

Natural character Assessment Sheet

Map Unit	WNC1
Description	Waitaki River Mouth



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Low-mid energy hapua. Landforms comprise mixed sand-gravel spits enclosing a predominantly freshwater lagoon. Landforms remain essentially natural albeit modified as the consequence of flow regulation of the Waitaki River.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are wave overwash from the sea and freshwater outflow from the Waitaki River. The former is unconstrained. Flow regulation of the Waitaki River has altered the latter processes.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Water quantity is highly affected by upstream land-use (with water abstraction for irrigation, hydropower) albeit minimum flows are maintained. Water quality adversely affected by point and non point discharges up stream.	Medium low

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Wave and flood action limit vegetation, although flow regulation has lessened these effects.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic vegetation including marram, lupins, exotic grasses and weeds. Attempts are being made to control extent of lupins and willows.	Low
The (apparent) health and level of modification of intertidal and aquatic habitats?	Largely natural, but exposure to wave action and periodic floods mean a depauperate intertidal and subtidal community.	Medium
The degree to which wildlife is present and sustained?	Very low diversity and abundance of flora and fauna. Likely breeding area for red-billed gull and white fronted tern	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings or structures. The Kaik road constitutes the only apparent earthworks.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	A high degree of both tumultuous and undomesticated wildness. Moderate scenic quality.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	While retaining a reasonably high level of perceptual naturalness the unit is adversely affected by the control exerted upstream on the flows of the Waitaki River.	No

Natural character Assessment Sheet

Map Unit	WNC2
Description	Waitaki Delta



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Landforms comprised of a low river terrace terminating in an abrupt coastal cliff fronted by mixed sand-gravel beaches. In most places capped with loess. Landforms have been modified in places by gravel extraction and the diversion and the creation of new water courses.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and essentially unconstrained; albeit erosion may have been exacerbated by water abstraction and modified beach sediment budgets.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with high level of mixing. Some reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely exotic grasses and weeds to high water mark. Very small amount of regeneration taking place in some streambeds.	Low
The degree to which the vegetation cover is indigenous to the area?	Low. Largely exotic grasses and weeds with very small amount of regeneration.	Low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Very exposed gravel and coarse sand shoreline subject to constant disturbance from wave action. Low threat from sedimentation and farming runoff.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed gravel beaches of southern New Zealand are of low diversity and low abundance. Finfish are common offshore and occasionally targeted by commercial trawlers.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings are evident within the unit. The only structures apparent are farm fences. There are a number of gravel &/or sand extraction operations along the edge of the sea cliff, and roads, tracks and drainage channels are evidence of earthworks.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	The unit has high tumultuous and undomesticated wildness, but low scenic quality.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	While the geomorphological and hydrological processes remain reasonably intact in this unit, the ecology is highly modified and the perceptual naturalness is fairly low.	No

Natural character Assessment Sheet

Map Unit	WNC3
Description	Oamaru



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shore protection structures (sea-wall, rip-rap, breakwater), occasional dredging of the harbour, reclamation and development of the hinterland have modified landforms and seabed. The back-beach and immediate strip of land are essentially un-natural.	Low
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes (onshore/offshore and longshore sediment transport) modified and constrained by the above structures.	Low
The degree to which water quality and quantity are unaffected by land use activities?	Water quality is likely to be good albeit reduced at times due to runoff from industry and minor marine spills. Relative limited flushing in the harbour compared to the open coast means that water quality here is likely to be poorer than elsewhere in the unit.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Highly modified.	Low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic trees, grasses and weeds	Low
The (apparent) health and level of modification of intertidal and aquatic habitats?	Extensive reclamation in port area. Artificial rocky intertidal zone around port and breakwater.	Medium
The degree to which wildlife is present and sustained?	Intertidal flora and fauna within port and along breakwater is in moderately good health. Evidence of sedimentation from land runoff. Intertidal and subtidal communities are in moderately good health and reflect communities from equivalent substrate in other southern South Island harbours. Breeding area for little blue penguin and sooty shearwater. Roosting area for spotted shag.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Buildings within the unit are restricted to the southern portion adjacent to the harbour. Significant sea wall built the length of the unit plus the break waters and harbour facilities and quarry detract significantly from the natural character of the land and seascapes.	Low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some wildness in the tumultuous sense. Little in the undomesticated sense. Little scenic value.	Low

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Low	While the unit is important for wildlife, human habitation has otherwise modified it to a significant degree.	No

Natural character Assessment Sheet

Map Unit	WNC4
Description	Cape Wanbrow



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Headland with cliffs and sand beaches. Earthworks associated with tracks, gun emplacements and a quarry have modified the northern part of the headland. The remainder is essentially natural albeit landforms have been slightly modified by roading, tracks, buildings and pastoral land use.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Cleared land mostly grazed or developed.	Low
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops. Small patches of regenerating indigenous flora on northern part of headland.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. Rocky intertidal zone largely natural, with minimal influenced by erosion. Under moderately low threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Habitat for Stewart Is shag, sooty shearwater, little blue penguin, spotted shag. Visited by reef heron, Fiordland crested penguin, Caspian tern. Possible breeding area for yellow-eyed penguin. Haul out site for NZ fur seal and sea lions.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A few buildings present in the unit including gun emplacements, a lighthouse and farm buildings. Earthworks are reasonably extensive, but include tracking constructed during the recent felling of a pine forest on the headland. The more eastern and southern parts of the headland are less modified.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high degree of tumultuous wildness, particularly associated with the sea and cliffs. Lesser degree of undomesticated wildness owing to agricultural use. Moderately high wild and scenic qualities.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	While the geomorphology of the headland has been modified to a degree, natural process remain dominant and water quality moderately high. The ecology of the landward portions of the unit has been significantly modified but it remains important habitat for wildlife. It has moderately high perceptual naturalness and wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC5
Description	Beach Road



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Low coastal terrace comprised predominately of Late-Pleistocene coastal sands and gravels, with tuff outcrops and reefs in the south of the unit fronted by a sandy beach. A scarp separates the terrace from the beach with some limited foredune development at the mouth of occasional streams. These are dominated and modified by marram. Landforms somewhat modified by roads, carparks, riprap, but essentially natural.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained although limited along small sections of the unit by shore protection works. The accelerated erosion of the coastal scarp may be related to changes in the coastal sand budget related to land use changes in the Kakanui catchment.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate. Area has been farmed. Indigenous vegetation being allowed to regenerate in small patches.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Small patches of indigenous vegetation along with occasional exotic shrubs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal sandy and rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A reasonable number of dwellings and farm buildings are present within this unit which detract from the natural character. Earthworks include those relating to the golf course at the northern end of the unit, and the coastal road which runs the length of the unit.	Medium low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness. Less undomesticated wildness. Some scenic quality.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are largely intact within this unit. The terrestrial ecology is significantly modified due to farming and exotic vegetation but the marine ecology is more intact. The unit has moderately low perceptual naturalness and moderate wild and scenic value only.	No

Natural character Assessment Sheet

Map Unit	WNC6
Description	Beach Road (limestone section)



