



**MARLBOROUGH
DISTRICT COUNCIL**



**Information Package
Regulatory Department
10 February 2022**

Contents

Environmental Science & Monitoring	1
Biosecurity (Pest Management)	1
Other Biosecurity Projects/Initiatives	3
Environmental Science and Monitoring.....	6
Catchment Management	67
Marlborough Landscape Group C230-001-M05	73
Building Control Group	77
Alcohol Licensing.....	79
Compliance Group Update – December 2021	85
Resource Consents Section	91
Resource Consent Approvals Under Delegated Authority	93

Environmental Science & Monitoring

Biosecurity (Pest Management)

(Report prepared by Liam Falconer, Brent Holms & Jono Underwood)

Reporting Period (1/11/2021 – 21/01/2022) RPMP Programmes Operative in this Period

Chilean needle grass

(E315-003-009-01)

The Chilean needle grass programme is well underway with a total of 2895 hours of control, surveillance and compliance work undertaken so far this season. Council has engaging six contracting companies to undertake control and surveillance work throughout Marlborough from late October through to early January. The contractors along with our staff have so far undertaken visits to 218 properties to undertake control work, compliance work, as well as surveillance on at risk properties.

There have been four new sites found so far this season. All appear to be minor infestations. Of note the most unexpected find was in Picton at Endeavour Park. After some further research it was found that in the early 2000s soil was taken to the park from a heavily affected property in south Marlborough, highlighting the importance of preventing affected soil from being distributed around the district.



Image Chilean needle grass found in Endeavour Park, Picton

Cotton thistle

(E315-000-012-01)

The first run of control and surveillance work for the 2021/2022 cotton thistle programme has been completed, with all 8 active sites having been visited. Council biosecurity staff have carried out a total of 55 hours of work so far and destroyed 271 plants.

Of note, 15 plants were found at a site on Wairau Bar Rd. This is the first time cotton thistle has been found at this site since 2016 and emphasises the importance of on-going monitoring of sites due to cotton thistle's long-lived seedbank. The second run of control and surveillance work is scheduled to be completed by 4 February 2022.



Image: Biosecurity Officer Shane Webber undertaking cotton thistle control work in Waihopai Valley

Giant needle grass

(E315-003-015-01)

A total of 19 hours were spent undertaking activities for the giant needle grass programme. This included visiting all active and all historical sites. A total of 293 plants were destroyed, with the majority of these plants found at the Shingly Creek Forestry Block in the Wairau Valley.

Kangaroo grass

(E315-003-017-01)

Council biosecurity staff have completed all kangaroo grass compliance inspections for 2021/2022. Of the properties inspected, three sites did not comply with the RPMP rule with one Notice of Direction being issued. These properties are scheduled for re-inspections next month.

Biosecurity staff have almost finished undertaking control work on sites subject to the service-delivery component of the programme, with only one site remaining to be visited.

Mediterranean fanworm

(E315-003-019)

During November and December two dive contracting companies undertook dive work in Picton and Port Underwood as part of the dive surveillance programme. Nothing was found during this surveillance.

Over the Summer holiday period the Top of the South Partnership dive team have been undertaking vessel checks throughout the Marlborough Sounds and Able Tasman area. During this work they have undertaken over 1000 checks of vessels and moorings. So far only one Marlborough vessel was found to have a small number of immature fanworm on it. The infestation found on the super yacht can be linked back to the Americas cup in Auckland. Council will be working with the boat owner to get the vessel treated.

In late January the Biosecurity team undertook snorkel surveillance on a number of large vessels in the Picton marina. One vessel was found to have a singular small suspected fanworm tube on it. This was able to be removed from the vessel. Once again, the vessel was linked to the upper North Island.

During November the Biosecurity team undertook a compliance check on the Taharoa Buoy that has been brought into Picton for repairs. No fanworm were found on the Buoy during the inspection.



Image: Biosecurity Officer Hayden Nott undertaking a snorkel inspection on the Taharoa Buoy.

Nassella tussock

(E315-003-021-01)

A total of 370 properties were included in the active compliance programme for nassella tussock for the 2021 calendar year. At the end of the season a total of 271 properties or 73% had been physically inspected, exceeding the overall programme objective for the year.

