidly regenerating in ground cover plants and small shrubs.

Associative Attributes

This land parcel partly includes an ONF/L overlay and as such these parts of it will have greater shared and recognised values than if it did not. The land parcel is contiguous with the Ruahine Forest Park and there may be some incidental use of the Dutch Creek area by recreationalists, such as for hunting and fishing²¹. Having said that, the narrow, steep sided land parcel appears to be inaccessible other than via Dutch Creek. As such, any shared and recognised value will be from these limited parties and probably only when experiencing the land parcel from the creek bed. Due to its small size and location, there are no other specific cultural or historic associations present in the land parcel. The historic Ellis hut is located near the source of Dutch Creek to the north and outside the land parcel. This could technically be accessed via the Dutch Creek corridor on foot / small farm vehicle but would be more likely to be accessed via Ellis Road and the Wakarara Road end²².

6. Evaluation of Landscape Character

An assessment of landscape character considers natural elements, patterns and processes (which can be considered ‘natural resources’) and how these co-exist and to what extent they may or may not have been altered by human-induced modifications.

The relevant legislation to consider this under is the Conservation Act which defines ‘natural resources’ as:

- *plants and animals of all kinds; and*
 - *the air, water, and soil in or on which any plant or animal lives or may live; and*
 - *landscape and landform; and*
 - *geological features; and*
 - *systems of interacting living organisms, and their environment; -*
- and includes any interest in a natural resource.*

The preceding section described in detail and assessed the various attributes of the landscape within each land parcel and how these land parcels fit within their broader landscape setting. The below evaluates the overall (existing) landscape character based on

²¹ Statement of Advice (Recreation) for DOC, M. Harbrow, 31 July 2026, [32].

²² Ibid, [25].

all attributes when bound together. This is what makes the four separate land parcels distinct from one another.

Under 'Scenario 2', this assessment accounts for several 'direct' improvements to the SEB that are proposed as part of the land exchange but otherwise considers the four land parcels as they are at this point in time ('Scenario 1').

This report does not apply separate findings on the seven-point scale for 'physical', 'perceptual' and 'associative' values as they are all different aspects contributing to an overall finding of landscape character. In other words, each are interconnected and inform one another which is the approach supported in Te Tangi a te Manu, where it states at [5.04] under 'Character':

"Landscape character is each landscape's distinct combination of physical, associative, and perceptual attributes. A landscape's character entails:

- both tangible and intangible attributes and*
- the attributes in combination (as a whole) and*
- especially the combination that makes a place distinct.*

Character

The distinctive nature of something.

The quality of being individual in an interesting or unusual way.

*The particular **combination** of qualities in a ...place that makes (it) different from others.*

*...all the **qualities** that make...a place...**distinct** from other ... places. If something has a particular character, it has a particular quality."*



Figure 1: Seven-point scale from Te Tangi a te Manu Aotearoa New Zealand Landscape Assessment Guidelines, July 2022.

SEB DOC 'Get' land parcel

This 170ha land parcel is adjacent to the Gwavas Conservation Area / ONF/L and for this reason is closely associated with this less modified and highly natural landscape. In addition, the ONF/L overlays part of the land parcel, as do three SNAs which further contributes to physical, perceptual and associative values.

The topography within the land parcel varies and undulates and retains a largely black beech canopy with young mixed podocarp forest and lower indigenous forest cover in the north of the block and in less stock-accessible, steeply sided or wetter gully areas.

Geomorphological processes are obvious where the soft substrates have been weathered down, now forming steep sided ridgelines separated with narrow V-shaped valleys. Landslips and scarring are evident in many places. However, the land parcel is in large part fully accessible to stock for grazing which has denuded the understorey in places.