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Low limestone cliffs with coves, sandy beaches, and sub-tidal reefs. Landforms slightly modified by roads and quarrying but the landform is essentially natural.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained, except the rate of erosion and the sediment budget of the coastal system may be at least in part related to landuse change in the Kakanui catchment.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate. Area has been farmed. Indigenous vegetation being allowed to regenerate in small patches.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Small patches of indigenous vegetation along with occasional exotic shrubs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal sandy and rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Some dwellings and farm buildings within this unit. The road runs through the length of the unit and there is some evidence of quarrying. A large irrigation dam is present within, or on the margin of the unit.	Medium low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness. Less undomesticated wildness. Some scenic quality.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are largely intact within this unit. The terrestrial ecology is significantly modified due to farming and exotic vegetation but the marine ecology is more intact. The unit has moderately low perceptual naturalness and moderate wild and scenic value only.	No

Natural character Assessment Sheet

Map Unit	WNC7
Description	North Kakanui Headland



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Semi-vegetated cliffs with sand and gravel beaches and intertidal and subtidal reefs. Landforms slightly modified by roading, boatramp, rock groyne and a few buildings, but are essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from runoff and outflow from the Kakanui Estuary is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Low. Area has been farmed. Indigenous vegetation being allowed to regenerate in places.	Low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Small patches of indigenous vegetation along with occasional exotic trees and shrubs.	Low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Some dwellings and other buildings. Earthworks limited to roads and driveways.	Medium low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness. Less undomesticated wildness. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are largely intact. The terrestrial ecology is significantly modified by human activities but the marine ecology is more intact. The perceptual naturalness is fairly low and the scenic value is moderate only.	No

8 Natural character Assessment Sheet

Map Unit	WNC8
Description	Kakanui Beach



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Late-Pleistocene coastal deposits between the North Kakanui Headland at the outlet of the Kakanui Estuary. Dominant landuse is pastoral. Landforms have been slightly modified by tracks and roading. Limited dune formation. Where present modified by marram.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes (onshore/offshore and longshore sediment transport) largely unconstrained. Reduced water flows in the Kakanui due to upstream water abstraction have likely altered river mouth dynamics, namely a decrease in overwash events and an elongation of the spit.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Freshwater inputs have been reduced by water abstraction in the Kakanui River. Water quality is likely to be reduced at times from outflow from the Kakanui Estuary.	Medium

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely exotic grasses and weeds to high water mark.	Low
The degree to which the vegetation cover is indigenous to the area?	Low to moderate. Largely exotic grasses and weeds.	Low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Relatively exposed sandy shoreline subject to constant disturbance from wave action. Moderate threat from sedimentation and farming runoff.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Finfish are common offshore and occasionally targeted by commercial trawlers.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Some buildings within the unit. The road way, tracks and a boat ramp are present.	Medium low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness and some undomesticated wildness. Some scenic value.	Medium low

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium low	Geomorphological and hydrological processes have been modified by upstream water abstraction. The terrestrial ecology is significantly modified, but marine ecology is more intact. Perceptual naturalness and wild and scenic value are moderately low.	No

Natural character Assessment Sheet

Map Unit	WNC9
Description	Kakanui Estuary



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Tidal river. Margins slightly modified by reclamation, roading and tracks.	Medium low
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Tidal processes are essentially natural although accumulation of sediment at the mouth of the estuary due to reduced freshwater flows has limited tidal influence. Water abstraction has reduced water quantity and associated hydrological processes.	Medium low
The degree to which water quality and quantity are unaffected by land use activities?	Water quantity is highly affected by upstream landuse albeit minimum flows are maintained. Water quality is reduced due to landuse intensification and non point discharges up stream, and is not always correlated with rainfall. Water quality exceeded safe levels of the national microbiological water quality guidelines for recreational	Low

	contract on four occasions over the 2014/2015 summer sampling period.	
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Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate degree of naturalness. Small percentage of saltmarsh. Some evidence of reclamation around perimeter in upper estuary.	Medium
The degree to which the vegetation cover is indigenous to the area?	Small remnants of wetland remain. Exotic grasses evident around perimeter and associated with reclaimed areas.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered fair. Under moderate threat from reclamation, farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium
The degree to which wildlife is present and sustained?	Roosting and feeding habitat for a diversity of waterbirds. Likely spawning area for finfish such as flounder, galaxiids.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Some buildings present (boat houses). A large road bridge crosses the unit. Some roading and tracks around margins.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Little wildness in either the tumultuous or undomesticated senses. Little scenic quality.	Medium low

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium low	Geomorphological and hydrological processes are significantly impacted by upstream abstraction and land uses. Human activity has compromised both the aquatic and terrestrial ecologies. The area has some perceptual naturalness but moderately low wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC10
Description	Kakanui Point



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Low tuff headland with vegetated and semi-vegetated cliffs, beaches and intertidal and subtidal reefs. Modified by earthworks for roads and dwellings.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from outflow from the Kakanui Estuary is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Low. Area has been farmed. Indigenous vegetation being allowed to regenerate in places.	Low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Patches of indigenous vegetation on cliffs along with occasional exotic trees and shrubs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds and possible breeding site for sooty shearwater.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Landward portion significantly modified by residential development (roads and houses). Seaward edge much less impacted by human habitation.	Low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	High tumultuous wildness around the coastal margin, but low undomesticated wildness owing to residential development. Some scenic quality around the sea margin.	Low

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium low	While the geomorphological and hydrological processes within the unit are largely intact, the terrestrial ecology is significantly modified and the perceptual naturalness and wild and scenic value are low. The marine ecology is more intact.	No

Natural character Assessment Sheet

Map Unit	WNC11
Description	All Day Bay



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone terrace with a well defined vegetated scarp fronted by low foredunes and a sandy beach. Foredunes formed in association with and modified by marram.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are modified by marram. Essentially unconstrained.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram and lupin covered dunes with extensive exotic and indigenous shrubs along scarp with exotic grasses behind.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Medium. Marram, lupins, exotic grasses. Moderate cover of regenerating indigenous vegetation on scarp.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate health, medium low modification. Exposed sandy shoreline subject to disturbance from wave action. Moderately low threat from sedimentation and farming runoff.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Sealions may haul out here occasionally. Finfish are common offshore. Indigenous vegetation is likely to support indigenous terrestrial invertebrates, lizards and bush birds. Beach provide suitable habitat for shorebirds.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Some buildings (dwellings and farm buildings) and structures (orchard or horticultural). Little or no evidence of earthworks except for the coast road which passes through the unit to the east of the One Day Bay estuary.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness with less undomesticated wildness. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	While the geomorphological and hydrological processes are largely intact within this unit the terrestrial and marine ecologies are compromised by human activity. It has moderate perceptual naturalness and wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC12
Description	All Day Bay Lagoon



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shallow lagoon somewhat modified by reclamation. Outflow has probably been constrained beneath the road bridge, and by accretion of marram.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Undetermined post-European fluvial input, manifest as accelerated sedimentation and modification of hydrological processes. Inlet mouth processes likely to have been constrained by marram.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Unknown but likely to be some water degradation due to nutrient and sediment runoff and, to a lesser extent, contamination from waterfowl, both non-native and the consequence of decreased tidal circulation and flushing of the unit. Limited outflow and intermittent closure of the estuary mouth limits flushing of the unit.	Medium

