

Summary Report on the Results of the Significant Natural Areas Project 2021 - 2022





**MARLBOROUGH
DISTRICT COUNCIL**

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Executive Summary

Introduction and Background

Through the Resource Management Act 1991 and its subsequent amendments, the Marlborough District Council (Council) has a role in maintaining and protecting indigenous biodiversity and significant natural areas in the Marlborough region. Since 2001 the Council has implemented the “Significant Natural Areas” (SNA) project, which has involved extensive field based ecological survey work and a subsequent protection and monitoring programme.

This report provides a summary of results of the Significant Natural Areas project (SNA) over the one-year period from July 2021 to June 2022. It follows from eleven previous summary reports, one of which covered the early years of the project from 2001 to June 2008, one covering the two-year period from 2008 to 2010 and the others covering the annual periods from 2010 to 2022.

This report summarises the results of:

- Ecological survey work carried out from July 2021 to June 2022.
- Environmental protection work carried out through the SNA Landowner Assistance Programme from July 2021 to June 2022.
- Significant Natural Area monitoring programmes, July 2021 to June 2022; and
- The Native Seed Collection Project in 2022.

(NB: All financial amounts in this report are presented GST inclusive).

Strategic Direction

Following the external review of the SNA project, which was undertaken by Wildlands Consultants in 2016, a Prioritisation Project was initiated to give better direction to the Council's Biodiversity work. The Potential Ecosystems map produced in 2016/17 has been used to inform this process. Subsequently a Zonation Analysis was undertaken using this and other data in 2018/19 and GIS maps produced. This work will guide our biodiversity work by prioritising the sites of natural biodiversity in the region.

Overlaying all of this has been the development of a National Biodiversity Strategy and a National Policy Statement on Indigenous Biodiversity through a process being led nationally by MfE and DOC with major input from Local Government. These documents are expected in the next six months after a number of lengthy delays due to Covid 19 and other issues. They, along with the likes of the Kotahitanga mō te Taiao Alliance Strategy, will guide the Marlborough Biodiversity Strategy, so the timing has been potentially very beneficial if not a bit frustrating.

Ecological Survey Work

Since 2001, extensive field based ecological surveys have been carried out on private land through large parts of the Marlborough region. The majority of the work was carried out from 2001 to 2009 and since that time properties have been visited opportunistically.

There are a total number of 771 Significant Natural Areas currently mapped and identified in our database, an increase of 13 sites.

In 2022, a cluster of properties was surveyed at the mouth of the Medway, including forested gorges holding large remnants of indigenous forest in the plains environment which is largely devoid of indigenous vegetation.

Protection Programme

A pilot landowner assistance programme to implement protection of areas identified as significant natural areas was established in 2003 and extended into a full programme in 2005. Since this time, a total of 143 protection projects have been established.

There were 30 projects funded in 2021/2022 financial year. Of these, 12 new projects were started in the year.

This programme to assist landowners to improve the condition of their SNAs resulted in the investment of \$410,755 into native biodiversity on private land in 2020/21, of which Council paid about half. Around a third of this went into fencing stock out of sites and the rest went into weed control, animal pest control and planting native trees.

Funds were also directed towards restoration of beaches and dunes in the Marfell's Beach to Waima/Ure River, with a mix of weed control and planting backed up by collection of local seed for propagation.

Total Funding Contributions for Biodiversity Protection Projects on Private Land 2021 – 2022

	2021/22	2020/21
Marlborough District Council Funding	\$188,244	\$215,247
Central Government (NZTA)	\$18,590	\$12,336
QEII National Trust	\$24,991	\$54,708
Landowners	\$183,937	\$190,731
Total	\$415,762.00	\$473,022

Monitoring

Monitoring of Managed SNA Sites was initiated in 2006 and repeated on a bi-ennial basis until 2018, when it went annual. Monitoring of Un-managed sites was started in 2014/15. The Monitoring Plan for 2021/2022 has recovered from setbacks due to Covid19 and is starting to make up lost ground.

Monitoring of eight Managed sites and 11 Unmanaged sites made for a total of 19 sites monitored on 11 properties for the year in Rangitoto ki te Tonga/D'Urville, Te Hoiere/Pelorus, Flaxbourne, Hillersden and the Kekerengu EDs.

Results from this monitoring were pleasing as all Managed sites were in Good condition with a trend over time of Stable or Improving. The unmanaged site results were also pleasing with all but two in Fair or Good condition and trending either Stable or Improving other than two that were Stable-Deteriorating. One of these sites was protected by covenants.

Seed collection

- Contract seed collection was carried out between February and June 2022 with the usual focus on collecting kahikatea, tōtara and matai seed for local planting projects, as well as species suitable for the Flaxbourne Catchment Care projects.

Discussion and Conclusions

There has been a continued involvement with landowners on the east coast, south of Lake Grassmere/Kapara Te Hau. This work began in earnest after the November 2016 Kaikōura Earthquake as we did a concerted assessment of the SNAs that were likely to have been affected by that quake. Many of the sites are coastal dune areas that have been impacted by uplift during the quake. While they had not been hugely damaged by the quake, there was considerable evidence of damage caused by vehicles being able to access the area in a way they had not been able to previously.

At the same time the uplift created an opportunity to restore a natural dune ecosystem less overwhelmed by exotic weeds such as marram grass and wilding pines. Increased interest in the coastal dunes has resulted in an improved knowledge in what is found there, including nationally important populations of endemic invertebrates, such as katipo and kiwaia, the mat daisy jumper, which is a critically endangered flightless moth unique to this coast.

The Council is currently consulting with the community on implementing a bylaw to manage the conflict between vehicles and indigenous biodiversity. In the meantime, we are committed to planting pockets of native sand binding plants to introduce native seed sources into the area and gradually reducing the weed populations in those same areas. This area is highly regarded for its indigenous biodiversity and is important for threatened species, such as banded dotterel, katipo, kiwaia and *Meuhlenbeckia astonii*, coastal mat daisy.

Restoration of large wetland ecosystems at Para Swamp and Lake Elterwater continues. Both sites are the focus of planting native species and willow control efforts.

Landowners are also showing their commitment to their SNAs by covenanting through the QEII Trust, and Department of Conservation, with 25 new covenants on SNAs.

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1. Introduction

The Significant Natural Area project was established in 2001 to enable the Marlborough District Council to meet its obligations under section 6(c) of the Resource Management Act which requires that, in relation to managing the use, development and protection of natural and physical resources, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna, shall be recognised and provided for as a matter of national importance.

The Council of the time decided to meet these obligations through a proactive but non-regulatory programme to identify significant natural areas and offer landowners support to protect and enhance these areas. Integral to this approach was a commitment to hold the property specific information confidentially rather than scheduling it for regulatory purposes.