Despite approximately 47 ha of the SEB being currently in grazed open pasture - due to the area's remoteness and its lack of visibility from outside view it has an overall **'Moderate'** landscape character. This is partly contributed by the remaining indigenous forest cover contrasted with open pastoral grassland. With regards to edge effects, the land parcel abuts an ONF/L and so part of the land parcel's edge is less susceptible to weed and animal pests compared if it abutted a more modified landscape.

'SNA Block' 'Give' land parcel - Mākāroro River channel

This land parcel is on a relatively narrow strip of land between the Mākāroro River channel of which it partly occupies and a higher terrace mostly under a commercial forestry land use activity. The land parcel represents a small remnant of riparian forest.

Part of the land parcel retains mature mixed podocarp forest, while part includes scrubby mixed native and exotic vegetation, including weed species.

A steep exposed terrace scarp is within the land parcel which contributes strongly to its legibility as a landform that has been shaped by the erosive properties of the Mākāroro River.

The land parcel is visible, particularly from the south, including from the river channel and the Historic mill site which is publicly accessible. As such the land parcel is not particularly remote.

The land parcel includes an SNA which contributes to its perceptual and associative values.

Due to the land parcel's long and linear shape, it is largely 'edge' and susceptible to river transported weeds on one side and wildings from the plantation above on the other side. This lessens its landscape value.

Overall, the land parcel is assessed to have a **'Low-moderate'** to **'Moderate'** level of landscape character due to its SNA status, mature podocarps present, its river corridor location and setting and strong geomorphic legibility. Detractors include its isolated location as a remnant of sorts, its modified vegetation cover and terrestrial surrounds, its linear shape with a high edge to core ratio and likely threats from neighbouring areas.

'Island Block' 'Give' land parcel - Mākāroro River channel

This island-like land parcel occupies an inside loop of the Mākāroro River and the point where Dutch Creek meets the Mākāroro River.

In terms of vegetation cover, the land parcel appears to be fully intact and includes no obvious human-induced modifications.

The land parcel includes a steep exposed scarp contributing to its legibility and substrates.

The land parcel is highly visible, particularly from Wakarara Road and the Historic mill site which is publicly accessible. As such the land parcel is not particularly remote.

The land parcel has no landscape protection overlays, but due to the physical difficulty in accessing it, retains strong natural elements and patterns, which contributes to its perceptual and associative values.

As the land parcel is quite small, its core is relatively small surrounded by an extensive 'edge'. Part of this edge abuts plantation forestry, while the majority abuts the river channel.

Overall, the land parcel is assessed to have **'Moderate-high'** landscape character due largely to its intactness and location at the confluence of Dutch Creek with the Mākāroro River.

'Dutch Creek' 'Give' land parcel

This long and tightly meandering land parcel includes parts of Dutch Creek, its margins and some tributaries. Much of the land parcel is within a large ONF/L ('Kaweka and Ruahine Ranges' ONFL7).

The land parcel has a high level of legibility as the creek has obviously down-cut through the soft substrates exposing steep bank or cliff faces in many areas.

The land parcel is for the most part well vegetated with a high diversity of canopy and emergent species and appears largely intact other than the southern end of the land parcel where historic clearance has occurred including on neighbouring land. These areas are now regenerating.

The land parcel is not especially accessible and due to its tight and enclosed incised character is remote. Though the land parcel is highly linear, and therefore high in 'edge' versus core, this is not really the case as the land parcel mostly abuts and is essentially part of a large area of intact indigenous mixed podocarp forest which is ONF/L or where not, has the same outward looking properties. To the east, commercial plantation forestry occupies the terrace lands on the true left above Dutch Creek, however indigenous vegetation has been retained along the steep stream margins providing a landscape and visual buffer.

Overall, the land parcel is assessed to have **'Moderate-high'** to **'High'** landscape character.

7. Waterways

Waterways, wetlands and their margins are of particular importance to an assessment of overall landscape character as they are a key indicator of landscape health and intactness - and as such are addressed separately below.