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Margins dominated by natural/regenerating indigenous terrestrial vegetation.	High
The degree to which the vegetation cover is indigenous to the area?	Regionally Significant Wetland (no. 2) and QEII Covenant. Margins are predominantly indigenous vegetation, including <i>Carex</i> sp., <i>Scirpus</i> sp., <i>Cotula coronopifolia</i> , glasswort (<i>Sarcocornia quinqueflora</i>).	High
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of wetland naturalness, despite parts of the lagoon being moderately modified. Input from farm runoff. Invertebrate communities likely typical of modified and enriched soft-bottom estuaries.	Medium High
The degree to which wildlife is present and sustained?	High. Habitat for Shoveller and Grey Duck (<i>Anas superciliosa</i>), Grey Teal (<i>Anas gracilis</i>), Oystercatcher (<i>Haematopodidae</i>), Pied Stilt (<i>Himantopus himantopus</i>), Black Stilt (<i>Himantopus novaeseelandiae</i>). Also visited by Royal Spoonbill (<i>Platalea regia</i>), Glossy Ibis (<i>Plegadis falcinellus</i>) and White Heron (<i>Egretta alba modesta</i>) and Banded Dotterel (<i>Charadrius bicinctus</i>). Wader species recorded include Pied Stilt (<i>Himantopus himantopus</i>), Banded Dotterel (<i>Charadrius bicinctus</i>), Royal Spoonbill (<i>Platalea regia</i>) and White Heron (<i>Egretta alba modesta</i>). Large and high diversity of waterfowl.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings present within the unit but there is a road bridge across the mouth of the estuary. A road is present along the southern margin of the estuary.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Little wildness in either the tumultuous or the undomesticated senses. Some scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	While the geomorphological and hydrological processes within the unit have been modified to a degree the unit has high ecological	No

	value, both in its terrestrial and aquatic spheres. It has reasonably high perceptual naturalness and wild and scenic value.	
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Natural character Assessment Sheet

Map Unit	WNC13
Description	Orore Point



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Basaltic headlands with cliffs, small coves, beaches and intertidal and subtidal reefs. Modified by earthworks for roads and dwellings but essentially unmodified.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate. Area has been farmed. Indigenous vegetation being allowed to regenerate in places.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Small patches of indigenous vegetation along with occasional exotic shrubs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A dwelling and associated structures is present within the unit. The coast road passes through the unit, and there is a large, apparently constructed, pond adjacent to the dwelling. Tracking present on Bridge Point.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness and less undomesticated wildness. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	While the geomorphological and hydrological processes within the unit are largely intact, the terrestrial ecology is significantly impacted by human activity. The marine ecology is less modified. The unit has moderate perceptual naturalness and wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC14
Description	Te Hakapureirei Beach



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Late Pleistocene coastal terrace. Fronted in the north of the unit by low foredunes, formed in association with marram. Small areas of riprap in the south of the unit. Modified with road and dwellings but essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are modified by marram. Dominant processes in the south of the unit are erosional and constrained in places by shore protection structures.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram and lupin covered dunes with extensive indigenous and exotic shrubs along scarp and exotic grasses behind. Modified with road, occasional car parks and walking tracks.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Medium. Marram, ngaio, muehlenbeckia, lupins, exotic grasses. Moderate cover of regenerating indigenous vegetation between beach and road.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate health, medium low modification. Exposed sandy shoreline subject to disturbance from wave action. Moderately low threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Sealions may haul out here occasionally. Finfish are common offshore. Indigenous vegetation is likely to support indigenous terrestrial invertebrates, lizards and bush birds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	One dwelling and associated farm buildings present within the unit. The coast road runs almost the full length of the unit. There is a gabion wall protecting the road from encroachment from the sea in the southern part of the unit.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness and some undomesticated wildness. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	The geomorphological and hydrological processes within the unit are predominantly intact. The terrestrial ecology is more modified but the marine ecology is also predominantly intact. The unit has moderately high perceptual naturalness and moderate wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC15
Description	Bow Alley Creek



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Narrow river estuary now divided into two lagoons by causeway. Mouth intermittently closed. Reclamation and conversion of surrounding land to pasture appears to have resulted in channelization of the river mouth.	Medium low
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Construction of causeway has likely limited freshwater outflow and inland tidal influence, and associated geomorphic and hydraulic processes.	Medium low
The degree to which water quality and quantity are unaffected by land use activities?	Unknown; but runoff from the surrounding agricultural land in combination with limited outflow, is likely to degrade water quality.	Medium low

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate degree of naturalness. Small areas of wetland and saltmarsh. Remainder is modified with pastoral land on both banks. Some evidence of reclamation.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Saltmarsh vegetation largely indigenous. Mixture of exotic and indigenous trees along banks. Exotic grasses evident around perimeter and associated with farmed areas.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered moderate. Under threat from reclamation, farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium
The degree to which wildlife is present and sustained?	Likely habitat for a diversity of waterbirds. Edges provide suitable habitat for terrestrial invertebrates and lizards. Infauna likely typical of moderately enriched lowland streams. Likely spawning area for finfish such as flounder, galaxiids.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A number of structures are present including a group of what appear to be water tanks, a causeway and a road bridge. There appears to have been some reclamation and there is a track around part of its southern margin.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Little wildness in either sense of the word. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium low	Geomorphological and hydrological processes are significantly modified. Terrestrial ecology is significantly compromised and the marine ecology is compromised also. The unit has moderate perceptual naturalness and moderate wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC16
Description	Waianakarua River



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shallow River estuary. Mouth intermittently closed. Gravel and water extraction upstream are likely to have influenced landforms downstream, but the estuary is essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Processes affecting the migration and opening of the river mouth are modified at times by water abstraction and possibly gravel extraction upstream.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Water quality is likely to be reduced due to runoff and groundwater inputs. Limited outflow restricts flushing of the unit during periods of low flow. Upstream water abstraction has reduced water quantity, albeit minimum flows are maintained.	Medium low

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of wetland naturalness. Regionally significant wetland 164. Modified with pastoral land on both banks. Some evidence of regeneration.	Medium high
The degree to which the vegetation cover is indigenous to the area?	Mixture of exotic and indigenous trees along banks. Exotic grasses associated with farmed areas evident beyond banks. Some small patches of regenerating indigenous vegetation plus exotic trees and shrubs on banks. Presence of shore cress (<i>Lepidium tenuicaule</i>), which has a threat status of declining.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered moderately high. Under threat from farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium high
The degree to which wildlife is present and sustained?	Habitat for nationally or internationally rare or threatened species or communities. Likely habitat for a diversity of waterbirds. Edges provide suitable habitat for terrestrial invertebrates and lizards. Infauna likely typical of moderately enriched lowland streams. Likely spawning area for finfish such as flounder, galaxiids.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No apparent structures or buildings within this unit. No noticeable earthworks.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some degree of undomesticated wildness and lesser tumultuous wildness. Some scenic quality.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are compromised by water abstraction upstream which also diminishes water quality. The terrestrial ecology is moderately intact, and the marine ecology is more so. The unit has moderately high perceptual naturalness and moderate wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC17
Description	Lookout Bluff