A working group was established to assist the Council to manage the programme. The group included Councillors and staff, Department of Conservation staff, three landowner representatives and the local QEII representative. This group met several times a year in the initial stages of the project and continues to meet approximately annually. It has played an important role in guiding the direction of the project over the years.



Figure 1: Limestone Bluffs in Kekerengu ED. Recent pine control is evident.

A small team was employed to assist with landowner consultation and carry out the ecological survey work. Paul Millen carried out the majority of the direct consultation with landowners while ecologists Geoff Walls and Philip Simpson carried out the ecological field work and reporting and also provided expert advice as required. Geoff Walls has continued to be the key Ecologist for the monitoring

programme although he has gradually been weaning himself of us as retirement beckons. Wildlands Consultants Ltd has undertaken most property SNA surveys since 2018, all in the Awatere Valley. In 2022, Ecologist, Simon Litchwark, was engaged to do the bulk of the SNA monitoring and survey work which resulted in a partially restored monitoring programme.

Information collected through the significant natural areas surveys is held in a database and is only reported publicly in a general sense. The two main ways the information is used are, firstly, to provide a regional overview of significant natural areas and biodiversity on private land in the Marlborough region, and secondly, to provide a basis for developing protection programmes with landowners interested in proactively managing and protecting these areas.

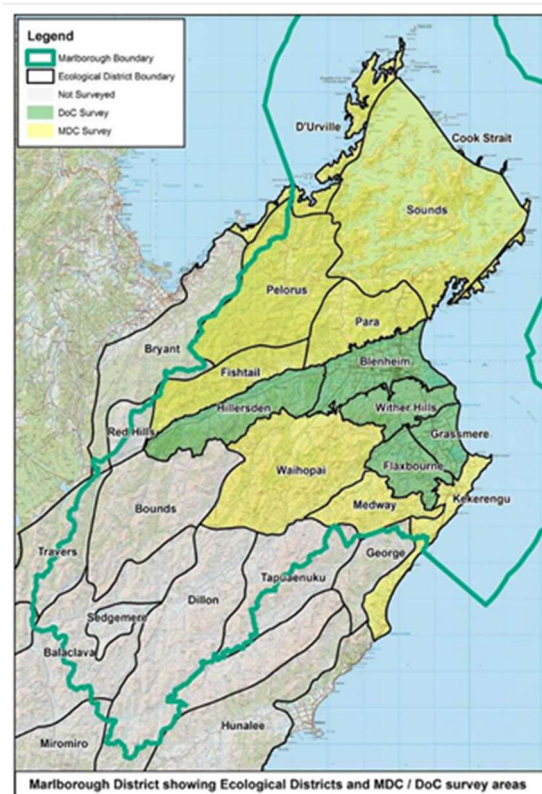
The Marlborough District Council continues to support the non-regulatory approach to provide for the protection of significant natural areas. The Significant Natural Areas programme is well established but continues to evolve over time.

Part A: Ecological Survey Work

2. Field Based Ecological Surveys – Background and Overview

Between 2001 and 2009, extensive field based ecological surveys were carried out on private land throughout large parts of Marlborough District. This work has been approached as a partnership with landowners, who have participated voluntarily. Through the results of the ecological survey work, it has been possible to analyse the extent and type of ecosystems remaining and the severity and types of pressures these remaining areas are subject to.

Ecological districts have been used as the survey units. The Marlborough District Council carried out the majority of the survey work overall (Kekerengu, Medway and Waihopai ecological districts in South Marlborough and Para, Fishtail, Te Hoiere/Pelorus, Rangitoto ki te Tonga/D'Urville, Sounds and Cook Strait ecological districts in North Marlborough - see yellow shaded areas on map). However, the Department of Conservation also carried out a substantial part of the survey work between the years 2002 – 2004, as part of the Protected Natural Areas (PNA) survey of the Wairau ecological region which included five ecological districts in South Marlborough - Grassmere, Flaxbourne, Wither Hills, Blenheim and Hillersden (see green shaded areas on map).



Some ecological districts at the south of the region (Tapuaenuku, Bounds, Dillon, Sedgemere, Balaclava, Travers and Red Hills), were not surveyed in the 2000's being mostly Department of Conservation land or pastoral leasehold land. In 2018, surveys of properties in the Upper Awatere Valley were initiated to fill gaps in coverage in Tapuaenuku, Dillon and Waihopai ecological districts.

This work will continue for as long as run holders welcome us onto their properties. Wildlands Consultants have been engaged to undertake these surveys which have required ten days or more of field time per property and frequently take more than one field trip to complete. Three reports have been completed and one is part finished. In 2022, three Lower Awatere properties in the Flaxbourne ED were surveyed with seven new SNAs identified.

There are still some gaps in coverage in parts of Marlborough previously surveyed, especially in the Te Hoiere/Pelorus, Waihopai, and Flaxbourne, which are being addressed as opportunity allows. These have been conducted at the request of landowners since 2009, mainly by Ecologist Geoff Walls in association with annual monitoring of SNA condition. More recently, Biodiversity Coordinator Mike Aviss has been undertaking surveys with contract ecologist, Simon Litchwark.

As each SNA is visited for monitoring, the opportunity is taken to reassess the boundary to ensure it still reflects the extent of significant habitat. The inaccuracies mainly stem from the quality of mapping that was available during the early 2000's compared to what is used today.

This ecological survey work has resulted in a large amount of information being collected. It provides both a regional scale overview of the extent and state of biodiversity resources on private land, and a

more detailed property scale assessment which is useful for implementing practical protection measures such as fencing and pest control. While the emphasis has been on terrestrial vegetation and habitat values, wetlands, and some waterways, have also been assessed.

2.1. Summary of Results – July 2021 to June 2022

2.1.1 Property Surveys

Wildlands Consultants were contracted to survey a cluster of three Mid-Awatere properties in the Flaxbourne ecological district and part of the Medway ED. The farms were physically surveyed over five days which gave a good overview. Seven new SNAs were identified within the area surveyed, totalling approximately 172ha. Collectively, they contain a range of habitats that include forest, scrub, shrublands, bluffs, riparian forest and wetlands. These properties are on the edge of the plains in an Ecological District with less than 2% indigenous vegetation remaining, so their inclusion in the programme is critical.



Figure 2: Pink broom flowering on limestone bluffs.

A coastal limestone property in Kekerengu ED was surveyed and two sites were added to the map: one of coastal hills and dune lands and another of limestone bluffs and gorges, totalling 167ha.

A third survey involved a property in Waitaria Bay, Kenepuru Sound, and added a further three sites (32.4ha) to the database, including nationally rare lowland alluvial swamp forest remnants and hill country broadleaf-beech-podocarp forest.