SEB DOC 'Get' land parcel

Four streams pass through the SEB - named in the Applicant's SLR report as: 'North Stream', 'Middle Stream', 'Donovan Stream' and 'South Stream' (**Attachment 3**). All discharge into / are tributaries of the Mākāroro River and all but one (Donovan Stream) have their headwaters in the Wakarara Range / Gwavas Conservation Area / ONL. Only Donovan Stream is fully outside the ONL. For these reasons, the water quality from North Stream and Middle Stream on entering the SEB land includes typically clear and likely good water quality as the upper catchments are largely clothed in mixed podocarp forest or lower regenerating indigenous forest cover. The stretch of South Stream upstream of the SEB partly flows through grazed pasture and may have somewhat reduced water quality. South Stream has not been specifically assessed.

Where the streams exit the SEB, water quality is not considered 'very high' or 'pristine' as stock have access to the streams either upstream of the SEB land (South Stream), and/or from within the land parcel. The streams are not fully fenced from stock. The various streams are cobbled and have a mix of shallow runs and deeper pools in forested areas. The stream in Donovan Gully is the exception and includes large areas of grazed pasture within its catchment. This stream has open, muddy and ephemerally wetted margins and includes small 'wetland' areas formed by stock pugging. The water appears cloudy. All streams are prone to rapid water level rise in times of extreme rainfall, causing bank slumping and stream bed erosion, and resulting in turbid water. In extreme weather events culverts have been washed away in some instances.

The primary modification to streams has occurred through land use change. In this case where native forest has been converted to pasture. This is most marked in Donovan Gully where the various streams' form and physical character is now substantially altered. Other lesser modifications are limited to the presence of culverts in several places allowing farm vehicles and stock to cross waterways. Mechanical excavation work has been regularly undertaken to clear slips and debris. There is no evidence of any streamside planting having been undertaken inside the land parcel.

Overall, the waterways and their margins within the SEB, apart from Donovan Stream, are assessed to have on average a 'Low-moderate' to 'Moderate' landscape value, due to the streams' locations largely in forested and unfarmed areas. Several streams pass through or have caused landslips which has degraded values where these instances occur. Donovan Stream is the exception with a 'Low' landscape value which keeps the overall rating no greater than 'Low-moderate'.

'SNA Block' 'Give' land parcel - Mākāroro River channel

This land parcel largely comprises both an old higher terrace well above the (rare for the region) braided gravel Mākāroro River (SNA-6) and partly a lower gravelly terrace and river bed that is regularly inundated during high river flows. As such, the Mākāroro River influences about half of the land parcel, potentially highly. In another part of the land parcel, the river margin includes a steep and variable in height exposed scarp and above this and clear of high river flows, dense missed podocarp forest on the sand and mudstone substrates.

Approximately 2.5 kms west of the land parcel, the Mākāroro River exits the gorge near Gold Creek and upstream of this point, the river tightly meanders through a large catchment which includes vast and dense indigenous forest cover on the Ruahine Ranges and ONL. As such water quality is expected to be very high before the Mākāroro passes through the more modified landscape eastward of the Ruahine Range.

In addition to the Mākāroro River, a tributary to it flows across the land parcel, with its source and small catchment on the indigenous forested western flank of the Ruahine Range. The lower part of this tributary passes through an area under a commercial plantation forestry land use, although the watercourse itself is separated from this exotic cover and harvesting, where it is confined within a deeply incised gully clothed in regenerating indigenous forest cover. Where the tributary flows across the land parcel, vegetation cover includes both

native species and exotic weed cover. Here the margins and possibly the water quality are influenced by runoff from the plantation forestry on the terrace above, which may include debris following harvesting.

Other than the introduction of exotic weed species, there is no evidence of any human-induced modifications to the watercourses or their margins within the land parcel.

