East Coast Protection Group 2016

Presentation to Vehicles on Beaches Bylaw – November 24th 2021

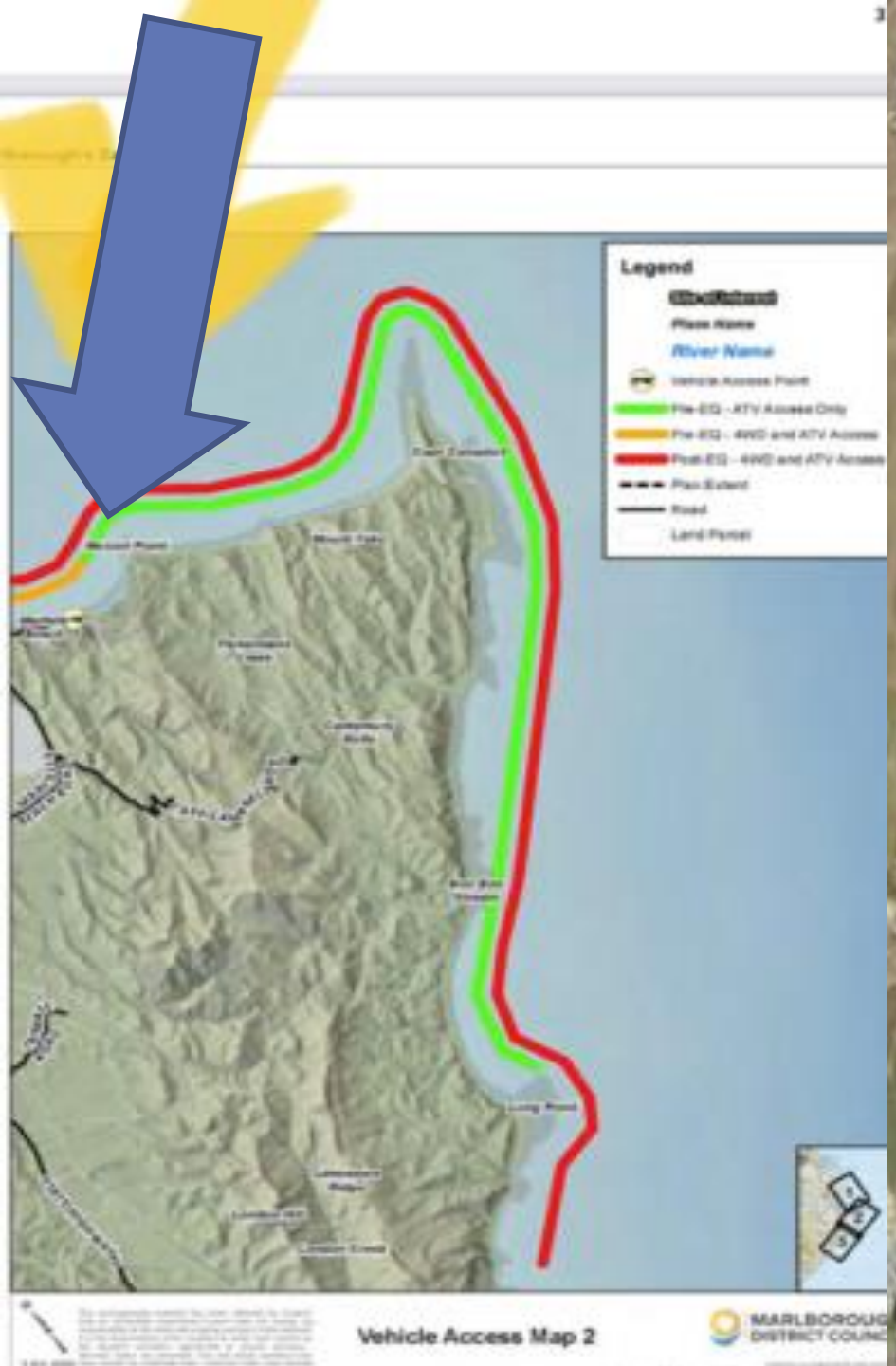
Programme

1. Background of presenter
2. Background of ECPG
3. Background research – MDC/UC Technical Reports
4. Prehistory – vulnerable to vehicles on beaches
5. Fauna/Flora and the effects of vehicles on beaches
6. ECPG achievements 2016-21
7. Vehicles on Beaches – further impacts
8. Where to from here?

1. My Background Rick Stolwerk

- Connection with Marlborough – wife's family have lived in Marlborough for 4 generations. Myself 1987 – 2021.
- 2018 - Chair of East Coast Protection Group
- 2016 - Councillor Northland Regional Council
- 2005 - Purchased coastal farm in Ward 2005
- 2005 – Convenor New Zealand Coastal Society Conference – Tutukaka, Whangarei
- 2001 - MSc Auckland University – Environmental and Marine Science. CZM in Bream Bay, Northland
- 1995 – 2005 Tutor Conservation/Environmental Management. North Tec, Whangarei
- 2000 – 2021 – Dune revegetation Waipu Cove and Langs Beach, Northland. Last planting 20 November 2021.

2. Background to ECPG


Legend
Vehicle Access Map 2
MARLBOROUGH DISTRICT COUNCIL


LEGEND
Indicative high tide line
Prequake
Postquake
0
100 m
Imagery © Land Information New Zealand

Map 2: The ONL following the coast from Marfell's Beach to the Waima. Source: Marlborough Environment Plan, Volume 4, Map 9

4.2. The Natural Habitats and Ecosystems

The extensive sweep of gravel beach dividing steep cliffs and ocean along Marlborough's East Coast gives the area a rugged and remote feeling and is home to many species of terrestrial and marine indigenous vegetation and fauna.

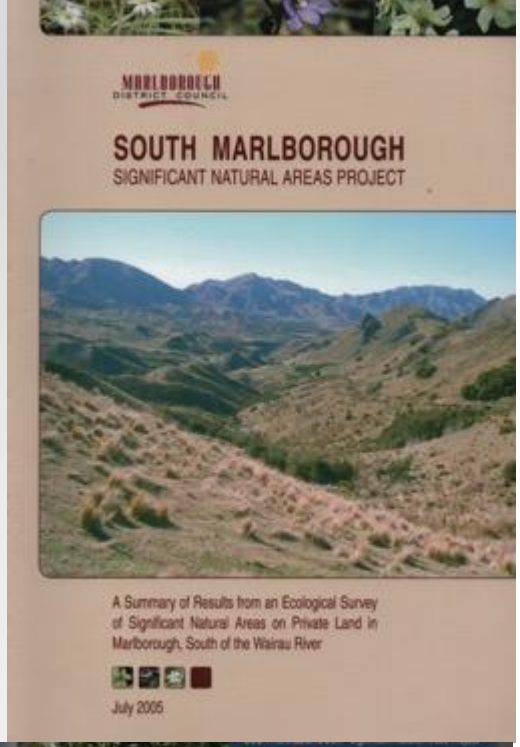
Outlining the outstanding geomorphology and biodiversity of this coast