Therefore, 376.4ha of additional land were added to the database of significant sites this financial year.

The cost to Council of the surveys and reports was \$27,421.00.

2.1.2 Wetland Survey 2010 – 2013

From 2010 – 2013 Council carried out a further project to identify regionally significant wetlands in Marlborough. These have been scheduled in the proposed Marlborough Environment Plan which is currently notified, and submissions are being analysed. Wetlands are identified on the Planning Zone

maps and landowners will then have another opportunity to consider them. This project involved desktop identification followed by notification to all affected landowners and follow up field visits on request. There was some overlap with wetland areas already identified through the earlier Significant Natural Area surveys.

Most wetlands were not visited or described in a survey as part of the identification process. This is an information gap which will need to be filled as opportunity allows with some ecological assessments.

There were 1,300 wetlands identified in the desk-top exercise. While the final number of identified wetlands is yet to be confirmed, well over 1,000 are likely to be scheduled in the Marlborough Environment Plan once it is ratified. Until then they are all being treated as SNAs, which means they qualify for the same level of assistance through the Landowner Assistance Programme.

Additional wetlands identified opportunistically since then have been added to a separate database to be processed during the next plan change.

2.1.3 Results

The tables below show the summary of ecological results from the Significant Natural Area surveys on private land for both South and North Marlborough in the 13-year period from July 2001 to June 2022. These do not include the additional wetland sites that have been identified more recently through the 2010-13 survey described above, unless they have had a full SNA assessment report completed and have been assigned a number.

Table 1 and Table 2 show the total participation rates and overall results from 2001 to June 2022 in South and North Marlborough respectively. Using ecological district units, the tables show; the number of sites identified, the number of sites legally protected, the combined area and percentage of total land area of all of the identified Significant Natural Area sites, and the percentage of Department of Conservation land in each Ecological District.

As of June 2022, a total of 771 Significant Natural Areas have been identified, with a combined area of 91135 hectares.

Table 1: South Marlborough Ecological Survey Participation and Results (July 01 – June 22).

Ecological Districts	No. of Sites	No. Sites Legally Protected	Combined Area (ha)	SNA sites as a % of Total Private Land Area in ED	SNA sites as a % of Total Land Area	% of ED in DoC land
Kekerengu	61	6	1,647	9.9%	5.4%	3.8%
Flaxbourne	72	7	2,332	6.4%	8.3%	0.3%
Grassmere	19	0	1,742	6.2%	9.4%	0.4%
Blenheim	20	8	3,085	2.4%	7.4%	3.4%
Medway	69	15	3,833	12%	11.9%	1.0%
Hillersden	47	5	9,439	10%	18.3%	3.6%
Wither Hills	25	3	5,039	16.7%	16.6%	0%
Waihopai	74	23	17269	20.5%	15.8%	24.5%
Tapuaenuku	19	0	1,341	4.4%	1.8%	40.2%
Dillon	29	0	13,876	37%	7.6%	69.8%

Balaclava	7	0	5361	54%	4.4%	91.3%
Bounds	4	0	1232	11.6%	1.28%	88.9%
Totals	446	67 (13%)	66,196	Av=15.9%	Av=9.0%	Av=27.3%

Table 2: North Marlborough – Ecological Survey – Participation and Results (July 01 – June 22).

Ecological Districts	No. of Sites	No. sites legally protected	Combined Area (ha)	SNA sites as a % of Total Private Land Area in ED	SNA sites as a % of Total Area of ED (DoC and Private)	% of ED in DoC Land
Rangitoto ki te Tonga/D'Urville	49	1	5166	32.7%	17.8%	31%
Cook Strait	6	2	478	12.9%	9.3%	28%
Sounds	222	27	12,468	17.9%	10.8%	41%
Te Hoiere/Pelorus	43	8	2,131	8.3%	2.1%	68%
Para	63	5	3,648	10.7%	7.6%	28%
Fishtail	27	3	1,088	8.0%	2.5%	68%
Totals	410	46 (10%)	24,979	(Av=15%)	(Av=8.3%)	(Av=41.6%)

2.2. Discussion

The field based ecological surveys have produced a lot of information about the distribution and type of native habitat remaining on private land in both South and North Marlborough. Despite a high level of buy-in from Marlborough landowners when the programme was initiated, there are still large tracts of land that have not been assessed for SNA status which we are visiting as opportunity allows. Sites are being added to the database on a regular basis and new relationships being developed with landowners all the time, usually leading to improvements being made to many of the sites.

2.3. South Marlborough

This part of the region is characterised by a long history of extensive native vegetation clearance and is consequently much depleted in ecological functioning in some respects. While there are some extensive areas of beech forest, kānuka forest, shrublands and tussock grasslands, these all occur in the extensive areas of hill country. Of the ten ecological districts that were surveyed in the South Marlborough area there is very little Department of Conservation land in seven of them. The percentage of total land area of significant natural sites is also very low for some of these - less than 10% in the three lowland coastal ecological districts (Flaxbourne, Grassmere and Kekerengu).

This is clearly reflected when the ecological districts are compared to the Priority One area of the 2007 Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land which identifies land environments that have less than 20% remaining in indigenous cover. The 20% threshold is based on a well-established species-area relationship which shows that the rate of biodiversity loss increases dramatically when the amount of available habitat drops below 20% of its original extent.

Some ecosystem types in South Marlborough are much depleted (for instance wetlands, podocarp forest and broadleaved forests) and the little that does remain is not always well managed or formally protected in any way. However, with an emphasis on protection of some of these areas, some improvements are being made with landowners introducing management such as fencing, weed control and restoration planting. This will help to ensure the long-term sustainability of some of these sites.



Figure 3: Medway Gorge

2.4. North Marlborough

The North Marlborough part of the region has a different climate and history of land clearance to South Marlborough and also has a considerable amount of Public Conservation Land (ranging from 24% to 68% in different ecological districts). The percentage of total land area of significant natural sites is generally higher than in South Marlborough, ranging from about 7% to 30% across the ecological districts.

While some ecosystem types are quite depleted, for instance lowland alluvial and swamp forests and kohekohe forest, a significant amount of native forest habitat remains – both beech and podocarp dominated. Additionally, large areas of regenerating forests consisting of kānuka, mānuka, tauhinu and broadleaved species are present where land has been left to regenerate following earlier clearance.

While fencing is important for some lowland sites within a pastoral farming landscape, feral animal pest control is the main challenge in North Marlborough, especially as there are still populations of a range of native fauna present (forest birds, sea birds, weka, giant land snails, and native freshwater fish species).

Part B: Site Improvement – Landowner Assistance Programme – Summary of Results 2021-2022

3. Landowner Assistance Programme – Background and Overview

The Landowner Assistance Programme has been operating since 2003 in conjunction with the field ecological survey work and has targeted assistance to high value sites with identified pressures and threats that can be practically managed. It was initially established as a pilot programme with a focus on the South Marlborough area but has since been fully established as a permanent programme and extended to include North Marlborough.