Overall, the parts of the waterways and their margins within this land parcel are assessed to have **'Moderate'** landscape value, due to their proximity and ecological connection with the Mākāroro River coupled with some wetland habitat present. Landscape values are slightly downgraded as the watercourses and their margins are mostly within the western end of the land parcel which has lower levels of naturalness. This is due to the presence of exotic weed species (including willow) and the areas ongoing re-infestation from upstream weedy margins sites. Another detractor is the tributary passing through a plantation forestry area, where debris, including unwanted seedlings will likely be transported.

'Island Block' 'Give' land parcel - Mākāroro River channel

This land parcel is essentially surrounded by the Mākāroro River on one side and a former channel of Dutch Creek on the other. The confluence of Dutch Creek and the Mākāroro River is currently to the north of the land parcel. It may be that in times of flood, waters from Dutch Creek are also forced around the east side of the land parcel. Patterns in the gravel riverbed suggest this may be the case. At these times, the land parcel would appear as an island. The land parcel itself does not appear to have any watercourses within it.

The margins of the land parcel include dense mixed podocarp forest which appears intact and extend down to where high river flows will have likely naturally 'trimmed' the vegetation cover. There appears to be little exotic weed cover. 'Islands' of willow and other exotic woody weeds are not readily apparent other than in one area outside the land parcel. This opinion may differ if a site visit was undertaken. This assumption is based on desktop study and observations.

There is no obvious evidence of any human-induced modifications to the waterways or their margins within or abutting the land parcel.

Overall, the parts of the waterways and their margins where they abut or are within this land parcel are assessed to have **'High'** landscape value, largely because the margins appear to include intact indigenous forest cover.

'Dutch Creek' 'Give' land parcel

This tightly meandering land parcel includes a large portion of Dutch Creek, its margins and some tributaries. Dutch Creek's catchment is extensive, located both on the eastern flank of the Ruahine Range, which is covered in dense indigenous mixed podocarp forest, and on the western flank of the Wakarara Range vegetation cover also includes extensive commercial plantation forestry extending close to Dutch Creek. However, both margins which include steep scarps and banks are heavily clothed in dense indigenous forest cover. Much of the land parcel is ONF/L ('Kaweka and Ruahine Ranges' ONFL). Frequent landslips are found along the banks and cliffs above the waterway, with various debris fields in the

stream corridor. Steep sandstone and siltstone cliffs on the energy side of the creek rise above and contrast with depositional cobbled beaches on the low energy parts of the meanders. Landscape values decline slightly at the southern end of the land parcel where plantation on both sides closes in on the stream margins.

Water quality is expected to be high as the majority of the catchment is deemed outstanding or highly natural and dense indigenous vegetation cover. Any influence that the commercial forestry on higher land above the true left of the river may have on the land parcel is likely well buffered by the indigenous 'buffer strip' of sorts although the efficacy of this vegetation as a 'filter' is assumed. Some wilding pines and 'old man pines' are present within the land parcel. Vegetation cover while highly natural is not pristine.

Other than localised effects associated with historic logging, adjacent plantation forestry and scattered exotic species, the watercourse remains largely intact.

Overall, the land parcel is assessed to have '**High**' landscape value.

Summary: Landscape Character

	Landscape Value	Waterways Value	Combined Value (columns 1 & 2)
SEB DOC 'Get' Scenario 1: current	Moderate	Low-moderate	Moderate
SEB DOC 'Get' Scenario 2: with direct and indirect improvements	Moderate-high	Moderate	Moderate
SNA Block DOC 'Give'	Low-moderate to Moderate	Moderate	Low-moderate to Moderate
Island Block DOC 'Give'	Moderate-high	High	Moderate-high
Dutch Creek DOC 'Give'	Moderate-high to High	High	High

Table 1 – Summary of findings on the seven-point scale.