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone headlands with some basalt sections. Landforms comprise of cliffs (many vegetated), gravel and sand beaches, intertidal and sub-tidal reefs. Hillslopes unstable in places, likely related to deforestation, at least in part. Low foredunes present in places, formed with and modified by marram.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Cleared land currently grazed.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops. Reasonably extensive patches of regenerating indigenous flora at southern end of headland	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. Rocky intertidal zone largely natural, with minimal influenced by erosion. Under moderately low threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Likely paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Breeding area for little blue penguin. Breeding area for yellow-eyed penguin. Haul out for fur seals. Cliffs likely provide seabird habitat.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings or structures save farm fences. No discernible earthworks.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Reasonably high in tumultuous wildness with lesser undomesticated wildness. Has some scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	While geomorphological processes are reasonably intact, hydrological processes are compromised to a degree. The terrestrial ecology is moderately intact, and the marine ecology more highly intact. The unit provides important wildlife habitat. It has high perceptual	No

	naturalness and moderately high wild and scenic value.	
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Natural character Assessment Sheet

Map Unit	WNC18
Description	Moeraki / Hampden Beach



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone cliffs (some vegetated) fronted by a sandy beach and subtidal platforms. Moeraki Boulders, concretions, located in intertidal. The hillslopes are unstable in places; related to deforestation at least in part. Low foredunes present in places, formed with, and modified by, marram. Essentially natural, albeit landforms modified by dwellings, carparks, and roads in places.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality from farmland runoff is likely at times, particularly after high rainfall.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely exotic trees and grasses to top of scarp, but with occasional quite large patches of remnant and regenerating indigenous vegetation,	Medium low
The degree to which the vegetation cover is indigenous to the area?	Moderately low. Marram, muehlenbeckia, lupins, exotic trees, exotic grasses. Efforts being made to replant with indigenous shrubs and grasses in some areas and regeneration being encouraged in others.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, generally low modification. Moderately exposed sandy shoreline subject to disturbance from wave action. Moderately low threat from sedimentation and farming runoff.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Sealions may occasionally haul out here. Finfish are common offshore.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A number of buildings and structures including the Moeraki Boulders Café, railway lines and a railway bridge. Some roading and tracks.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness. Some undomesticated wildness. Definite scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are reasonably intact. The terrestrial ecology is significantly modified, but the marine ecology is less modified. It has moderate perceptual naturalness and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC19
Description	Kakaho Creek



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Narrow river estuary with multiple channels. Mouth intermittently closed. Margins modified by reclamation and conversion of surrounding land to pasture although relatively natural wetlands are present in places.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Undetermined post-European fluvial input, manifest as accelerated sedimentation and modification of hydrological processes.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Unknown but likely to be some water degradation due to nutrient and sediment runoff Limited outflow and intermittent closure of the estuary mouth limits flushing of the unit.	Medium

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	With a high degree of wetland naturalness, Kakaho Creek is recognised as regionally significant wetland 69.	Medium high
The degree to which the vegetation cover is indigenous to the area?	Highly modified along either bank with pasture dominating and exotic trees present. Small ribbons of regenerating indigenous vegetation and some saltmarsh along banks.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate health. Area compromised by surrounding farmland and threats from sedimentation and nutrient runoff.	Medium
The degree to which wildlife is present and sustained?	Infauna likely typical of enriched lowland soft-bottom streams. Habitat for a variety of water birds.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No structures. No discernible earthworks.	Medium high

Experiential naturalness

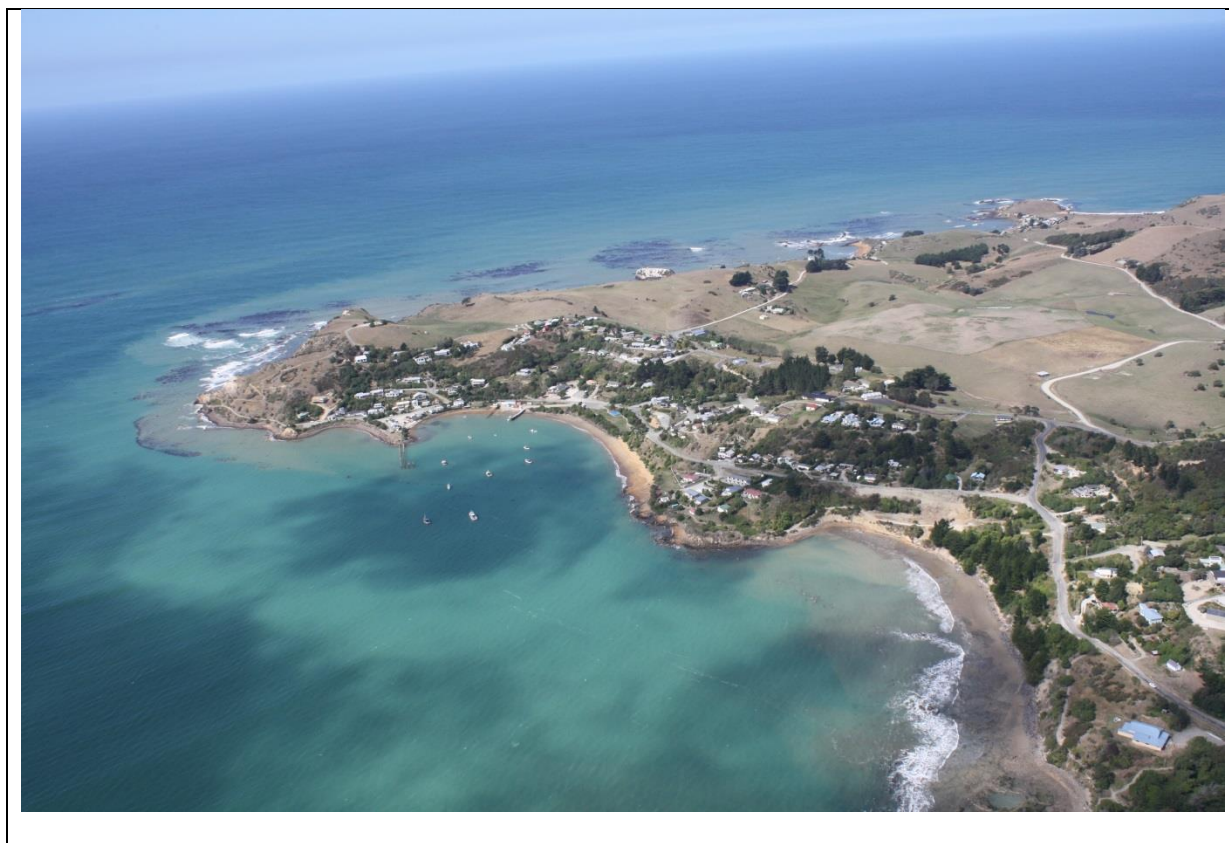
Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness contributed by the sea. Only moderate undomesticated wildness. Low to moderate scenic quality.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	The geomorphological and hydrological processes within the unit are reasonably significantly compromised. While the wetlands associated with the creek are reasonably intact, the rest of the terrestrial and marine ecologies are significantly compromised. The unit has moderately high perceptual naturalness, and moderate wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC20
Description	Moeraki