While the main focus of the programme has been on management of threats within individual high value significant natural area sites (including a mix of fencing, weed and animal pest control and restoration planting work), other broader methods to promote the protection of natural values in South Marlborough have also been incorporated. These have included:

- The pilot use of farm scale plans to balance the production and conservation values within properties (especially where fencing is not practical);
- Three feasibility studies looking at pest and weed control issues (old man's beard and goat control in South Marlborough and wilding pine control on Rangitoto ki te Tonga/Rangitoto ki te Tonga/D'Urville Island).
- The collection of native plant seed material to ensure an ongoing supply of locally sourced plants for re-vegetation and restoration efforts, associated publicity and promotion work (newsletters, a series of newspaper articles and publication of summary reports and native planting guides for both South and North Marlborough); and
- The Tūi to Town project (recently discontinued in favour of the Working for Nature fund, part of Councils Environmental Grants Scheme).

A concerted conservation effort on private land is needed if functioning ecosystems are to be maintained, especially in the lowland areas of South Marlborough which have been identified nationally as threatened environments with less than 20% of natural cover remaining. To be effective, this would need to include continued protection of the last remaining remnants as well as active restoration planting to create new habitats and increase the overall area in natural cover (which is currently less than 1% on the Wairau and Awatere Plain areas). So far about 19% of the 771 identified sites over the whole of Marlborough have received funding assistance for restoration or management (45 in North Marlborough and 98 in South Marlborough). While a number of sites are likely to be deteriorating in condition over time due to a range of threats and pressures, it is pleasing to note that the condition of nine of the eleven unmanaged sites monitored in 2021/22 was Fair, and the trend in nine of the eleven was either Improving or Stable.

Expenditure to manage SNAs averaged about \$120K per annum from 2007 until 2012, when DOCs Bio Fund rules changed. Council has since increased its commitment and in 2021/2022 landowners were given financial assistance amounting to \$194,192 to help manage threats to indigenous biodiversity on their land. The amount has been matched by landowners and others so that in 2021/2022 a total of \$392,165 was spent improving the condition of significant natural sites on private land in Marlborough.

A lot of restoration and good-will has also been achieved by the programme over time. There is also unrecorded effort over and above this where Council is not involved financially through the SNA programme.

3.1. SNA Habitat Improvement Projects 2021-2022

In the 12-month period from July 2021 to June 2022, the Council contributed to 29 projects in total. Thirteen of these were new projects, with a mix of weed control, pest control, fencing and planting, planning and threatened species management. Sixteen are ongoing projects; mostly weed control but also including a fencing project and threatened native broom management.

Highlights of the year in the Management Projects include:

- Planting 5000sqm of native spinifex and pingao into the sand on the coast between Boo Boo Stream and Cape Campbell, and 2000 trees at Mussel Point, in community planting days.
- Fencing stock out of a wetland near the mouth of the Ure River.
- Fencing stock out of the northern end of Lake Elterwater.
- Ground control of cotoneaster in the Grey River to protect the native pink tree brooms.
- Ongoing fencing and planting of 200ha of coastal cliff SNAs in the outer Sounds.
- Predator control in Boons Valley.
- Wilding pine control on coastal limestone properties near Needles Point.

Since 2003, 144 separate sites have been the recipient of funding assistance from MDC.

Recently, restoration of the East Coast south of Lake Grassmere/Kapara Te Hau has been a focus. Ward School pupils helped other locals to plant 2000 seedlings at Mussel Point near Marfell's Beach. This was funded by Ministry of Primary Industries (MPI) through their 1 Billion Trees Matariki Tu Rakau community planting programme, to help restore areas with a goal of shading out the marram grass that is dominating dunes there. Another 1800 pingao seedlings have now also been planted further south along that coast. This is part of a project called Beach Aid, a collaboration with University of Canterbury, MDC and East Coast landowners. Barriers are erected to exclude vehicles and we plant the grasses in different ways to help design the ultimate best way to restore native vegetation to the beaches uplifted during the November 2016 Kaikoura Earthquake.

A number of wetland owners have expressed an interest in wetland restoration and approached the Council for assistance. All Significant Wetlands are treated as if they are SNAs and in the 2021–2022-year, eight wetland restoration projects were funded, with Council funding \$51,092.

A summary of all Significant Natural Area project expenditure is included in Appendix 1.



Figure 4: Nopera Covenant fence



Figure 5: Mussel Point 1BT planting

3.2. Protection Projects Summary – July 2021 – June 2022

Table 3: Summary of new protection projects July 2021 – June 2022 (GST inclusive).

Ecosystem Type	Size (ha)	North/South Marlborough ED	Type of Work	Total Funding	Council	Other	Landowner
Riparian (Holt)	31	N Te Hoiere/Pelorus	Fence	\$22170	\$11085		\$11085
Hillslopes (Rent)	149	S Hillersden	Weeds	\$9918	\$4959		\$4959
Wetland (F&G)	126	N Para	Weeds/Plant	\$7874	\$7874		\$0
Hillslopes (Holm)	460	N Te Hoiere/Pelorus	Animal pests	\$6078	\$3039		\$3039
Hillslopes (Spei)	129	S Kekerengu	Pines	\$5750	\$2875		\$2875
Riparian (Kawh)	3.5	N D'Urville	Weeds	\$94	\$94		\$0
Hillslopes (Muir)	190	N Sounds	Weeds/pests	\$39307	\$11,500		\$27807
Hillslopes (Harv)	344	N Sounds	Possoms	\$9736	\$4868		\$4868
Hillslopes (Suth)	610	N Sounds	Goats	\$27945	\$11000		\$16945
Wetland (Macd)	10	S Tapuaenuku	Fence	\$30316	\$11500	\$7316	\$11500
Dunes (1BT)	1.0	S Kekerengu	Plants	\$18590	\$0	\$18590	\$0
Wetland (Lind)	1.0	S Blenheim	Planting	\$20583	\$10291		\$10292
Lowland (Obr)	2.0	N Sounds	Traps	\$575	\$0	\$575	\$0
Total	2057			\$198936.00	\$79,085.00	\$26681	\$93370.00

Table 4: Summary of ongoing protection projects July 2021-June 2022 (GST inclusive).