In **Table 1** above under 'Scenario 1' there will be an overall net loss to DOC regarding combined landscape value – associated with the SEB's large proportion of pasture, inferior quality waterways, wetlands and their margins compared to the DOC Give areas. Terrestrial values (excluding the areas of pasture) and where native vegetation is present are however comparable. Positives include the SEB's larger area of extensive indigenous vegetation, its greater diversity and close association with the Gwavas Conservation Area; however, the native forest is affected by stock access and deer browse. In contrast, the DOC land parcels,

particularly Dutch Creek, include more intact freshwater environments, stronger terrestrial-freshwater ecological connections, and higher quality wetland and stream habitats.

Under 'Scenario 2' the gap in values between the SEB and the higher-value DOC Give land parcels narrows when the Applicant's proposed direct improvements through ecological enhancement and management actions undertaken on the SEB (fencing, pest control, weed control, planting and management planning) are considered. In addition, Scenario 2 accounts for the Applicant's indirect improvements comprising wider project initiatives following the construction of the dam and future reservoir. These improvements to the SEB rest with recreation improvements including increased public access and visitor use (walking and cycling), historic interpretation, and expanded recreation opportunities - notably a rarer lake-based experience. This will improve the practical conservation and recreational value of the SEB once it becomes part of the conservation estate. Landscape value includes both ecological and recreational attributes.

However, under both scenarios as proposed the de-stocked and formerly grazed pasture and rank grass which covers approximately 45 ha of the block will be left largely unchanged. This area will quickly become an ongoing management liability for DOC as discussed below. Any proposed planting through direct improvements is limited to the Donovan Gully area. However, any ecological gains are likely to take many years, and potentially decades, to fully materialise and be demonstrated.

The ongoing vegetative change from retired pasture to weed cover and its ongoing management required of DOC covering approximately 45 ha of the SEB represents a negative aspect of the proposal in landscape terms. This aspect 'drags down' the overall landscape values of the SEB in both Scenario 1 and 2. While the area of land being given is substantially larger than what is taken, the character and required management of the landscape areas is not like for like. In this case landscape 'quantity' will not be synonymous with landscape 'quality'.

For this reason and when the direct and indirect improvements are weighed against the current and likely future condition of a large part of the SEB there will be a net loss to DOC in terms of landscape value.

8. The Weed Issue

Following the land exchange 'physical handover' from Smedley Station to DOC, the SEB will be de-stocked and fenced from the wider Smedley Station. It is understood that DOC are not able or willing to continue to graze the SEB. DOC does not intend to carry out revegetation within the land parcel other than a little riparian planting.

If the approximately 45 ha area of pasture was retained as grazed pasture or if retired, was actively managed by the Applicant towards returning it to an indigenous scrub/forest ecosystem, the conservation values of the SEB would be greatly improved over the currently proposed scenarios to a 'High' or possibly 'Very high' level.

However, unless the methodology for ongoing management of the pasture area was revisited by the Applicant, abundant weed growth will result in what is a large part of the

SEB. Agricultural weeds such as gorse, broom, and thistle (currently kept in check by grazing stock) will rapidly emerge and spread, although over time they are likely (but not guaranteed) to be superseded by kanuka, manuka, and small-leaved coprosma species. Taller woody weed species such as (but not limited to) wilding conifers, rowan and birch will also emerge, and/or self-seed into the new weed cover. These more shade-tolerant species will not be so easily suppressed by any native regrowth.

During the site visit, gorse, wilding exotic conifers (not limited to *Pinus radiata*) and other exotic weed species were observed, including inside an adjacent QEII Block which was densely infested with gorse cover. Gorse can be a nursery crop as native plants will grow within it, eventually overtopping the gorse, shading it out and suppressing it and there would be abundant native seed source around the area allowing this to happen via wind and bird dispersal. However, palatable native broadleaved species will struggle to establish in the SEB unless animal pests are adequately controlled.

As such, large parts of the SEB that are currently in pasture and not proposed to be revegetated will therefore become an immediate and then ongoing management liability for DOC. Any increase in weed cover in the SEB will also threaten existing areas of native vegetation – particularly at the margins.