Of the properties inspected 8 were issued with Notices of Direction due to non-compliance. One of the Notices issued was not complied with on time resulting in council carrying out work on default.

Reed sweet grass

Contractors were again engaged to carry out the majority of the reed sweet grass control work this year. Sites included the Grovetown Lagoon, Ruakanakana Creek, Lower Wairau Drains and Langley Dale. Council biosecurity staff carried out control work at Patuki Station on Rangitoto ki te Tonga/D'Urville Island.

Agrichemical logs recorded by contractors and biosecurity staff showed less herbicide was used this year compared to previous years, indicating a reduction in the size of infestations.

Saffron thistle

All eight 'active' and 'monitoring' saffron thistle sites were visited before Christmas. A total of 40.5 hours has been spent undertaking control work, with almost 3000 plants being destroyed. This represents a marked increase in the number of plants destroyed in the 2020/2021 season. The vast majority of these plants were located at one property in Blind River. The increase in numbers can be attributed to a new patch that the land-occupier notified us about and, potentially, the higher-than-average recorded rain fall in spring.

Follow-up visits to all sites will be carried out in the coming weeks.

Other Biosecurity Projects/Initiatives

Wilding Conifers

This period has seen all the wilding conifer control programmes the Council is involved via the National Wilding Conifer Control Programme (NWCCP) with get into full swing for the season. In summary:

Molesworth - Aerial basal bark spraying commenced in late October and is continuing as weather allows. A ground crew also commenced work in operational areas bounding the Maukuratawhai infestations (near Hanmer). A separate 40-strong ground crew started work in December addressing higher number of young trees in the Saxton catchment before moving in the New Year to large operational areas at Tarndale. Just before writing this report, a large ~100ha aerial foliar application operation was also completed across dense infestation mapped across both the Tarndale and Maukuratawhai operational areas.

Waihopai - Ground contractors have been undertaking works in the Boundary Creek Scenic Reserve, Upper Waihopai and Saltwater Creek areas. Aerial basal bark spraying operations have also been undertaking across large areas of the Upper Waihopai and the Wye catchment. A small aerial foliar application operation was completed to treat small dense areas in Boundary Creek Scenic Reserve and adjacent to the heavily infested 'Wye Core' infestations.

Sounds - The Marlborough Sounds Restoration Trust has been steadily moving through their 2021/22 work programme with numerous operations across the Sounds. This has primarily been through the use of ground contractors undertaking 'drill and fill' operations.

Awatere/Te Hau/The Ned - The South Marlborough Landscape Restoration Trust has been focussed on the Te Hau/The Ned component of their NWCCP Community Partnership Project. In conjunction with landholders, a large amount of aerial foliar spot spraying has been completed. When this is complete, efforts will move to the Awatere Valley to deliver planned works for the 2021/22 season.

As information is recorded from all these operations to feed reporting under the NWCCP, it can be viewed [HERE](#) via the public information viewer (and wilding reporting tool) associated with the Wilding Conifer Information System hosted by Toitū Te Whenua LINZ.

Restoring Flora – Jobs for Nature/KMTT Alliance Project (E315-021-002-03)

(Report prepared by Rob Simons)

Background

In 2020 post the initial covid 19 lockdowns the Government launched the Jobs for Nature Programme (J4N). The initial purpose of the J4N programme was to revitalise the economy and regional communities by helping people back into nature-based employment through various projects that would enhance and protect significant ecosystems and their biodiversity. In the top of the South Island these projects are now guided by the Kotahitanga Mo te Taiao Alliance (KMTT) which is an alliance between 15 partners including the Department of Conservation, Iwi, and Councils, working in partnership to deliver conservation projects across the Marlborough, Tasman, Buller, and Nelson regions.

One of the key J4N projects to come out of this was the 'Restoring Flora Project' in Marlborough. The main objective of this project led by The Nature Conservancy (TNC), was to roll out high impact weed control and planting programmes on a landscape scale across various ecologically significant sites within the Wairau Valley and Marlborough Sounds.