Ecosystem Type	Size (ha)	North/South Marlborough ED	Type of Work	Total Funding	Council	Other	Landowner
Wetland (Gree)	2.6	S Kekerengu	Fence	\$6164	\$3082	\$0	\$3082
Wetland (Hunt)	0.8	S Blenheim	Weeds, plant	\$8152	\$4076	\$0	\$4076
Riparian (Dowl)	1.0	N Sounds	Fence	\$4181	\$1394	\$1394	\$1394
Hillslope (Mole)	200	N Sounds	Planting fence	\$42,032	\$5750	\$0	\$36,272
Forest (Bala)	73	S Waihopai	Fence	\$14134	\$14134	\$0	0
Coastal (Pete)	1	S Kekerengu	Planting	\$12298	\$6149	\$1745	\$6149
Coastal (Pete)	3	S Kekerengu	Marram	\$7654	\$6023	\$460	\$3827
Coastal (Wilt)	2.0	S Kekerengu	Planting/marram	\$20110	\$10055	\$0	\$10055
Wetland (Opao)	4	S Blenheim	Weeds, plant	\$7070	\$3535	\$0	\$3535
Hillslopes (Coat)	250	N Para	Pines	\$9316	\$4658	\$0	\$4658
Hillslopes (Harv)	54	S Medway	OMB	\$4,942	\$2,471	\$0	\$2,471
Wetland (Patr)	5	S Hillersden	Weeds, plants	\$19398	\$9699	\$0	\$9699
Forest (MSRT)	26	N Sounds	Pines	\$8628	\$4314	\$0	\$4314
Coastal (MDC)	3.5	S Kekerengu	Marram	\$3414	\$3414	\$0	\$0
Hillslopes (Thr)	28	S Waihopai	Fence	\$29370	\$29370	\$0	\$0
Wetland (Brya)	4	N Te Hoiere/Pelorus	Fence	\$2645	\$1035	\$575	\$1035
Coastal (Sto)	92	S Kekerengu	Pines	\$32396	\$9835	\$12,726	\$9835
Total	749.9			\$231,904.00	\$118,994.00	\$16900	\$100,402.00

Total Funding Contributions for Biodiversity Protection Projects on Private Land 2021-2022

Marlborough District Council Funding	\$188,244
Central Government Biodiversity Fund	\$18,590
QEII National Trust	\$24,991
Landowners	\$183,937
Total	\$415,762.00

Summary of Total Funding Contributions for Biodiversity Protection Projects on Private Land 2003 – 2022

Marlborough District Council Funding	\$1,421,866
Central Government Biodiversity Fund	\$867,234
QEII National Trust	\$240,256
Landowners	\$1,537,884
Total	\$4,067,240.00

3.3. Relationships

Council promotes covenanting and maintains strong relationships with the Department of Conservation and the Queen Elizabeth II National Trust (QEII), both of which provide a mechanism for landowners to independently protect areas on their properties.

A total of 58 of the 143 projects protected through the programme so far have been on covenanted sites. Three of these are Protected Private Land (PPL) covenants administered by the Department of Conservation and the other 54 are QEII covenants. The QEII takes responsibility for on-going monitoring of their covenanted sites, reducing the monitoring required to be carried out by Council.

The table below shows the number of SNAs that have been protected by either the QEII Trust or DOC. The boundaries of both do not always, or even often, agree so the area is only where they overlap. The QEII data comes from their website and is only updated once the covenant has been formalised, fenced and then surveyed, which allows it to be mapped and added to the GIS layer. This creates a lag time from the time the agreement is signed to when it is mapped. 25 extra SNAs were legally protected this year.

Table 5: SNAs in Marlborough which have legal protection.

	Sites
SNAs in Marlborough which have some legal protection at August 2020	89
SNAs in Marlborough which have some legal protection at July 2021	114

Council has also been working collaboratively with the Marlborough Sounds Restoration Trust in recent years and has contributed to several wilding pine control projects on private properties led by the Trust as well as a guideline about converting pine plantations to native vegetation. In 2021/2022, Council contributed \$4313 to MSRT, toward control of deer in SNAs in the Outer Sounds.

Other community-based conservation groups currently operating in the Marlborough region include:

- Endeavour Inlet Restoration Trust.
- Grovetown Lagoon Restoration Project.
- Kaipupu Mainland Island Sanctuary.
- Para Swamp Restoration project (Fish and Game and The Gamebird Habitat Trust).
- Picton and Rarangi Dawn Chorus Groups.
- Te Hoiere/Pelorus Long-Tailed Bat Project (Forest and Bird).
- Tōtara for Tōtaranui Project.
- Tūi Nature Reserve Trust.

All of these groups are independent of the Council and compete in a tight market for funding from a small number of other sources, such as Lotteries Commission, Canterbury Community Fund, the DOC Community Fund, Council and landowners. Council has worked with DOC to set up a Biodiversity Forum to provide a simple way of communicating with all the groups and enabling them to communicate with each other. These meetings have been well attended and have been seen as positive by the various community groups.

Part C: Monitoring Programme – Summary of Results

4. Background and Overview

Monitoring is an important part of measuring and tracking the outputs and outcomes of any project. There are three types of biodiversity monitoring that are relevant to the Significant Natural Areas project.

Firstly, at the broadest level, regional scale biodiversity monitoring is desirable so that an overall picture of biodiversity state and trends can be gained. At this stage, this type of monitoring is not established in the Marlborough region, however we are involved in a national Envirolink Tools project which is being carried out in conjunction with Landcare Research and the Department of Conservation. This project is developing some standardised biodiversity indicators and methodology to measure these indicators. Staff has been involved in meetings helping to develop this project.

Secondly and more specifically, in relation to the Significant Natural Areas project, Council is undertaking a programme of ongoing monitoring of the state and condition of a selection of representative sites from the more than 730 SNAs identified that have not had any specific conservation management applied. This type of monitoring was started in the 2014/15 in two ecological districts and repeated annually ever since.

The previous two monitoring seasons were heavily impacted by the Covid 19 pandemic. The monitoring programme is now recovering and has recently had a major boost with the assistance of a new ecologist based locally who is available and committed to working with us. Simon Litchwark has a good knowledge of the flora of Marlborough as well as years of field experience with the South Marlborough Office of DOC as well as DOCs National Monitoring team. He comes at a time when Geoff Walls has been reducing his involvement after decades of incredible service for the Council.

Seven properties were visited for monitoring of unmanaged sites and a total of 11 separate Significant Natural Areas were assessed for their condition. The results show that, without any financial assistance from Council, these SNAs are still in fair condition and with mostly a trend or at least stable, benefiting often from the considerable efforts of landowners keen to keep their properties in good shape.

Thirdly, systematic monitoring has been established to assess the condition of the 143 sites that have been actively managed through the Landowner Assistance Programme (about 13% of all sites identified). This started in 2006/07. In 2022, eight managed sites were monitored and found to be in good condition with a trend of improving.

The QEII National Trust monitors the sites that it has covenanted (currently 95 sites in Marlborough, 89 of which overlap with SNAs), so Council does not generally monitor the SNAs that QEII monitors, even though Council contributes to funding management at some of them.