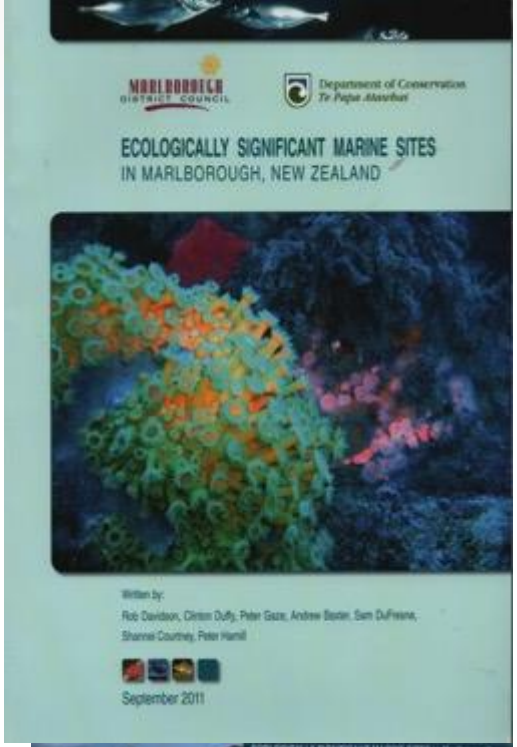
22. The Limestone Coastline	
Biophysical Values	- Geomorphology of limestone coastline includes several coastal geopreservation sites: Needles Point Cretaceous-Tertiary boundary, Flaxbourne River folds and thrusts, and the Chancet Rocks. - Broad and deeply incised mudstone shore platforms and offshore reefs characterise the marine environment around Cape Campbell. - Colonies of New Zealand fur seals at Chancet Rocks and the Needles. - Coastal platforms and ecological values of importance, with Marlborough endemic flora common, rocky areas (including the Marlborough rock daisy) and gullies. - All of these features are interlinked by beaches, cliffs and back dunes and hill country, which share the same geology and erosional and tectonic forces, culminating in an extremely impressive and legible coastline that clearly expresses its formative processes.

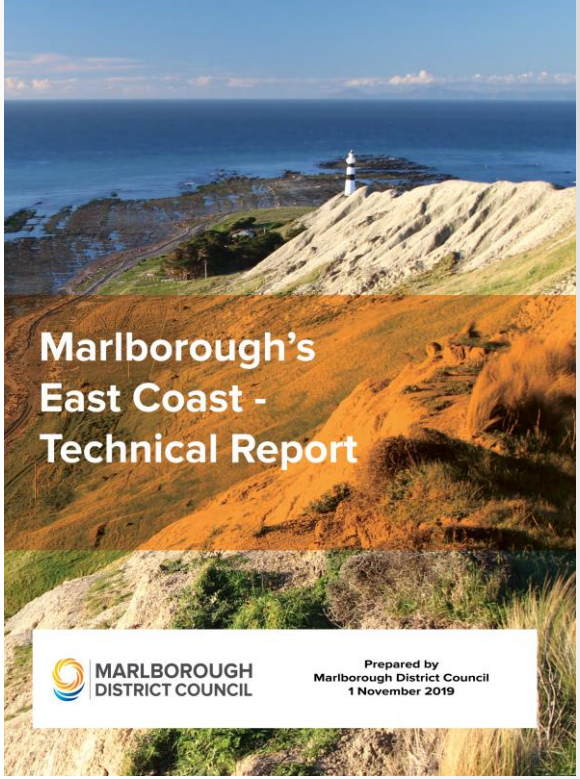
East Coast Protection Group
VISION STATEMENT

- To create local leadership and educate local users.
- To achieve protection of our coastal environment for future generations
- To understand the distinctive biological diversity and cultural heritage of this outstanding natural landscape and its values