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Basalt headland with some sandstone. Landforms modified by dwellings, roads, wharves and shore protection structures.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant sediment transport processes are largely unconstrained. Erosional processes are constrained by shore protection works.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff and septic tanks is possible.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Residential development beyond beaches and on top of cliffs. Patches of regenerating indigenous vegetation interspersed with exotic trees and grasses.	Medium
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops and in built up area. Some moderately large patches of indigenous vegetation.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. <i>Durvillaea</i> dominated community on coast and <i>Macrocystis</i> community offshore. Rocky intertidal zone largely natural. Under low threat from sedimentation from erosion and land runoff. Beaches typical of semi sheltered sandy shores of southern New Zealand.	Medium
The degree to which wildlife is present and sustained?	Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community largely intact. Rich and diverse rocky intertidal epifauna typical of semi-sheltered southern coasts. Under occasional pressure from recreational fishers and low threat from sedimentation and human land-based activities. Sandy shore infauna of low diversity and abundance.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Significant evidence of earthworks. Many structures (wharves, slipways, seawalls) and buildings (dwellings, boat sheds, hotels, fish factories).	Low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some tumultuous wildness. Little undomesticated wildness. Some scenic value.	Medium low

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	The geomorphological processes of the unit are compromised to a degree, the hydrological processes less so. The terrestrial and marine ecologies are moderately compromised but the unit is important for wildlife. It has low perceptual naturalness, and moderately low wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC21
Description	Moeraki Point and adjacent coast



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Landforms comprise of headlands, cliffs, intertidal and subtidal reefs, and small coves with sandy beaches. Small settlements and roading has modified landforms in places by essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Pastoral development beyond beaches and on top of cliffs. Patches of regenerating indigenous vegetation interspersed with exotic trees and grasses.	Medium
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops. Some moderately large patches of indigenous vegetation on cliff faces.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. <i>Durvillaea</i> dominated community on coast and <i>Macrocystis</i> community offshore. Rocky intertidal zone largely natural. Under low threat from sedimentation from erosion and land runoff. Beaches typical of semi exposed sandy shores of southern New Zealand.	Medium high
The degree to which wildlife is present and sustained?	Breeding area for yellow-eyed penguin, little blue penguin, Stewart Island shag, little shag, spotted shag, royal spoonbill. Visited by crested penguin, rockhopper, erect crested and Fiordland crested penguin. Breeding area for NZ fur seal and haul out for sea lions, elephant seals and leopard seals. Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community largely intact. Rich and diverse rocky intertidal epifauna typical of exposed southern coasts. Under occasional pressure from recreational fishers and low threat from sedimentation and human land-based activities. Sandy shore infauna of low diversity and abundance.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Two settlements are present within this unit, and a number of minor roads. Earthworks (other than associated with the roading) are not apparent.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Fairly high tumultuous and undomesticated wildness (away from the settlements. High scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
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Medium high	The geomorphological and hydrological processes of the unit are slightly compromised. The terrestrial ecology is moderately compromised, but the marine ecology less so, and the unit provides important habitat for wildlife. It has moderately high perceptual naturalness and moderately high wild and scenic value.	No
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Natural character Assessment Sheet

Map Unit	WNC22
Description	Katiki Point



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Distinctive long, narrow basaltic headland. Landforms comprise cliffs, sub-tidal and intertidal reefs, coves with sandy beaches. Some dune forms present to the south of the unit, modified by marram. Earthworks for roading and buildings have modified landforms, but overall unit is essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Pastoral development on top of cliffs. Patches of regenerating indigenous vegetation interspersed with exotic trees and grasses.	Medium
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops. Some moderately large patches of indigenous vegetation regenerating.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. <i>Durvillaea</i> dominated community on coast and <i>Macrocystis</i> community offshore. Rocky intertidal zone largely natural. Under low threat from sedimentation from erosion and land runoff.	Medium high
The degree to which wildlife is present and sustained?	Breeding area for yellow-eyed penguin, broad billed prion, white faced storm petrel, red-billed gull, kelp gull, white fronted tern. Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community largely intact. Rich and diverse rocky intertidal epifauna typical of exposed southern coasts. Under occasional pressure from recreational fishers and low threat from sedimentation and human land-based activities.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A lighthouse and associated buildings is present on the headland, plus a second dwelling. A large car park is located adjacent to the lighthouse, and tracks are evident leading to the tip of the point.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	High tumultuous wildness and lesser undomesticated wildness. High scenic value.	High

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	The geomorphological and hydrological processes within the unit are predominantly intact. The terrestrial ecology is modified to a degree, but the marine ecology less so. The unit provides important wildlife	No

	habitat. It has moderately high perceptual naturalness and high wild and scenic value.	
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Natural character Assessment Sheet

Map Unit	WNC23
Description	Estuary south of Katiki Point (Kemp Road Lagoon)



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shallow estuary. Mouth intermittently closed. Stabilisation of sand dunes at mouth by marram is likely to have decreased the frequency of washover events and restricted water flow through the estuary mouth. Some reclamation of margins has occurred.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Stabilisation of the spit has likely limited freshwater outflow and the inland reach of the tidal influence, reducing the associated geomorphic and hydraulic processes.	Medium low
The degree to which water quality and quantity are unaffected by land use activities?	Unknown but runoff from the surrounding agricultural land use in combination with limited outflow is likely to have degraded water quality.	Medium low

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Kemp Road Lagoon recognised as regionally significant wetland 70. High degree of wetland naturalness. Surrounded by pastoral land and some evidence of reclamation.	Medium
The degree to which the vegetation cover is indigenous to the area?	Moderate amount of saltmarsh and indigenous vegetation around margins. Compromised by pasture surrounding lagoon.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Under threat from farming runoff, introduced weeds, nutrient pollution, stock grazing. Infauna likely typical of enriched lowland soft bottom streams.	Medium
The degree to which wildlife is present and sustained?	Regionally significant waterfowl and wader habitat. Breeding and feeding area for a number of species, including Paradise Shelduck (<i>Tadorna variegata</i>), shoveller and Grey Duck (<i>Anas superciliosa</i>), Grey Teal (<i>Anas gracilis</i>), Pied Stilt (<i>Himantopus himantopus</i>), Black Swan (<i>Cygnus atratus</i>) and Spur-winged Plover (<i>Vanellus miles novaehollandiae</i>).	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings. There is a fence which extends out into the estuary with a raft or some other structure at its end. Other than this the unit appears unmodified.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Little tumultuous wildness but moderately high undomesticated wildness. Some scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	The geomorphological and hydrological processes within the unit are compromised. The terrestrial and marine ecologies are also compromised, but the unit still provides important habitat for wildlife. It has high perceptual naturalness and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC24
Description	Katiki Beach