Figure 6: Wye Property 2002



Figure 7: Wye Property 2022

4.1 2021 - 2022 Monitoring of Un-Managed SNA Sites

Monitoring to assess the state and condition of a selection of representative sites that have not had any specific conservation management applied was carried out in 2021/2022.

They were located in the Rangitoto ki te Tonga/D'Urville, Te Hoiere/Pelorus, Kekerengu, Hillersden and Flaxbourne ecological districts (EDs).

4.2 Site Monitoring Results

- A total of 11 unmanaged sites were monitored on seven properties. The results are pleasing.
- Overall results show that most unmanaged sites visited were generally in reasonable condition (nine were in fair condition or better). This reflects the inherent resilience of most of the sites, which have persisted within a productive landscape over many years prior to the SNA programme identifying them. In many cases it also reflects the commitment of landowners to undertake management on their properties without any Council assistance and to manage their land in a manner sympathetic with the natural environment.
- Nine of the 11 unmanaged sites (94%) showed a condition trend of improving or stable (15% were improving). The main reason for the good result appears to be lower stocking rates on back country farms by careful farmers, and landowner pest control for the property, which allowed the sites to flourish.
- 1BT and the Emissions Trading Scheme are fast becoming buzz words in Marlborough in the native tree space. Properties which have no "managed sites" are doing it themselves when they have engaged in growing natives trees for the ETS. SNAs are also being fenced out of the farm with funding from 1BT and with assistance from Council. This is incentivising landowners to set aside their marginal land for growing carbon. I am actively assisting landowners to connect with experts able to assist in this effort. The SNA programme has contributed towards fencing stock out of areas set aside for carbon farming.
- While very few sites are legally protected, and rely on the benevolence of the owners, the Marlborough Environment Plan (MEP) clearance rules protect many of them from damage or destruction. There is now a recommendation in SNA monitoring reports that owners contact the QEII Trust to discuss legal protection of sites. This has been successful in prompting a number of SNA sites to be processed for covenanting by the QEII Trust.

Table 6: Summary of condition results of SNA Un-managed site revisits to Rangitoto ki te Tonga/D'Urville, Te Hoiere/Pelorus, Kekepengu, Hillersden, and Flaxbourne ecological districts- 2021/2022.

Site Condition	Good	Good/Fair	Fair	Fair/Poor	Poor
		6	3	2	
Site Trend	Improving	Improving/Stable	Stable	Stable/Deteriorating	Deteriorating
	1	5	3	2	

In recent years, the damage that is occurring to the dunes, beaches and coastal biodiversity within and beside the SNAs along the East Coast, post the Kaikōura Earthquake of 2016 has been reported. The damage to these vulnerable natural ecosystems has continued in the absence of any control or reduction of vehicle access to the coast. An effort has been made to understand the biodiversity of these ecosystems better. New populations of threatened species, such as katipo spider and the mat daisy jumper have been recorded recently, including katipo in one of the planted areas of beach. The SNA programme is managing a planting and weed control programme along the coast in an effort to come up with the best approach to restoring the indigenous biodiversity to the area. Results are being measured by Canterbury University to help quantify the best approach to restoring the coast.



Figure 8: Shrubby Tororaro 2005



Figure 9: Shrubby Tororaro 2022

4.3 2021 - 2022 Monitoring of Managed SNA Sites

SNA Assistance Programme Monitoring – In the 2021/2022 monitoring round, a total of eight sites were visited on six properties.

Monitoring of Managed Sites has increased again after an unsatisfactory effort last year. This reflects the contracting of another local ecologist and the trend for the future should be increased levels of monitoring of sites. Assessment methodology is qualitative and simple and includes rapid ecological condition and trend assessment along with photo points. Reports prepared for each site visited and provided to the landowners include commentary, site maps and photographs established at defined photo points to provide a visual record of changes over time. Any emerging issues (for instance weed invasion) are discussed with the landowner and further management is often put in place to deal with these.

The monitoring allows the Council to maintain links with landowners and assist them in relation to these sites. Further quantitative monitoring could be added in time to allow a more rigorous analysis of change in site condition over time or to target particular points of interest within sites.

The table below provides a summary of the condition and trend of the sites.

All managed sites were found to be in good condition and with a trend of improving, with one stable. The condition and trend of managed sites is better than unmanaged sites, as you would expect, however many of these sites are not under current management but are benefiting from previous efforts in fencing and weed control. This is a good outcome.

Table 7: Summary of Monitoring results for SNA Managed sites 2021/2022

	Good	Good/Fair	Fair	Fair/Poor	Poor
Site Condition	3 (%)	5			
	Improving	Improving/Stable	Stable	Stable /Deteriorating	Deteriorating
Site Trend	2 (%)	5	1		

4.4 Summary and Discussion

Some observations from the 2021/2022 monitoring round:

- Landowners continue to be co-operative and allow access for monitoring purposes and all landowners were very interested in their sites and tracking their progress over time.
- More landowners are increasingly becoming aware of the benefits of setting aside marginal land from their operations and allowing it to restore itself, often just to reduce their operating costs but also to generate an income by sequestering carbon and earning carbon credits from indigenous trees.
- Most SNA sites visited are improving in condition generally due to natural resilience and re-generation processes, and in some cases management interventions.
- Threats are most often either feral ungulates (mostly goats and deer) or weeds (especially old man's beard and wilding pines). These are old issues that seem to have gained traction in recent years
- Post the earthquake, natural regeneration on the coast south of Marfells Beach is largely being hindered by the impacts of much higher use of the coast. Indigenous dune ecosystems and species are being damaged mostly by vehicle traffic. Success of any plantings is being improved by post and rope fences with signs directing vehicles away from newly planted areas, however this still leaves most of the coast's biodiversity vulnerable.

Table 8: Summary of Monitoring of Managed SNA sites 2006 – 2022.