3. Background research

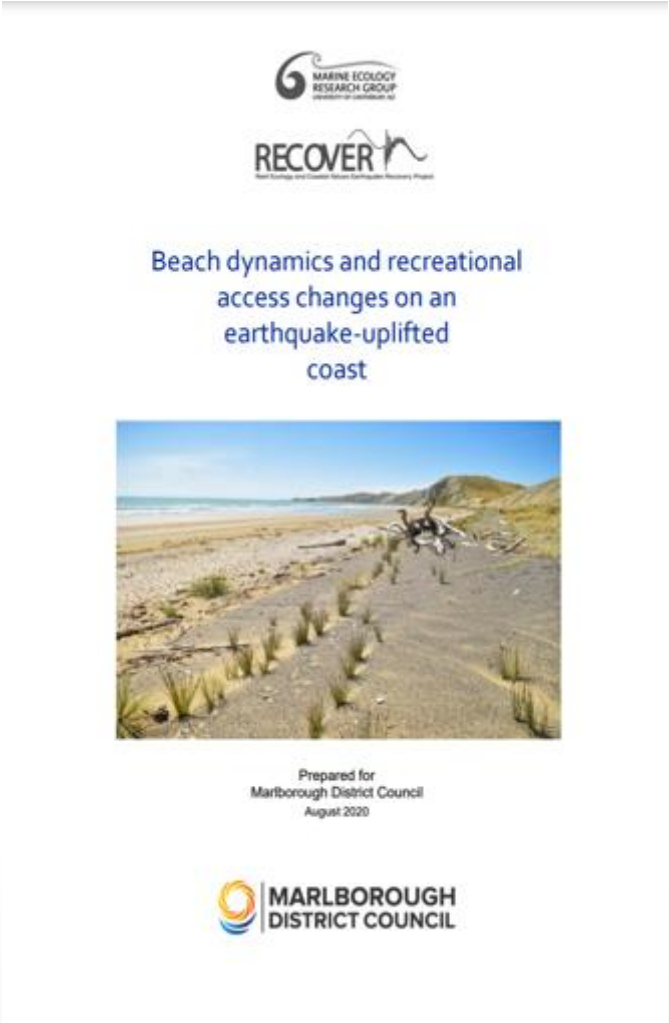






Biodiversity Restoration Plan for the South Marlborough Coast
Geoff Walls 2019

University of Canterbury



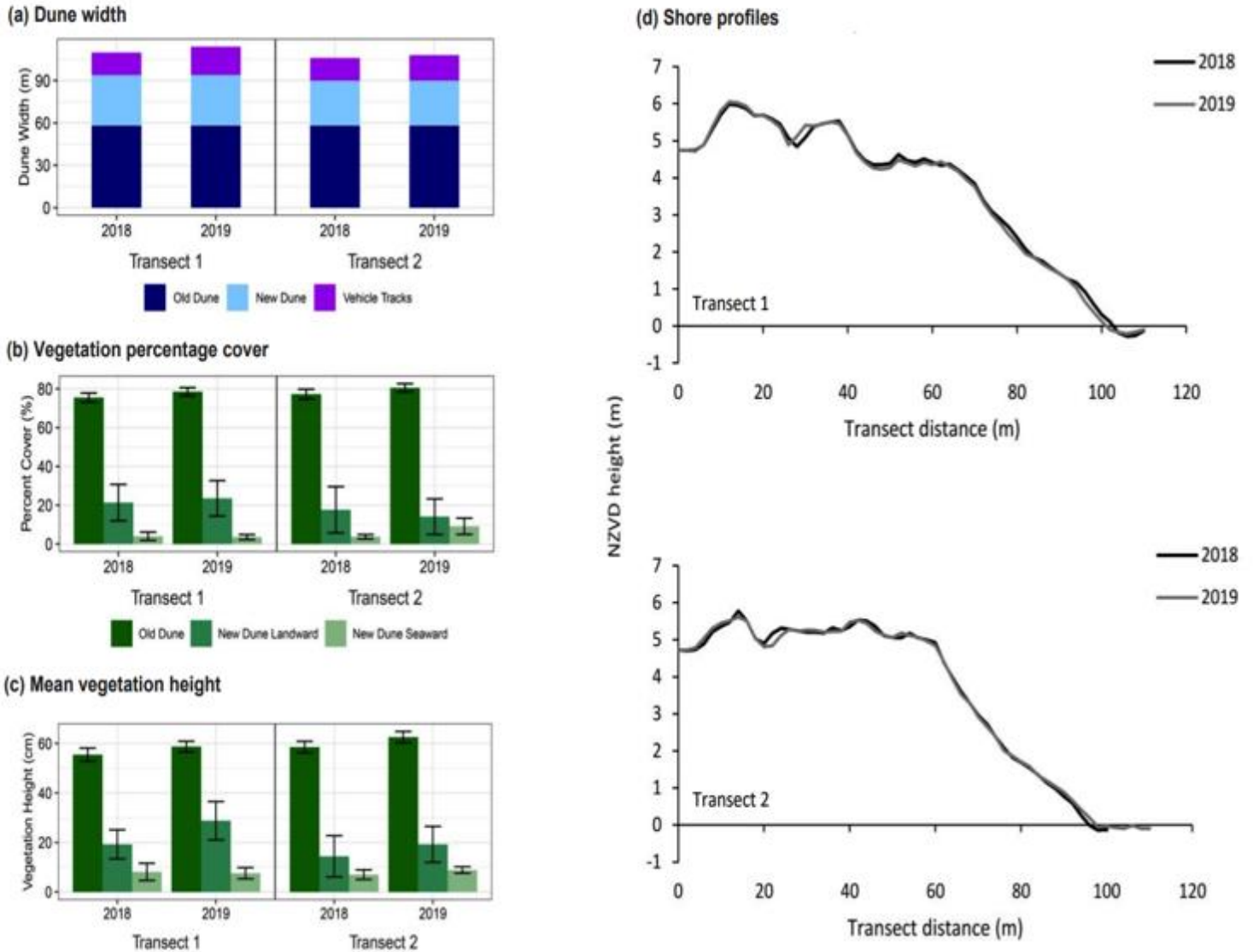


Fig. 4.6 Preliminary results from beach monitoring at Long Point over the summers of 2018 and 2019. (a) dune width, (b) percentage cover, (c) mean vegetation height, (d) shore profiles. The new dune zone is defined as the vegetation seaward of the estimated position of the old (pre-earthquake) dune toe, and is split in half (new dune landward and seaward) in graphs (b) and (c). Error bars are standard error of the mean for 2 x 2 m plots surveyed within each area.

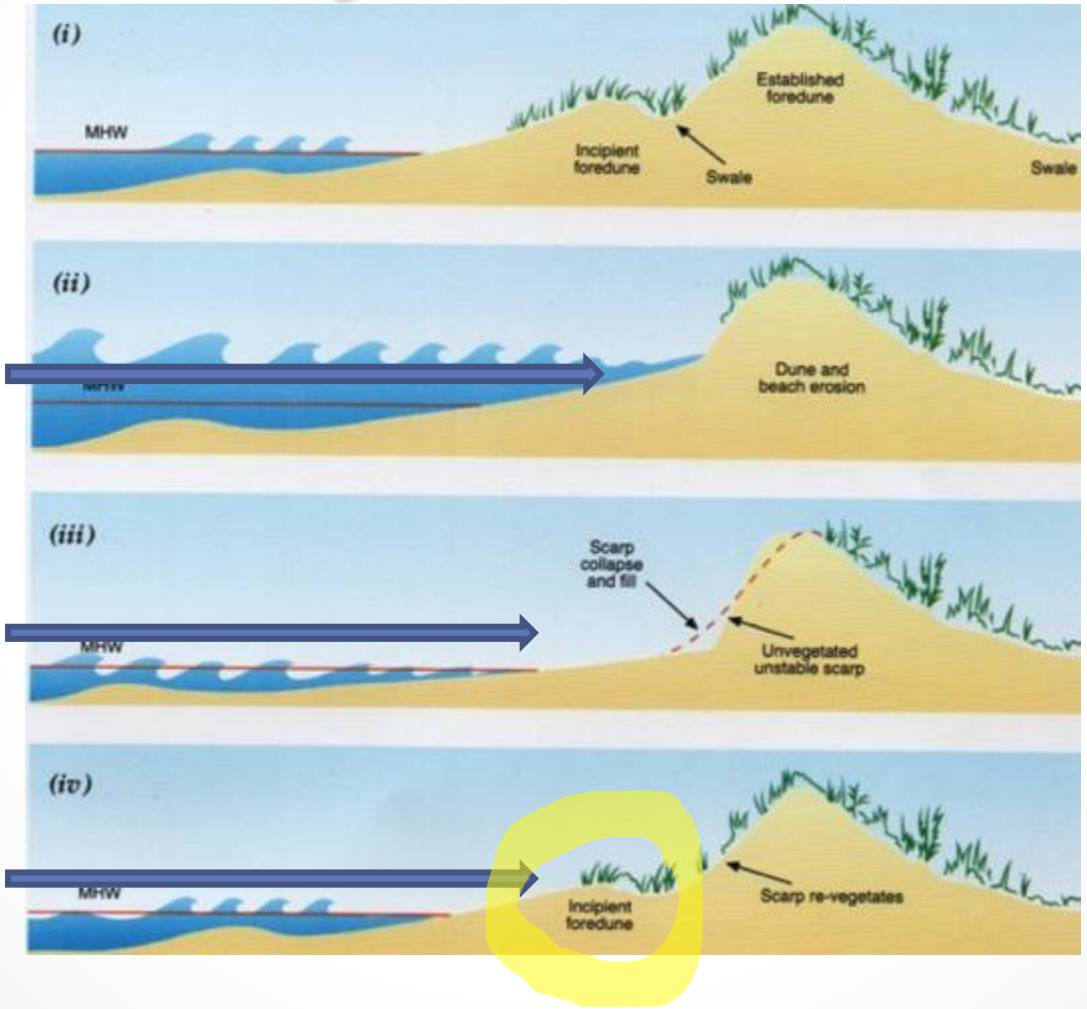
Beach and foredune dynamics

Normal dune formation

East Coast Marlborough before 2016

Post 2016

2019 …….