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Low sandstone cliffs (some vegetated) capped by loess fronted by a sandy beach in south of unit, Holocene shore and river deposits in the north of the unit. Low foredunes present in places, formed with and modified by marram. Essentially natural, albeit landforms modified by dwellings, carparks, roads and railways.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes in south of unit are erosional and are essentially unconstrained albeit riprap has been placed to minimise erosion. Dune processes in north have been constrained by marram.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times. Water quality in estuaries is likely degraded due to surrounding agricultural land use.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram and lupin covered cliffs with extensive indigenous shrubs along cliff tops and exotic grasses behind. Modified with road, railway, occasional car parks and walking tracks.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Medium. Marram, ngaio, muehlenbeckia, lupins, exotic grasses. Moderately extensive regenerating indigenous vegetation atop cliffs.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate health, medium low modification. Exposed sandy shoreline subject to disturbance from wave action. Moderately low threat from sedimentation and farming runoff. Intertidal and subtidal rocky reef platforms largely natural.	Medium high
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Intertidal and subtidal reefs harbour rich and diverse flora and fauna. Sealions may haul out here rarely. Finfish are common offshore. Low pressure from recreational fishers and divers. Indigenous vegetation is likely to support indigenous terrestrial invertebrates, lizards and bush birds. Beach and cliffs provide suitable habitat for shorebirds. Likely breeding area for yellow-eyed penguin.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Dwellings, farm buildings, tracks, State Highway 1 and the main trunk railway all impinge on the naturalness of this unit.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness, slightly lesser undomesticated wildness. High scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Despite interventions along the coast, geomorphological and hydrological processes are largely intact. While the terrestrial ecology is significantly modified the marine ecology is more intact, and the unit provides important habitat for wildlife. Human interventions in the landscape impact significantly on the perceptual naturalness of	No

	the unit but it has moderately high wild and scenic value.	
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Natural character Assessment Sheet

Map Unit	WNC25
Description	Shag Point town



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Eroding rocky shoreline with exceptional examples of supratidal reefs, with adjoining intertidal and subtidal reefs. The supratidal reef surface contains large concretions and fossil dinosaurs Landforms somewhat modified in places by dwellings and roads, but essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Dominant processes are erosional and are essentially unconstrained	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely exotic shrub and lupin covered cliffs, but with extensive indigenous shrubs regenerating along cliffs. Exotic trees and grasses behind. Modified with road, car parks and walking tracks.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Medium. Marram, ngaio, muehlenbeckia, lupins, exotic trees and grasses. Moderately extensive regenerating indigenous vegetation on cliff faces.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate health, medium low modification. Exposed shoreline subject to disturbance from wave action. Moderately low threat from sedimentation and farming runoff. Intertidal and subtidal rocky reef platforms largely natural.	Medium high
The degree to which wildlife is present and sustained?	Infaunal communities typical of disturbed sandy beaches of southern New Zealand are of relatively low diversity and low abundance. Intertidal and subtidal reefs harbour rich and diverse flora and fauna. Sealions and fur seals may haul out here rarely. Finfish are common offshore. Low pressure from recreational fishers and divers. Indigenous vegetation is likely to support indigenous terrestrial invertebrates, lizards and bush birds. Beach and cliffs provide suitable habitat for shorebirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Cribs and other dwellings, and roading are notable within this unit.	Medium low

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	High tumultuous wildness but fairly low undomesticated wildness. Some scenic quality	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are largely intact within the unit. The terrestrial ecology is significantly modified, but the marine ecology is more intact. The unit provides reasonably important habitat for wildlife. The unit has moderately low perceptual naturalness and while it has high tumultuous wildness it	No

	has only moderate scenic quality.	
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Natural character Assessment Sheet

Map Unit	WNC26
Description	Shag Point



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone headland with low cliffs, subtidal and intertidal reefs. Hillslopes unstable in places, related to deforestation and mining at least in part. Some landform modification for roading and carparks but essentially natural.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Main processes are erosional and are essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from runoff and outflow from the Shag Estuary is possible at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness of macroalgal beds on subtidal reefs. Pastoral and forestry development beyond cliffs. Patches of regenerating indigenous vegetation interspersed with exotic trees and grasses.	Medium
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic trees and grasses evident along cliff tops. Some moderately large patches of indigenous vegetation regenerating.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. <i>Durvillaea</i> dominated community on coast and <i>Macrocystis</i> community offshore. Rocky intertidal zone largely natural. Under low threat from sedimentation from erosion and land runoff.	Medium high
The degree to which wildlife is present and sustained?	Habitat for sooty shearwater, spotted shag, Stewart Island shag, yellow-eyed penguin, reef heron. Haul out site for sea lions, and fur seals. Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community largely intact. Rich and diverse rocky intertidal epifauna typical of exposed southern coasts. Under occasional pressure from recreational fishers and divers. Under low threat from sedimentation and human land-based activities.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	A few small buildings on the uphill side of the unit, and one dwelling. Roading, tracks, two car parks and a boat ramp impinge on the naturalness of the unit.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness and slightly lesser undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Geomorphological and hydrological processes are largely intact. The terrestrial ecology is significantly compromised, and the marine ecology less so. The unit provides important habitat for wildlife. It has moderate perceptual naturalness and moderately high wild and	No

	scenic value.	
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Natural character Assessment Sheet

Map Unit	WNC27
Description	Shag River Sandspit



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Late-Holocene barrier (spit) enclosing the estuary. The landform elements comprise foredunes and possibly transgressive dune features, (probably parabolic dunes). Dune morphology is modified by marram.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are modified by marram. No sand transport from beach to hinterland due to dune stabilisation. Washover processes and associated sand transport are now highly constrained.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from outflow from the Shag River Estuary is possible.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram covered sand backed by indigenous shrubs and exotic grassland.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Moderate, with extensive pasture beyond dunes. Dunes largely covered by marram.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Sheltered sandy shoreline. Moderately low threat from sedimentation and farming runoff. Some reclamation evident.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of exposed sandy beaches of southern New Zealand. Moderate diversity and high abundance of some species. Roosting habitat for shorebirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings or structures. Some evidence of tracking, but very minor.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness. High undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are significantly compromised, as is the terrestrial ecology. The marine ecology is more intact and the unit is reasonably important as wildlife habitat. It has high perceptual naturalness and reasonably high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC28
Description	Shag River Estuary



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shallow tidal estuary much in-filled with both fluvial and marine sediments. Fluvial input was probably enhanced during forest clearance. Estuary margins modified by conversion to pasture and reclamation.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Undetermined post-European fluvial input, manifest as accelerated sedimentation and modification of hydrological processes. The tidal flow through the estuary mouth has likely been constrained and accelerated following stabilisation of the enclosing spit associated with marram.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Water quality is generally good. Some water quality degradation due to runoff, groundwater inputs and deposition of sediment during high flows. Limited outflow restricts flushing of the unit. Upstream water abstraction has reduced water quantity albeit minimum flows are maintained.	Medium

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of wetland naturalness, especially in the lower reaches of the estuary. Regionally significant wetland 136. Moderate percentage of saltmarsh, approaching 30%. Remainder is largely sandflats. Some evidence of reclamation around perimeter in upper estuary.	Medium high
The degree to which the vegetation cover is indigenous to the area?	Saltmarsh largely indigenous. Exotic grasses evident around perimeter and associated with reclaimed areas.	Medium high
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered good. Under moderate threat from erosion, reclamation, farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium
The degree to which wildlife is present and sustained?	High degree of naturalness. Scarce wetland type. Saltmarsh community with glasswort (<i>Sarcocornia quinqueflora</i>), jointed rush (<i>Juncus articulatus</i>) and <i>Atriplex</i> spp. Supports recreational fisheries for whitebait/inanga (<i>Galaxias</i> spp.) and brown trout (<i>Salmo trutta</i>), as well as habitat for flounder (<i>Rhombosolea</i> sp.), mullet and stargazer.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No structures, buildings or apparent earthworks.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high undomesticated wildness, lesser tumultuous wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Geomorphological and hydrological processes are significantly compromised, but terrestrial and marine ecologies are reasonably intact. The unit has high perceptual naturalness, and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC29
Description	Cliffs between Shag and Stoney Rivers