Year	Total Sites	Sites monitored
2006/7	25	12 (9 properties)
2009/10	52	24 (17 properties)
2011/12	74	19 (13 properties)
2013/14	80	25 (19 properties)
2015/16	88	26 (19 properties)

2017/18	98	27 (17 properties)
2018/19	106	8 (6 properties)
2019/20	124	5 (4 properties)
2020/21	133	2 (2 properties)
2021/22	143	8 (6 properties)

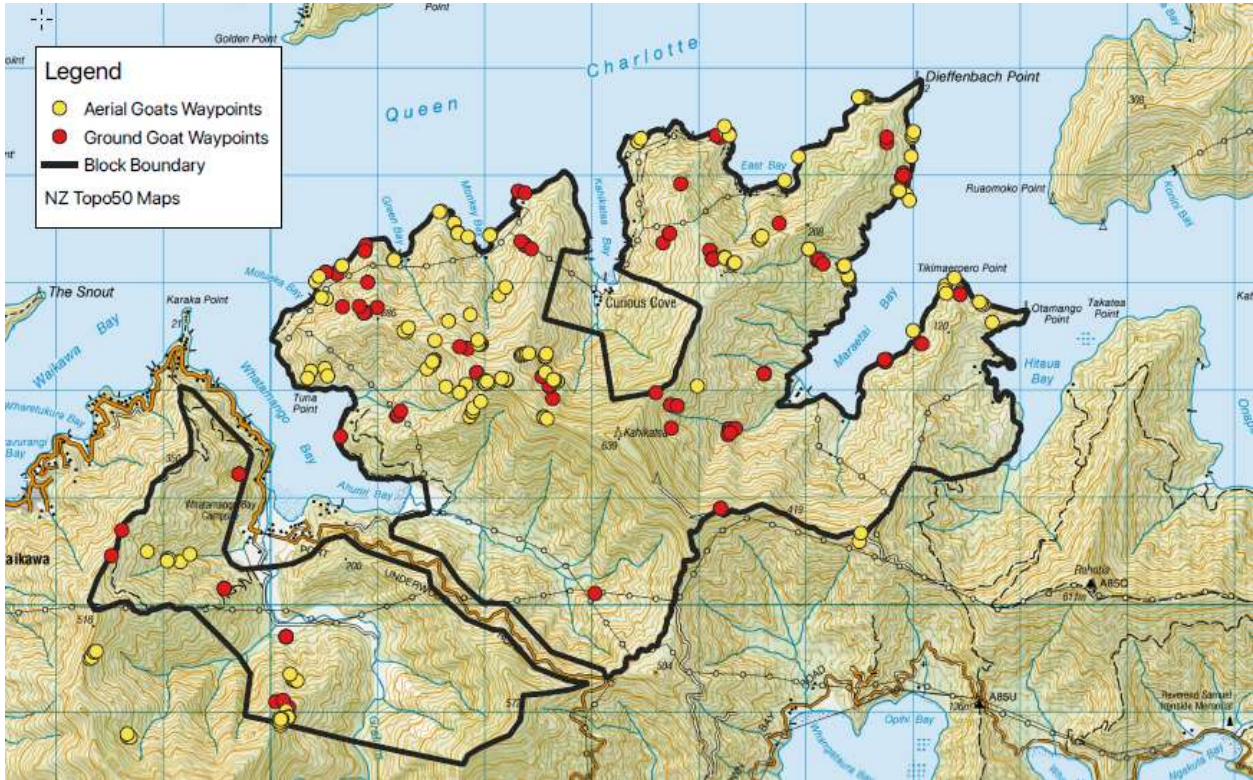


Figure 10: Marlborough Sounds feral ungulate control

Part D: Associated Projects

5.0 Publicity and Information

5.1 Background

Publicity and promotion have been integral to the Significant Natural Areas Project because it relies heavily on voluntary participation and proactive protection activity from landowners. Initially the emphasis was on increasing awareness about the unique and diverse biodiversity of the region and the opportunity for landowners to participate in collecting information and looking at options for protection where necessary. This occurred through personal contact, individual property reports, annual newsletters and newspaper articles.

More recently publicity about the SNA project is integrated into other media releases and publicity, for instance links with entrants in the Marlborough Environment Awards, farming articles and so on.

Previous publications relating to the project have included:

- Annual project newsletters – 2003-2016.

- Guidelines for landowners to develop a management plan for the sustainable management of native vegetation – 2004.
- Native Vegetation for South Marlborough – a Planting Guide – December 2004.
- South Marlborough – Significant Natural Areas Project Summary Report – July 2005.
- Marlborough District Council web page – Environment/Ecology and Biodiversity – 2005.
- Tūi to Town brochure, web page and associated planting guides (Wairau Plains and South Marlborough low lying hill country) – June 2008.
- North Marlborough – Significant Natural Areas Project Summary Report – June 2009.
- North Marlborough – Native vegetation planting and restoration guide – June 2011.
- Publication “Guidelines for Converting Pine Plantations to Native Vegetation in the Marlborough Sounds” – November 2016.

5.2 The 2021-2022 Year

During 2021/2022, the Biodiversity Co-ordinator spoke at the Marlborough Environment Awards Tree Field Day at the Throne to promote the planting of indigenous species, and to connect with landowners about the SNA programme. A presentation to the East Coast Protection Group’s AGM to promote the Councils role and achievements in relation to the east coast was also given. Articles were placed in local papers about SNAs and tree planting opportunities.

Five community planting days were held on the East Coast south of Marfells Beach. All sites were adjacent to SNAs. The seedlings were paid for either by Marlborough District Council or by the Ministry of Primary Industry’s One Billion Trees Fund. They were well attended by Marlborough residents and local school students. 6800 indigenous seedlings were planted including a mixture of sand grasses and coastal forest trees. The Marlborough Express attended one day and published an article about the days.

All existing information brochures and website versions were updated.

6.0 Seed Collection Project

6.1 Background

Through the Significant Natural Areas project, it became apparent that boosting the supply of suitable locally sourced native plants would be necessary if there was to be an adequate volume of appropriate plants available for restoration projects in Marlborough. The Working for Nature natural habitat restoration project is helping to stimulate this activity in Marlborough by providing information and for larger projects, funding assistance.

The Significant Natural Areas project has provided an opportunity to identify remaining pockets of indigenous plants on private land that provide valuable seed sources to generate future material for restoration planting.

A pilot seed collection project was initiated in 2006 focusing on tōtara seed collection and this has continued since then and broadened to include a range of suitable species for restoration planting such as kahikatea, matai, kowhai, kānuka, flax, cabbage tree, māhoe, kōhūhū, ngaio, broadleaf and lancewood, dependant on demand.

The programme is flexible and can be shifted to meet the needs of specific projects. The current emphasis in terms of location has been to collect seed close to Blenheim to ensure that the Working for Nature, Significant Natural Areas and other lowland restoration projects all have a supply of suitable plants. Recently this has expanded to collecting revegetation species in the Upper Awatere and the Katipo Coast for targeted restoration projects.

A co-operative arrangement with local plant nurseries has been developed whereby Council collects and provides the seeds (courtesy of the access granted by private landowners to seed sources), and the nursery propagates, grows and sells the plants. This helps to ensure that appropriate locally sourced native plants are available in Marlborough nurseries to service the restoration of natural areas in the modified lowland environments.



Figure 11: Pingao seed is collected to diversify dune plantings

6.2 The 2021-2022 Seed Collection Season

In the 2021/2022 seed collection season, seed was collected from a number of sites in both North and South Marlborough. The cost of this was \$16,104 incl GST. This is an increase on previous seasons which reflects the increased focus from MDC on additional planting programmes in Te Hoiere and Flaxbourne catchments through our Catchment Care Programmes.