Damage in the ‘new dune’ or ‘incipient foredune’ area

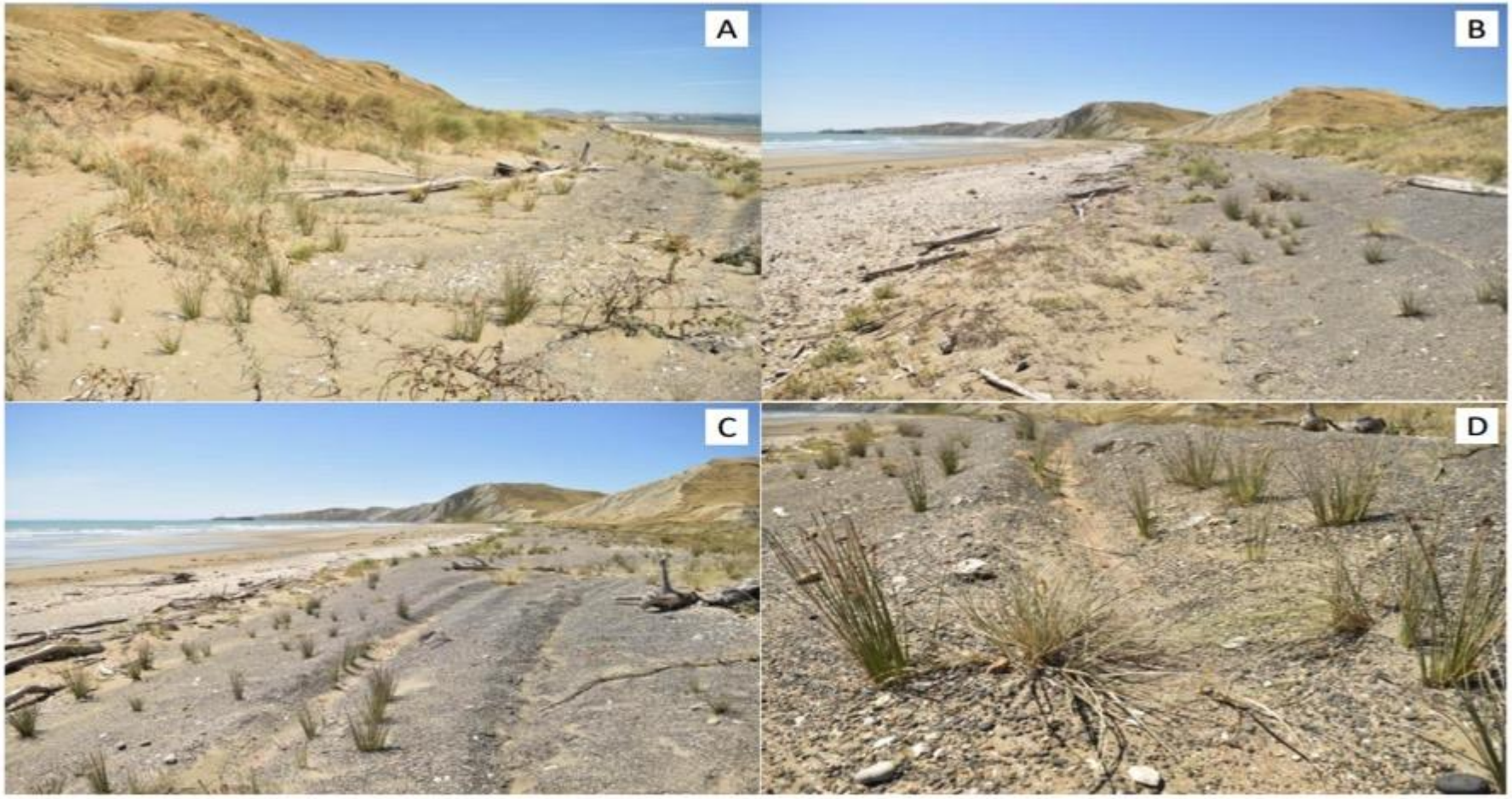


Fig. 4.13 Mussel Point beach. (a) spinifex runners extending into the ‘new dune’ zone on the uplifted beach. (b) view looking east from transect 2 showing the modest area of new beach (ca. 10 m wide) that has been uplifted above the post-quake high tide mark. (c) vehicle tracking on the dune face in the ‘new dune’ zone. (d) example of a new spinifex recruit in close proximity to vehicle tracks. Field observations have shown that the mortality of these post-quake recruits is relatively high at this site, with very few having become established and grown to appreciable size

4. Prehistory

Vulnerable to vehicles on dunes and beaches

Mid C14th archaeological sites Needles Point

South Island adzebill

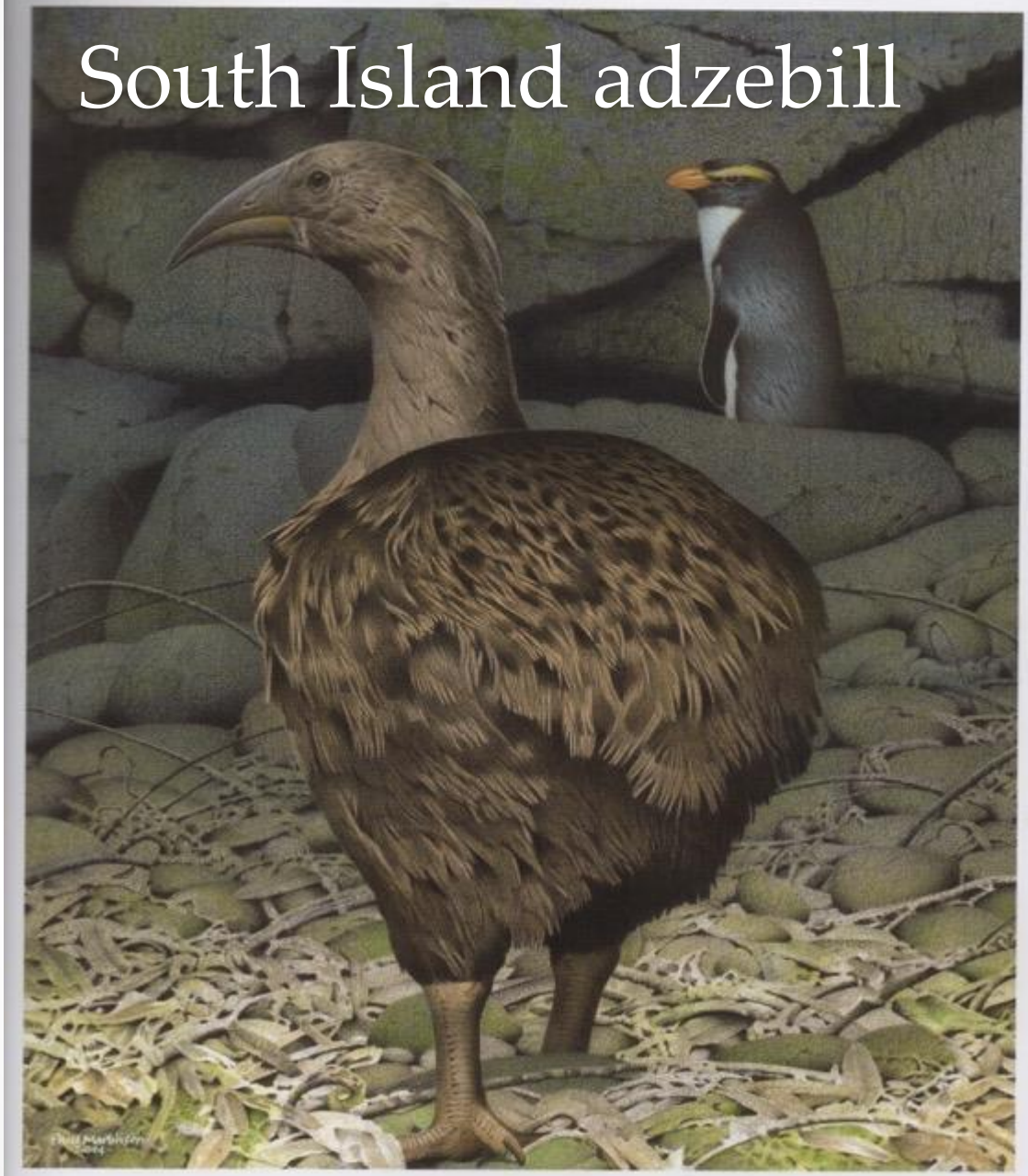


Figure 47. Serpentine pendant found near Needles Point and now housed in the Canterbury museum. *Image: Canterbury Museum. E168.547.*