At present several direct improvements to the SEB are proposed by the Applicant. These include:

- Stock-proof fencing of the SEB boundary with Smedley Station and areas of indigenous vegetation. It is assumed that 'areas of indigenous vegetation' within the SEB will not be separately fenced as stock will be removed.
- Pest control work across full 170ha extent of the SEB including:
 - i. Long term pest animal control (what defines 'long term' is not clarified. At least five years is assumed).
 - ii. Long term pest plant control (what defines 'long term' is not clarified. At least five years is assumed). Wilding pines are mentioned, but no other weed species are mentioned which would be far more difficult to manage.
- Restoration planting of the Donovan's Gully area within the SEB (extent currently unknown but will be provided in the future management plan post the land exchange taking place).
- Preparation of a management plan post the land exchange taking place.

While the above may go some way to addressing the weed issue, it is understood that the management plan which sets out the detail for how the topics listed above will be designed, implemented, monitored and managed over what is assumed to be at least a five-year time period has not yet been prepared. This document will not be prepared until after the land exchange has been approved / before dam construction commences. As such, the detail of the management plan and the outcomes sought - critical to maintaining the areas of native vegetation alongside how the retired pasture area is managed are not able to be fully

understood. Robust animal and plant pest management will be critical to the success of any direct improvements and the management implications of the SEB overall.

It is assumed that the above improvements will be implemented over a five-year period before the SEB is physically handed over to DOC. Given the size and extent of the SEB areas to be managed and the level of animal and plant pests currently present, this is a very short time period. Animal and plant pest control would ideally be required to occur over several decades to guarantee the success of any direct improvements, particularly with regards to vegetation change in the retired pastoral part of the block.

9. Conclusion

This landscape assessment has considered the landscape character and values of the land proposed to be exchanged between the Department of Conservation and Tukituki Water Security Limited. The assessment has been undertaken in accordance with the principles and methodology contained within *Te Tangi a te Manu Aotearoa New Zealand Landscape Assessment Guidelines* and has considered physical, perceptual and associative landscape attributes together with the character and condition of waterways and their margins.

The land proposed for acquisition by DOC (SEB) contains a range of positive landscape attributes, including indigenous vegetation, wetlands, waterways, and direct connections with existing public conservation land. However, a large part of the area has been historically modified through vegetation clearance, pastoral farming and ongoing animal pest pressures. As a consequence, existing landscape character and naturalness are variable across the SEB and substantial restoration and management intervention will be required to realise its longer-term landscape potential.

By comparison, the land proposed to be relinquished generally exhibits higher levels of existing naturalness, ecological integrity and landscape character. These areas contain more intact landscape patterns and processes, stronger terrestrial-freshwater connections, and a greater expression of natural landform and waterway values within their current condition.

The Applicant's proposed enhancement measures have the potential to improve the condition and landscape character of the SEB over time. However, these benefits remain prospective and are dependent upon successful implementation of fencing, restoration planting, weed management and sustained animal pest control. Given the scale of restoration required and the uncertainty associated with long-term management outcomes, the anticipated benefits cannot presently be relied upon as equivalent to the existing values of the land proposed to be surrendered. While these measures may improve the SEB's landscape character and waterways values under Scenario 2, the overall combined landscape value remains Moderate due to the continuing influence of the retired pasture areas and associated management requirements.

The proposal may also provide additional recreational opportunities associated with the future reservoir and improved public access. These benefits contribute positively to the practical conservation and recreation value of the SEB, but do not offset the higher existing landscape quality and freshwater values present within the land proposed to be surrendered.

Accordingly, based on the current state of the respective land parcels and having regard to their existing landscape character, naturalness and waterway values, this assessment concludes that the proposed land exchange would result in a **net loss** of landscape value to DOC at the time of transfer. While there is potential for landscape enhancement over the longer term, the existing landscape quality of the land proposed to be surrendered is generally greater than that of the land proposed to be acquired.