Good quantities of kahikatea and tōtara seed were collected from the Wairau Plains, Valley and tributaries. Ngaio, akiraho, sand *Coprosma*, Spinifex, pingao and sand tussock seed was collected from the coast for dune restoration projects.

Other seed was collected opportunistically during SNA survey and monitoring work, to help make rarer or uncommonly grown plants available for local restoration projects that are being started post the SNA survey. This included seed from a range of species in the Upper Awatere, including pink broom, cabbage tree and akiraho.



Figure 12: Spinifex planted south of Cape Campbell

7.0 General Discussion and Conclusions

The Significant Natural Areas programme has been run by the Marlborough District Council since 2001. It is the main mechanism used to identify and promote protection of terrestrial indigenous biodiversity on private land. While it is entirely voluntary for landowners to participate, it sits alongside some rules preventing certain types and scale of indigenous vegetation clearance and wetland drainage. The sites are not scheduled in resource management plans (apart from wetland sites identified in the 2010-13 surveys which are intended to be scheduled in the MEP).

The project is heavily focussed on identifying and protecting habitat areas on private land as a mechanism to protect larger suites of indigenous biodiversity (plants, insects, reptiles and birds). Ecological assessments are relatively broad scale, relying on experienced ecologists and rapid qualitative methods. While it is a voluntary programme, the information collected through the significant natural areas ecological surveys is used internally by the Council when assessing the effects of resource consents.

Central Government has initiated a process to produce a National Policy Statement for Indigenous Biodiversity. The process is consultative and will lead to the Aotearoa New Zealand Biodiversity Strategy, which will give Council direction for a Marlborough Biodiversity Strategy.

A working group continues to assist the Council to manage the Marlborough SNA project and usually meets annually. This group remains integral to the management and direction of the SNA project.

Of the 771 sites identified through the SNA surveys, about 143 have been managed in some way to enhance biodiversity and a number (89) of these sites are also covenanted to provide permanent legal protection (primarily through the QEII Trust).

Monitoring to track the condition of a random selection of these managed sites is undertaken annually. In 2021/22, managed sites were in Good condition. In terms of the trend in condition, all were Improving. This is a great result.

There are, however, still over 600 Significant Natural Areas which have not received any assistance from Council to proactively manage the ecological values and ensure they are sustained in the long term. Of the 6 sites monitored in this season, all were in Fair condition with a trend of Stable apart from two which deteriorating to some extent. This is a good outcome, although the impacts of weeds, especially wilding pines and old man's beard, in addition to feral ungulates and possums, were an important issue in 2021/2022.

In addition to the monitoring of SNA sites (both Managed and Un-managed) mentioned above, Council may be expected to establish a broader regional "state of environment" monitoring programme to align with national monitoring and reporting requirements. Work is underway nationally to assist councils in developing these programmes.

Council will in future be expected to identify ecological corridors and target potential SNAs and restoration areas within them. The east coast is a vital 50km long corridor/flyway for migratory and resident breeding shore birds. As already reported, a large effort is being invested into the SNAs there as well as towards restoring the vegetation sequences on the connected dunes and foreshore that have been damaged by centuries of fires and more recently agriculture, weed invasion and vehicle use.

Included in this corridor is a series of wetlands: the Waima/Ure mouth, Lake Elterwater and Lake Grassmere/Kapara Te Hau. This is a critically important flyway for waterfowl, especially in an otherwise dry landscape. Fences were erected with SNA assistance at Waima River Mouth and Lake Elterwater.

The SNA working group has recognised that building and maintaining goodwill and awareness amongst landowners is at the heart of the SNA programme, and the work carried out in relation to the site re-visits goes a long way to keeping contact with many landowners in the ecological districts involved.

An external review of the SNA programme has helped to set the future direction and work programmes associated with the SNA project. Also, the current review of the resource management framework in Marlborough through the proposed Marlborough Environment Plan may provide some further direction once the public submission process has been completed. The submission process will also result in a final confirmation of wetland sites which will then be formally eligible for financial and technical assistance through the SNA Landowner Assistance Programme.

Information management in relation to the SNA programme is undergoing some changes. Improvements to the Council's internal information storage systems have been implemented. The electronic capture of all of the Department of Conservation 2004 Wairau Region protected Natural Areas Survey Programme is a step forward although there is still work to be done in creating property specific maps and reports for landowners with sites originally identified through the DOC survey programme. More recently we also captured the Conservation Covenant database for Marlborough, and this has been useful in identifying further areas of private land which have legal protection.

In addition, new technologies (for instance improved aerial photography and LIDAR for large parts of Marlborough) and tools (such as development of a new tablet-based field collection tool) are improving accuracy and efficiency.

The Significant Natural Areas programme is an important element of indigenous biodiversity management and protection in Marlborough, with a particular focus on privately owned land. It is complemented by the work of the QEII National Trust which works independently with private landowners to covenant and protect areas. Council's relationship with QEII is close and productive and we help each other to engage with new clients on a regular basis. We also pool our funds to make projects more affordable for all parties.

The "Kotahitanga mo te Taiao" alliance continues to develop with Te Tau Ihu Iwi, DOC and the Top of the South Councils working closely to develop a strategy for improving indigenous biodiversity in Te Taihū.

There has also been an increase in the number of larger scale community conservation and restoration projects in Marlborough in recent years and the Significant Natural Area programme continues to work closely with some of these, particularly where private land is involved.

In summary, the Significant Natural Areas Project continues to be the main avenue for Council to protect land based indigenous biodiversity in the Marlborough region. Marlborough has less than 5% of its rarer ecosystem types remaining on the plains, which is not enough to sustain biodiversity on the plains over time. With Primary Industry being such an important part of the Marlborough economy, Council has an important role in working with the community to help ensure that the natural environment is not degraded, and hopefully is improved.



Figure 13: Kiwaia, mat daisy jumper flightless moth



Figure 14: Needles Point Gravel Beach

8.0 Appendices

Appendix 1: Total Budget for Main Aspects of Significant Natural Areas Project – Marlborough District Council Expenditure and Revenue – July 2021 – June 2022 (GST inclusive)

Table 9: Significant Natural Areas Project – Total budget July 2021 to June 2022.

Project Name	Projected Budget	Actual Expenditure
SNA survey and general	\$28,750	\$27,421
SNA protection projects	\$172,500	\$188,144
Seed collection	\$5,000	\$14,003
SNA monitoring – Managed sites	\$34,500	\$6,117
SNA monitoring – Unmanaged sites	\$34,500	\$7,874
Total	\$275,250.00	\$243,559.00