Figure 48. A drawing of the extinct giant rail (South Island adzebill) of the type found at Needles Point, which may have weighed up to 25kg. *Image: http://dinosaurs.wikia.com/wiki/Adzebill.*

Figure 49. An argillite adze from the Needles Point site. This adze was originally found by Bert Kennington and is marked with a distinctive 'K' in a circle, common to many of the artefacts found by Kennington. The style of the adze, which has now been donated to the Ward museum by Bert's son, Stuart, would suggest it dates from the earlier period of Māori prehistory. *Image: Graeme Taylor.*

Figure 50. Fur seals at Needles Point. These are likely to have been the primary attraction for the early Māori who occupied the Needles Point site but the local seal population was probably extinct by 1500 and did not return until around the 1970's and 1980's. *Image: Graeme Taylor.*

5. Fauna/Flora and the effects of vehicles on beaches

1:61,000

Marine Mammals Map 2

MARLBOROUGH DISTRICT COUNCIL

Seals vs Vehicles

Unfortunately…

Nesting birds are extremely vulnerable

Banded dotterel (*Charadrius bicintus*)

Description

A small brown bird with a white chest and distinctive thin black band and broad chestnut band.

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	At Risk - Declining	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

DAY ONE - born

DAY TWO – having a rest

DAY THREE – gone!!!

Living in harmony!

But not for long……

Unfortunately….

Coastal Mat Daisy

Table 2: Indigenous Vegetation

Species	Description	Conservation Status New Zealand Threat Classification System	Population	Habitat Type	Location on the coast Appendix 6	Observations	Potential Threats
Coastal mat daisy (*Raoulia hookeri* "coast")  Coastal mat daisy (*Raoulia hookeri* "coast") growing with *Pimelia* mats and sand tussock.	*Raoulia* aff. *hookeri* grows in coastal sand dune areas, forming very fine and dense growths, often in association with *Pimelia* mats and sand tussock. These compact growths from large amorphous cushion-like masses with only the growing tips visible above the sand. Due to their shape and form, the plant clusters resemble sheep from afar, this giving them their alternate name, vegetable sheep.	At Risk-Declining.	Largest population of this threatened species in the South Island, possibly NZ.	Open stable sand dune and pea gravel.	The Needles, Cape Campbell, Canterbury Gully, Long Point, Murza Stream.	No impact from the earthquake other than vehicles being able to access its habitat, especially at Mirza Stream, the Needles and Long Point. This species is protected at Cape Campbell and Canterbury Gully by farm boundary fences.	Loss of dune habitat from development and cultivation. Competition from marram grass and other invasive weeds. Damage by vehicles driving on beaches and dunes.

And of course the damage to flora/fauna too small to really photograph……

Minimac gecko (*Woodworthia* "Marlborough mini")

Description

Variable patterning but generally buff coloured with markings in lighter and darker shades. Body length up to 65mm.

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	At Risk - Declining	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

Location on Marlborough's East Coast

The most commonly seen gecko in South Marlborough in farmland and coastal sites. Relatively common all along this coastal area wherever the habitat exists. This is a significant population.

Habitat

Lives under driftwood and in vegetation along the coast, especially along the storm high tide mark where driftwood collects.

Observations following the earthquake

Raising of the coastal zone and changing the location of the habitat there. A new storm high tide mark now exists.

Potential threats

- Mainly predation by introduced mammals.
- Loss of habitat.
- Disturbance of habitat by people and vehicles.

Tunnelweb spider

Katipo (*Latrodectus katipo*)

Description

A small spider. The adult female has a pea sized abdomen, which is black with a pronounced red stripe. The males are about half the size of the females and have more white markings.

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	**At Risk - Declining**	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

Location on Marlborough's East Coast

Marlborough spotted skink (*Oligosoma aff. lineocellatum* "South Marlborough")

Description

Marlborough spotted skinks are spectacular large-bodied skinks that can be brown, grey or have a greenish tinge, but are always heavily flecked and usually have a salmon belly. Marlborough spotted skinks were until recently considered part of a single and widespread species called "spotted skinks."

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	At Risk - Declining	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

Sea holly (*Eryngium vesiculosum*)

Description

Sea holly is a small prickly endemic coastal herb.

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	At Risk - Declining	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

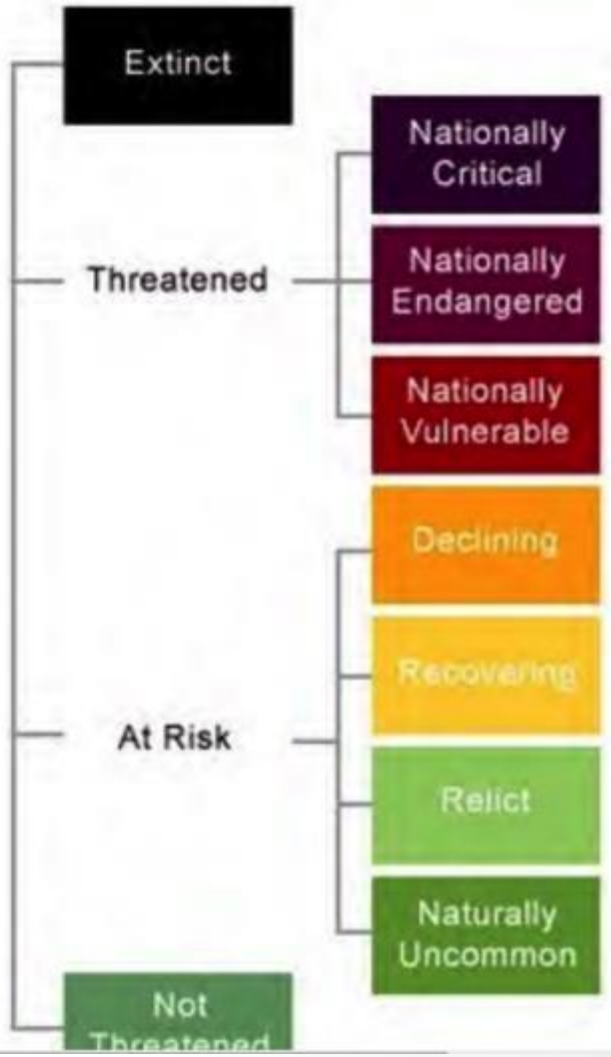
Conservation status

The New Zealand Threat Classification System (NZTCS) is explained on the NZTCS website at https://nztcs.org.nz/. Its inclusion here is to provide a reference to explain the NZTCS categories identified for the indigenous vegetation and fauna species included in this report. For each species a factsheet has been prepared that includes their classifications. A black border identifies the relevant classification. The focus has been on those species that are Threatened or At Risk-Declining. In some cases the species itself may not be threatened but their host species might be and vice versa.

The conservation status of a species is a forecast based on observed trends and likely pressures. As new threats emerge after the earthquake the status of the species present on the east coast may alter as a result of the natural processes of recovery or from interference from external pressures.

In the NZTCS endangered and threatened mean two different things.

- A threatened species is an umbrella term used to describe a range of threat categories.



Pintaro – *Pimilea prostrata*

Invertebrate	Pimelea looper moth	*Notoreas perornata* "Cape Campbell"	Threatened – Nationally Endangered

Mat daisy jumper (*Kiwaia* "Cloudy Bay")

Description

A very small flightless moth.