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone cliffs, some semi-vegetated, with coves and pocket beaches. Hillslopes unstable in places probably related to deforestation at least in part, but overall essentially natural. Some small areas of low dunes formed in association with and modified by marram.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes are predominantly erosional and essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with low turbidity. Some minor reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Terrestrial vegetation patterns are highly un-natural. Vegetation comprises pasture and crops, with patches of exotic trees. Some small patches of sparse native forest and scattered native shrubland.	Medium
The degree to which the vegetation cover is indigenous to the area?	Exotic trees and grasses evident along cliff tops. Little indigenous terrestrial vegetation apart from sparse, scattered native trees and shrubs on farmland and at top of coastal cliffs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of sandy beaches. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Infauna typicla of exposed sandyt beaches of southern New Zealand. Sea lions may haul out occasionally.	Medium

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings, structures (except for farm fences) or earthworks within this unit.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness with lesser undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	The unit has reasonably intact geomorphological and hydrological processes, but has significantly compromised terrestrial and marine ecologies. It has high perceptual naturalness and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC30
Description	Stoney Creek Spit



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Late-Holocene barrier (spit) enclosing the estuary. Landform elements comprise foredune and wash-over deposits. Dune morphology is modified by marram.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are modified by marram. No sand transport from beach to hinterland due to dune stabilisation. Washover processes and associated sand transport, now highly constrained.	Medium low
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some reduction in water quality resulting from outflow from the Stony Creek is likely at times	Medium

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram covered sand backed with very occasional indigenous shrubs interspersed with exotic grasses.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Moderate, with extensive pasture to south. Dunes largely covered by marram.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Sheltered sandy shoreline. Moderately low threat from sedimentation and farming runoff. Some reclamation evident.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of exposed sandy beaches of southern New Zealand. Moderate diversity and high abundance of some species. Roosting habitat for shorebirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings, structures or apparent earthworks .	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous and undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	Geomorphological and hydrological processes are significantly compromised as are the terrestrial and marine ecologies. The unit has high perceptual naturalness and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC31
Description	Stoney Creek Estuary



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Shallow tidal estuary much in-filled with both fluvial and marine sediments. Fluvial input was probably enhanced during forest clearance.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Undetermined post-European fluvial input, manifest as accelerated sedimentation and modification of hydrological processes. Tidal flow through estuary mouth has likely been constrained and accelerated following stabilisation of the enclosing spit associated with marram.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Water quality degradation due to runoff. Limited outflow restricts flushing of the unit.	Medium low

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Some wetland naturalness, especially in the lower reaches of the estuary. Moderate percentage of saltmarsh remains. Some evidence of reclamation around perimeter in upper estuary.	Medium
The degree to which the vegetation cover is indigenous to the area?	Saltmarsh largely indigenous. Exotic grasses evident around perimeter and associated with reclaimed areas.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered good. Under moderate threat from erosion, reclamation, farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium
The degree to which wildlife is present and sustained?	Moderate degree of naturalness. Shabitat for vriety of water birds. Likely habitat for spotted shag.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings within the unit. A few mai mai are present within the estuary. A road is partly located within the unit.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Some undomesticated wildness, and less tumultuous wildness. Some scenic value.	Medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium	The geomorphological and hydrological processes are significantly compromised within the unit, as are the terrestrial and marine ecologies. It has moderately high perceptual naturalness and lesser wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC32
Description	Cliffs south of Stoney Creek



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Sandstone cliffs, some semi-vegetated, with coves, beaches and intertidal reefs. Hillslopes unstable in places probably related to deforestation at least in part. Overall landforms/seabed essentially natural.	Medium High
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes are predominantly erosional and essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with low turbidity. Some minor reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Terrestrial vegetation patterns are un-natural. Vegetation comprises pasture and crops, with patches of exotic trees along cliff tops. Some very small patches of sparse scattered native shrubland.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Exotic trees and grasses evident along cliff tops. Little indigenous terrestrial vegetation apart from sparse, scattered native shrubs on farmland and at top of some coastal cliffs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of sandy beaches. Under moderate threat from sedimentation and farming runoff. Offshore reefs largely natural.	Medium high
The degree to which wildlife is present and sustained?	Infauna typical of exposed sandy beaches of southern New Zealand. Sea lions may haul out occasionally. Offshore platform reefs provide valuable habitat for a variety of subtidal flora and fauna.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	One node of farm buildings and structures (apart from farm fences). Little noticeable earthworks.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Reasonably high tumultuous wildness but lesser undomesticated wildness. Some scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	The unit has reasonably intact geomorphological and hydrological processes, but the terrestrial ecology is significantly compromised. The marine ecology is reasonably intact, and the unit has moderately high perceptual naturalness and wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC33
Description	Bobbys Head



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Basalt headland with coastal cliffs, intertidal and subtidal reefs. Essentially natural albeit landforms have been slightly modified by pastoral land use.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes are predominantly erosional and relatively unmodified.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with low turbidity. Some minor reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Cleared land currently grazed. Some areas of regenerating indigenous vegetation on cliff faces. High degree of naturalness of macroalgal beds on subtidal reefs.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Intertidal and subtidal macroalgal flora indigenous. Exotic grasses evident along cliff tops. Small patches of regenerating indigenous flora on headland	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of macroalgal beds on subtidal reefs. Rocky intertidal zone largely natural, with minimal influenced by erosion. Under moderately low threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Subtidal reefs valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Likely paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Very limited terrestrial habitat. Breeding area for yellow-eyed penguin, sooty shearwater, spotted shag, and little blue penguin. Haul out site for fur seals. Cliffs likely provide habitat for a wide variety of seabirds.	High

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No evidence of earthworks. No buildings. Farm fences the only structures.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness. Less undomesticated wildness. Some scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Geomorphological and hydrological processes are reasonably intact. The terrestrial ecology is significantly compromised, but the marine ecology is more intact, and the unit provides important wildlife habitat. It has high perceptual naturalness and moderately high wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC34
Description	Tavora



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Prograded dune barrier with washover and low dunes, enclosing small lagoon. Landforms have been modified by marram, albeit in places are now evolving in association with native dune binding plants introduced by the Yellow-Eyed Penguin Trust.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are, for the most, modified by marram. Limited sand transport from beach to hinterland due to dune stabilisation.	Medium
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with low turbidity. Some minor reduction in water quality from farmland runoff is likely at times. Water quality in the lagoon has improved following riparian plantings.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Terrestrial vegetation patterns are largely un-natural apart from wetland. Tavora Creek regionally significant wetland 173. Vegetation comprises pasture, with patches of exotic trees along beyond dunes. Some very small patches of sparse regenerating native shrubland.	Medium
The degree to which the vegetation cover is indigenous to the area?	Exotic trees and grasses evident beyond dunes. Dunes largely covered with marram. Little indigenous terrestrial vegetation beyond wetland, apart from sparse, scattered native shrubs on dunes and on the faces of some coastal cliffs. Pingao, sand tussock, <i>Euphorbia glauca</i> and sand coprosma have been planted. Saltmarsh largely natural. Habitat for <i>Mimulus repens</i> (Naturally uncommon).	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High degree of naturalness of sandy beaches. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	Habitat for nationally or internationally rare or threatened species or communities. Feeding habitat for white heron (Nationally Critical). The wetland is part of a 40ha coastal strip and riparian reserve owned and managed for conservation by the Yellow-eyed Penguin Trust since 1993. 28 hectares are leased for grazing, while 12 hectares of the coastal strip and the riparian strip alongside Tavora Creek are managed for conservation. Beach infauna typical of exposed sandy beaches of southern New Zealand. Sea lions may haul out occasionally.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No evidence of earthworks. No buildings. Farm fences are the only structures.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness. Moderately high undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
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Medium	Geomorphological and hydrological processes are compromised, as is the terrestrial ecology. The marine ecology is more intact, and the site provides reasonably important wildlife habitat. It has high perceptual naturalness and moderately high wild and scenic value.	No
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Natural character Assessment Sheet