Current conservation status

Not threatened	At Risk – Naturally Uncommon	At Risk - Relict	At Risk - Recovering	At Risk - Declining	Threatened - Nationally Vulnerable	Threatened – Nationally Endangered	Threatened – Nationally Critical

Location on Marlborough's East Coast

6. ECPG achievements 2016-2021

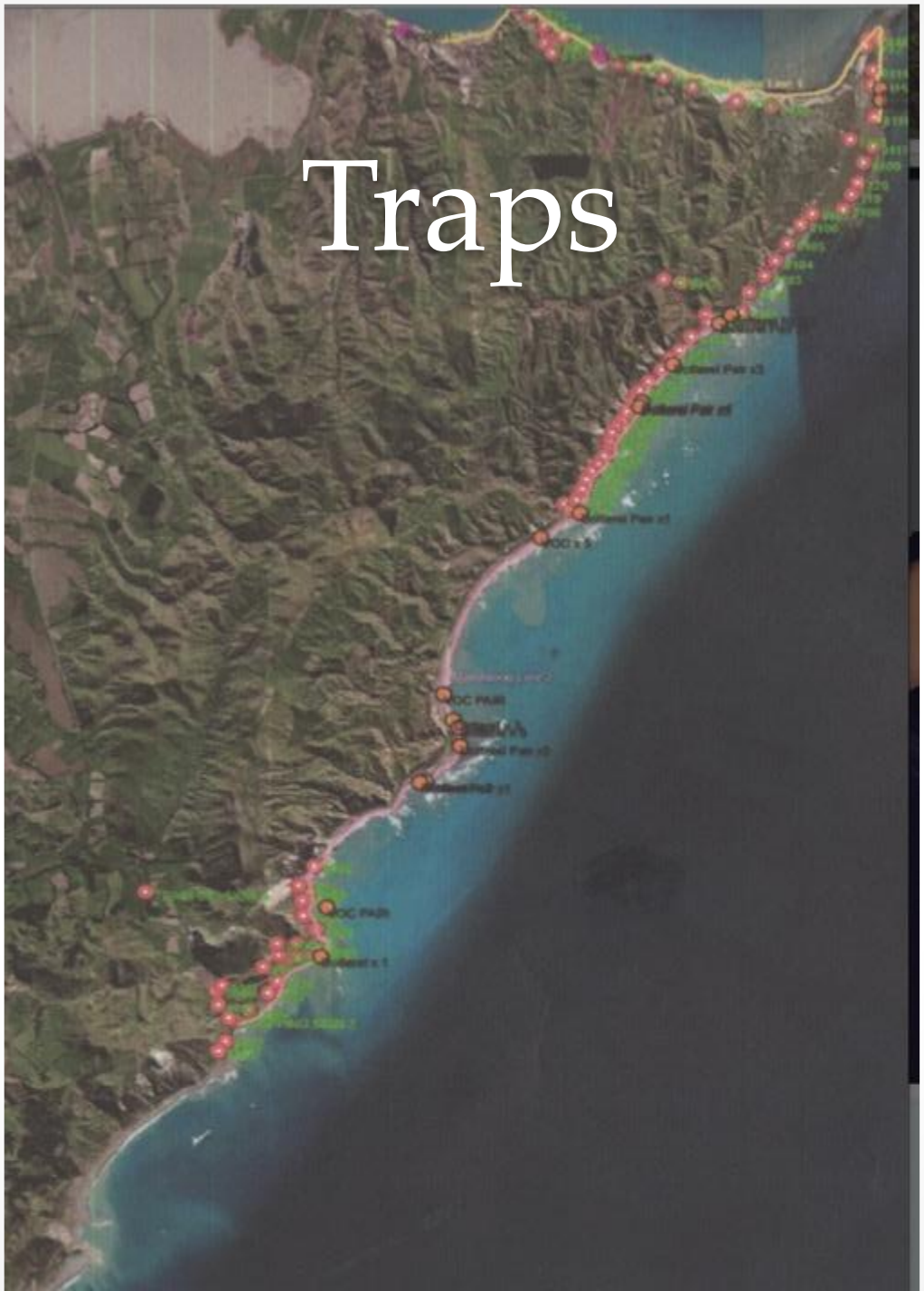
- Collaboration with Iwi – most recent meeting last Monday 22 November 2021
- Collaboration with University of Canterbury
  Dr Shane Orchard
- Collaboration with coastal landowners/community
- Involvement of schools – Ward, Seddon & MGHS.
- Collaboration with DoC
- Grant from Jobs for Nature (JfN) Employees
- Planting
- Pest and weed Control

Planting

Spinifex Plantings September 2021

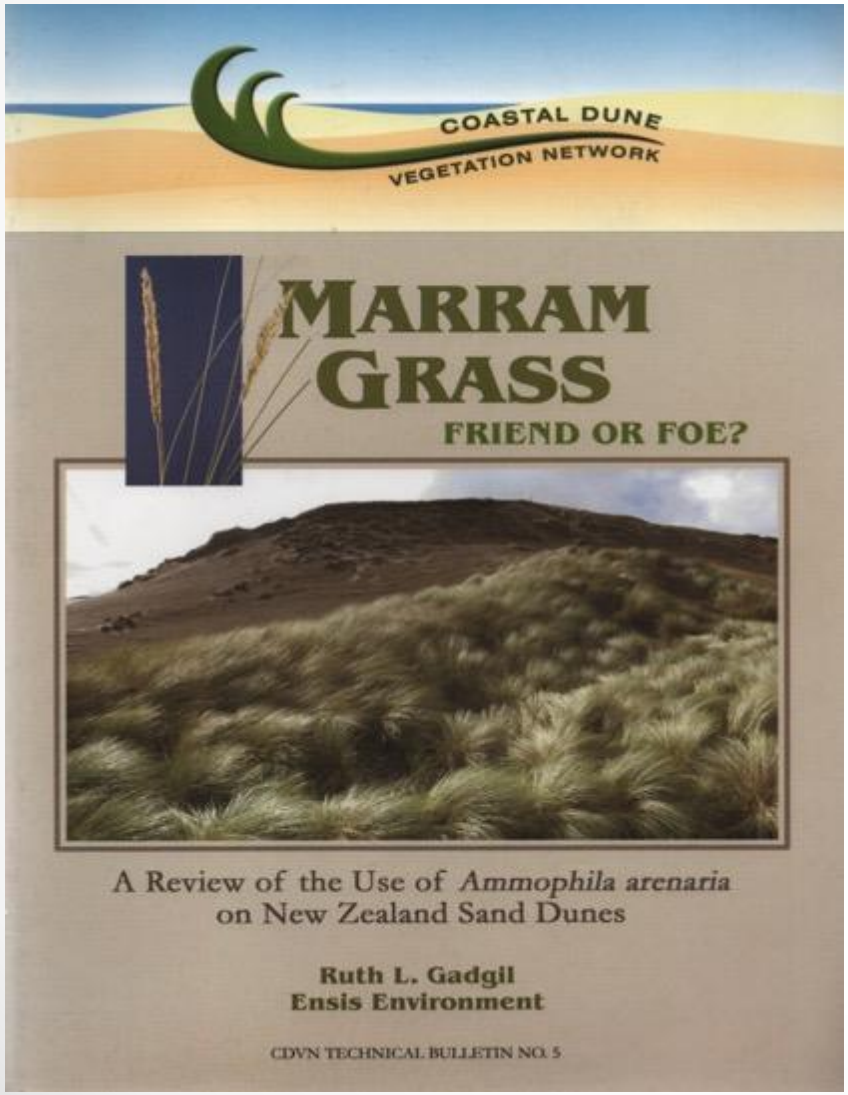
Vehicle use on the ‘new dune’

Traps

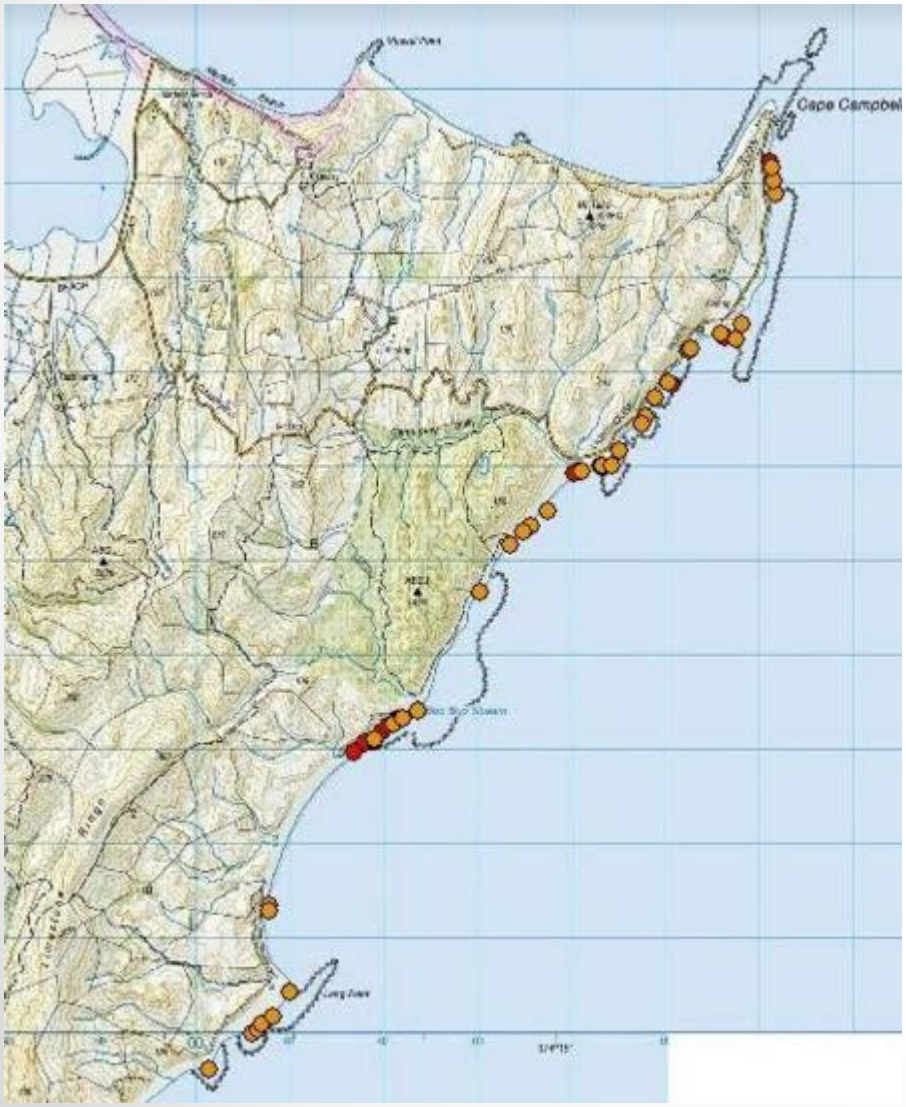


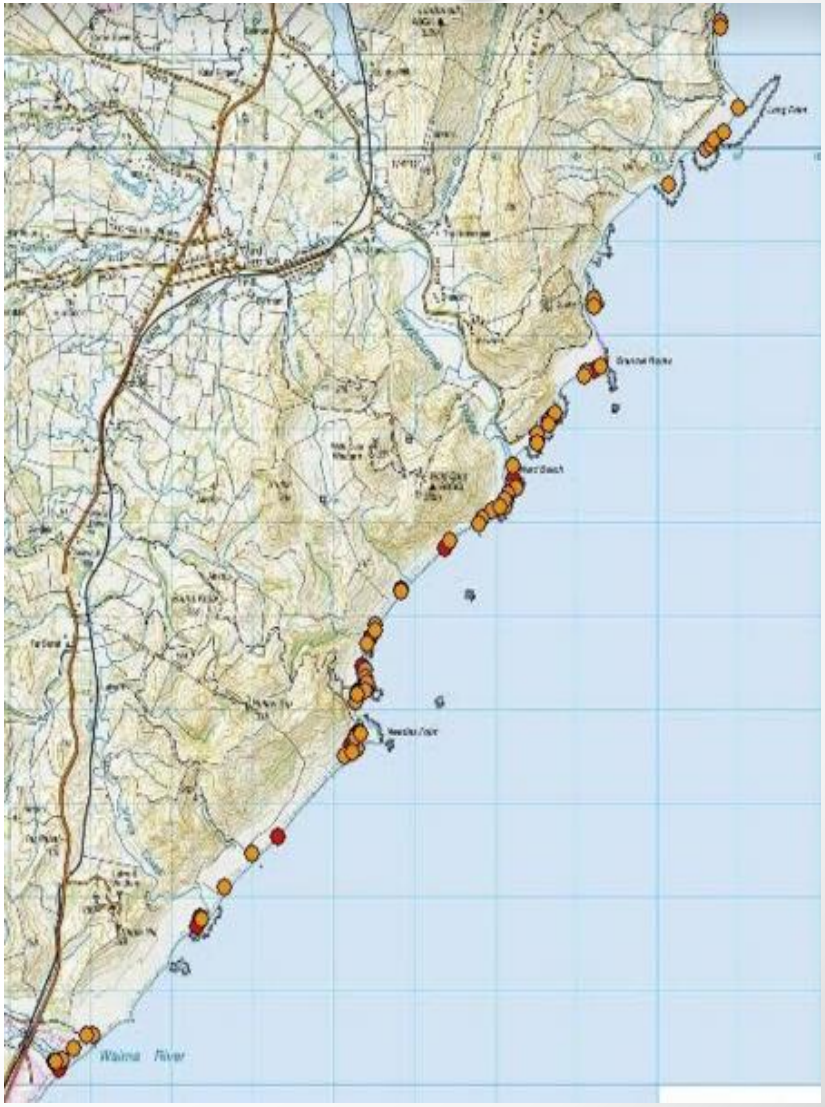
124 traps x 150m = 16.8km trapped

Marram Grass Control



Bird Monitoring





General shore and seabird counts September:

		05-Sep	09-Sep	11-Sep	15-Sep	19-Sep	24-Sep	29-Sep
Common name	Scientific name	CG to Ward	Waima to Mirza	CG to airstrip 11/09	Marfells/ Mussel pt	West CC south to airstrip	Booboo Stream	Ward to Waima
Banded dotterel	*Charadrius bicinctus*	55	22	24	0	10	21	50
Variable oystercatcher	*Haematopus unicolor*	16	2	4	4	13	1	0
S. I. pied oystercatcher	*Haematopus finschi*	4	1	2	4	1	1	0
Black-backed gull	*Larus dominicanus*	31	43	15	12	36	32	12
Black-billed gull	*Larus bulleri*	0	13	0	0	32	0	0
Red-billed gull	*Larus novaehollandiae*	53	0	13	313	145	12	13
White-faced heron	*Egretta novaehollandiae*	6	0	0	2	2	0	0
Pied shag	*Phalacrocorax varius*	15	0	7	17	13	9	9
Spotted shag	*Strictocarbo punctatus*	0	0	0	3	0	1	0
Black shag	*Phalacrocorax carbo*	0	0	1	0	0	2	0
Little shag	*Phalacrocorax melanoleucos*	3	0	2	1	4	0	0
White-fronted tern	*Sterna striata*	0	2	0	5	0	0	0
Black-fronted tern	*Chlidonias albostriatus*	0	0	0	0	0	0	0
Caspian tern	*Hydroprogne caspia*	5	3	3	0	3	3	1
Paradise shelduck	*Tadorna varigata*	0	0	0	2	0	2	2
NZ dotterel	*Charadrius obscurus*	1	0	0	0	0	1	0
Pied Stilt	*Himantopus himantopus*	3	2	0	1	0	0	2

7. Vehicles on Beaches – further impacts

MARLBOROUGH DISTRICT COUNCIL

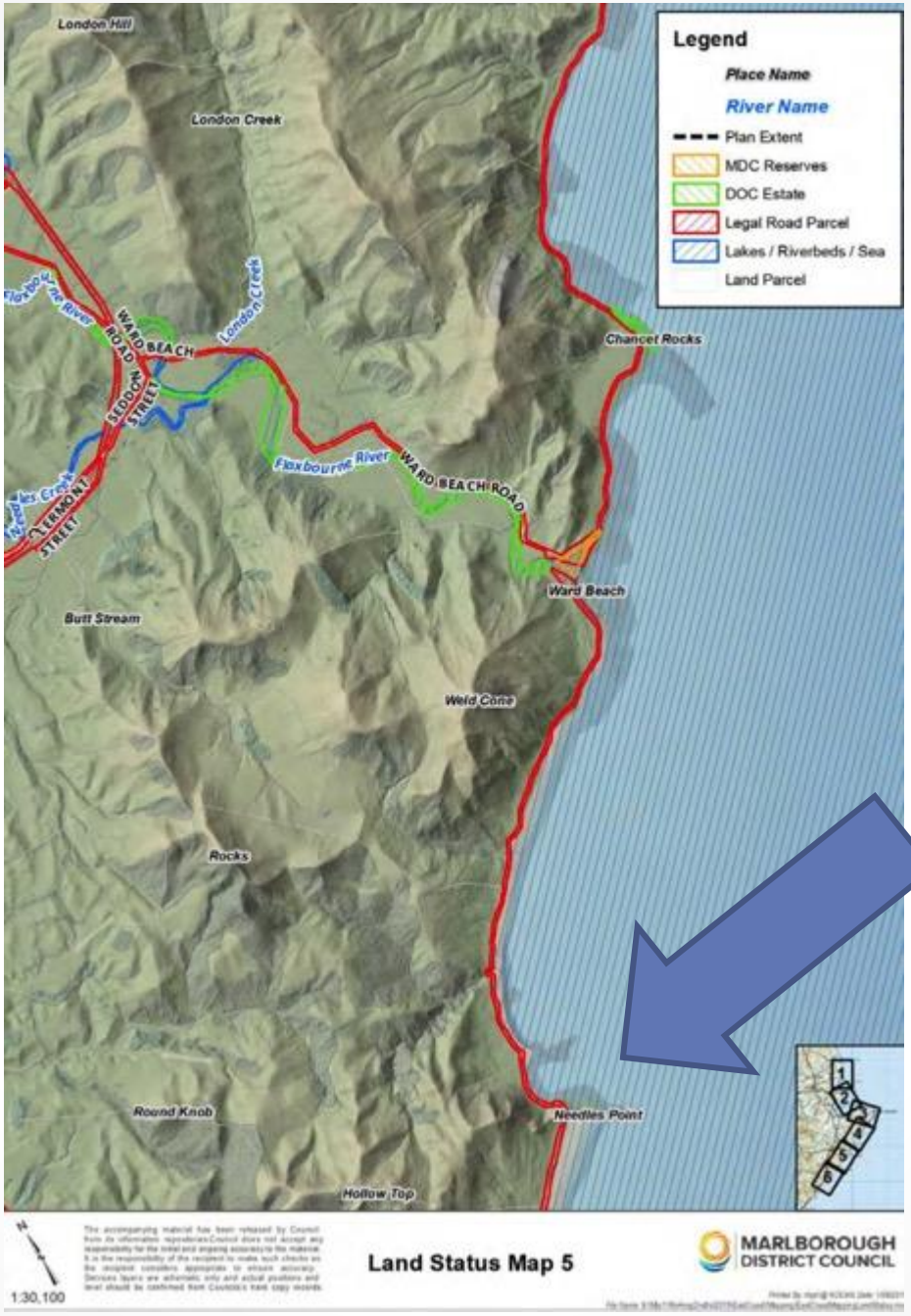
Marlborough's East Coast - Issues and Options

November 2019

6.2. Issue 2: Uncontrolled motor vehicle access to Marlborough's East Coast is causing a danger to *public safety and public enjoyment* of the coast.

6.2.1. Description of the issue

The increased accessibility of the coast has also created a threat to other coast users. There is a high public use of the coast at Marfells and Ward beaches, in particular. There are no current controls on speed or the route that motor vehicles must use when driving along the coast. Noise from motor vehicles can also detract from the enjoyment of the coast by other users.



Legal Road Parcel

1. Legal Road along the coast
2. However no practical access at some points e.g. Needles Point
3. Drivers still give it a go as it is there!

Despite the many signs…..

Figure 18 Well-worn vehicle route around Mussel Point

Vehicle ‘ART’


Sunset on the tracks

Easy access on the uplift area

ECPG bird monitoring work Mirza Creek – 20/11/21

8. Where to from here for the ECPG?

The future of the ECPG

- 2021 – 2022 - **Continue** re-planting of coastal vegetation, mustelid/rat/cat/hedgehog trapping and endangered bird monitoring
- 2022 –2023 - **The above** plus: insect monitoring, removal of marram grass and any wilding pines
- 2023 – 2024 - **All of the above** plus begin shellfish/crustacean monitoring if possible.
- **ONGOING** - Seek corporate funding to continue all of the above when JfN funding stops in 2024.

Continued collaboration with Iwi

- Both Iwi and ECPG awarded JfN funding for cross-over piece of coast, so collaboration is a must.
- Have met several times to discuss the way forward – last meeting this Monday November 22nd.
- Quarterly – next February 2022

Collaboration with University of Canterbury

- Establishing a comprehensive set of restoration sites to create new seed sources that will help to reverse historical degradation of native dune systems

- Establishing the distribution of plant species known to be displaced by the quake, especially those recruiting on uplifted beaches (e.g. spinifex, pīngao).

- Determining impacts on a range of threatened and at-risk species to determine their plight and management requirements on the earthquake-affected coast

Eventually work on…

Bringing back the indigenous coastal forest

Translocations of vertebrates and invertebrates that have been missing a long time.

Monitoring ecologically significant marine sites ….

Continue the UoC coastal monitoring e.g. paua!!

Figure 12 Pāua remain but are vulnerable

Once again thank you for your time today.

I am very happy to take any questions.