Map Unit	WNC35
Description	Cliffs south of Tavora



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Semi-vegetated sandstone cliffs with beaches, caves and intertidal reefs. Hillslopes unstable in places probably related to deforestation at least in part. Overall landforms/seabed essentially natural.	Medium High
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Coastal processes are predominantly erosional and essentially unconstrained.	High
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline with low turbidity. Some minor reduction in water quality from farmland runoff is likely at times.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Moderate. Area has been farmed. Being allowed to regenerate in small patches.	Medium low
The degree to which the vegetation cover is indigenous to the area?	Largely exotic grasses. Small patches of indigenous vegetation along with occasional exotic shrubs.	Medium low
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Largely natural intertidal sandy and rocky shore and shallow subtidal reefs. High degree of naturalness of <i>Macrocystis</i> beds on offshore reefs. Rocky and sandy intertidal zone largely natural, albeit influenced by erosion. Under moderate threat from sedimentation and farming runoff.	Medium high
The degree to which wildlife is present and sustained?	<i>Macrocystis</i> beds valued as rich and diverse habitat. Feeding and spawning area for a variety of finfish. Paua, rock lobster and kina habitat. Community likely largely intact. Under occasional pressure from recreational fishers and sedimentation from erosion and human land-based activities. Likely roosting site for seabirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings. Farm fences the only structures. Evidence of old earthworks in the form of tracks now grassed over.	Medium high

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness. Much lesser undomesticated wildness as the land is farmed up to the cliff edges. Moderate scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Geomorphological and hydrological processes are reasonably intact. Terrestrial ecology is significantly compromised, but marine ecology less so. The unit has moderately high perceptual naturalness and wild and scenic value.	No

Natural character Assessment Sheet

Map Unit	WNC36
Description	Pleasant river spit



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Late-Holocene barrier (spit) enclosing the estuary. Surface shows evidence of overwash features – now stable due to invasion and stabilisation by marram. Dune forms modified by marram.	Medium
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Active coastal sand-system (nearshore-beach-foredune sand exchange) intact, albeit dune processes are modified by marram. No sand transport from beach to hinterland due to dune stabilisation. Washover processes and associated sand transport, now highly constrained.	Medium low
The degree to which water quality and quantity are unaffected by land use activities?	Moderate energy coastline. Some minor reduction in water quality resulting from outflow from the Pleasant River Estuary is possible.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	Largely marram covered sand backed by indigenous shrubs with exotic grassland to the north.	Medium
The degree to which the vegetation cover is indigenous to the area?	Moderate, with extensive pasture beyond spit. Dunes largely covered by marram. Rush and reed land extending onto spit from wetland areas.	Medium
The (apparent) health and level of modification of intertidal and aquatic habitats?	High health, low modification. Sheltered sandy shoreline. Moderately low threat from sedimentation and farming runoff.	Medium
The degree to which wildlife is present and sustained?	Infaunal communities typical of exposed sandy beaches of southern New Zealand. Roosting habitat for shorebirds.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	No buildings, structures or earthworks evident.	High

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Moderately high tumultuous wildness. High undomesticated wildness. Moderately high scenic value.	Medium high

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	Geomorphological and hydrological processes are significantly compromised, as are the terrestrial and marine ecologies. High perceptual naturalness and moderately high wild and scenic value	No

Natural character Assessment Sheet

Map Unit	WNC37
Description	Pleasant River Estuary



Geomorphological and Hydrological naturalness

Criteria	Comments	Rating
The degree to which the landforms / seabed are the product of natural processes?	Tidal estuary much in-filled with both fluvial and marine sediments. Fluvial input was probably enhanced during forest clearance. Estuary margins to the north west modified by drainage and conversion to pasture. Extensive, relatively unmodified wetlands elsewhere.	Medium high
The degree to which natural geomorphological and hydrological processes are operating unconstrained?	Undetermined post-European fluvial input, manifest as accelerated sedimentation and modification of hydrological processes. Episodic flooding and associated processes has been limited by drainage and reclamation in places on the estuary margin.	Medium high
The degree to which water quality and quantity are unaffected by land use activities?	Some water degradation due to nutrient and sediment runoff and, to a lesser extent, contamination from waterbirds.	Medium high

Ecological naturalness

Criteria	Comments	Rating
The degree to which the vegetation patterns are a product of natural processes?	High degree of naturalness, especially in the lower reaches of the estuary. Regionally significant wetland 28. Relatively high percentage of saltmarsh, approaching 50%. Remainder is sandflats. Some evidence of reclamation around perimeter in upper estuary.	Medium high
The degree to which the vegetation cover is indigenous to the area?	Saltmarsh largely indigenous. Indigenous saltmarsh ribbonwood and silver tussock in places around perimeter. Exotic grasses evident around perimeter and associated with reclaimed areas.	Medium high
The (apparent) health and level of modification of intertidal and aquatic habitats?	Moderate degree of modification. Ecological health of estuary considered good. Under moderate threat from reclamation, farming runoff, introduced weeds, nutrient pollution, stock grazing.	Medium
The degree to which wildlife is present and sustained?	Shellfish (cockles) likely present. Valuable habitat for a diversity of waterbirds including threatened species and trans-equatorial migrants such as bar-tailed godwits. Edge provide suitable habitat for terrestrial invertebrates and lizards. Likely spawning area for finfish such as flounder, galaxiids.	Medium high

Influence of buildings / structures / earthworks

Criteria	Comments	Rating
The degree to which buildings, structures and earthworks (including dredging) influence the character of the landscape or seascape?	Factors which diminish natural character: <ul style="list-style-type: none"> • dwellings and building platforms on southern margins • drainage channels • pasture • conifer shelter belts Still predominantly natural in appearance, particularly to north and east.	Medium

Experiential naturalness

Criteria	Comments	Rating
The degree to which there are wild and scenic qualities?	Not 'wild' in the tempestuous sense, but has a moderately high degree of wildness in the undomesticated sense of the word. Has some scenic qualities, particularly to the north and east.	Low medium

Overall Natural character rating

Rating	Comments / Reasons	Outstanding?
Medium high	While some areas of the estuary have been modified by drainage and conversion to pasture its geomorphological and hydrological integrity remains largely intact. It has a moderately high ecological value	No

	including a range of indigenous vegetation and providing valuable habitat for birds and fish. Its perceptual naturalness is compromised by drainage works and by residential development and it has relatively high wild and scenic value.	
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