Project establishment

In early September 2021 representatives of the KMTT alliance partners nominated a suite of high-value ecological sites within the Wairau and Marlborough Sounds areas to be considered for inclusion in the Restoring Flora Project in Marlborough. These sites were further assessed by an Operational Liaison Support role within Council's Biosecurity section to determine feasibility of implementing high impact weed control programmes at those sites for the 3-year term of the project. Management plans for the recommended project sites were documented in TNC site prescriptions and submitted to TNC for approval. During this time the delivery contractor for the project Kumau-Environmental undertook a recruitment drive to engage a Team leader and trainee rangers, to enable the creation of new job training opportunities, and for the weed control programmes to be implement.

Progress

So far 11 project sites have been approved in Marlborough; these are made up of different land tenures, including QEii Covenants, Significant Natural Areas (SNA) on private land, and Public Conservation Land (PCL), together these sites cover approximately 1934 hectares (figure 1.). Where practicable these sites were broken down into smaller management/operational areas (approximately 764 hectares in total). The

key objective of the Restoring Flora Project is to treat/enhance 35000 hectares of land in the top of the South Island by 14 April 2024.

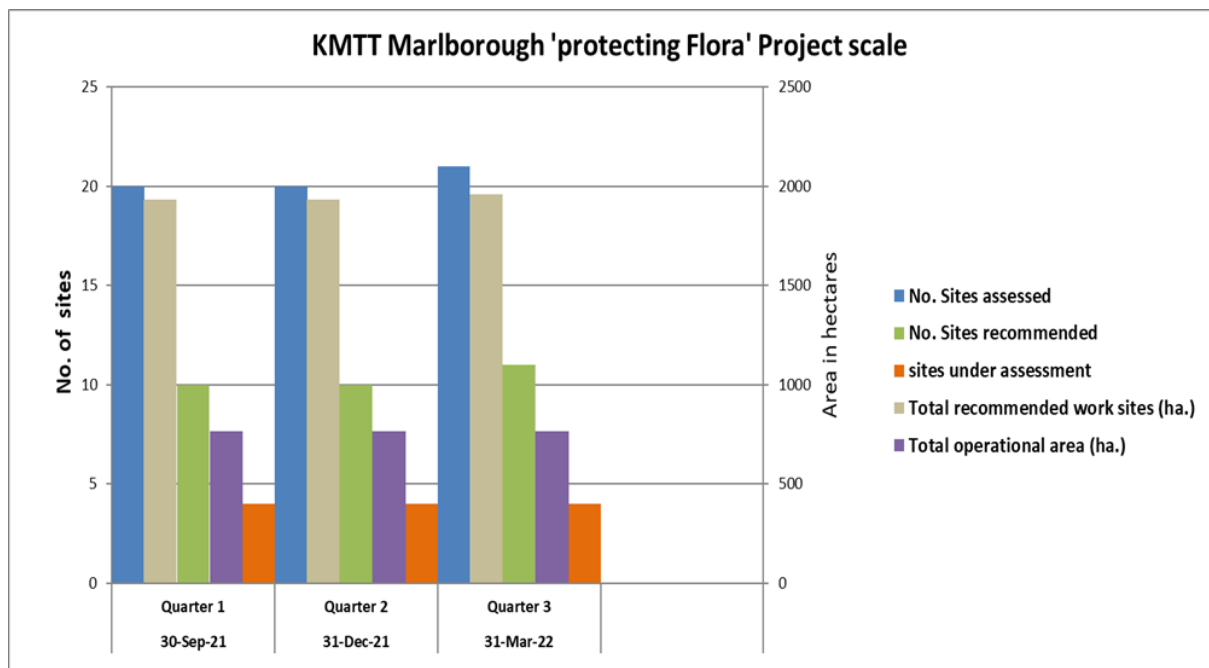


Figure 1. shows a running total of the project scale in Marlborough and the status of sites assessed up until 21 January 2022 (quarter 3 31 December 2021 – 31 March 2022).

Operational

The operational implementation of the project got off to a slow start in 2021 but was able to commence just before Christmas. As at the 13 January 2022 Kumanu-Environmental had completed work at their initial training site, covering approximately 1.85 hectares and destroying 158 target weeds (Figure 2.). The site will be visited again as required for follow-up work to be undertaken. As the capability of field staff increases so will the scope of the project by enabling work to commence at some of the more challenging sites.

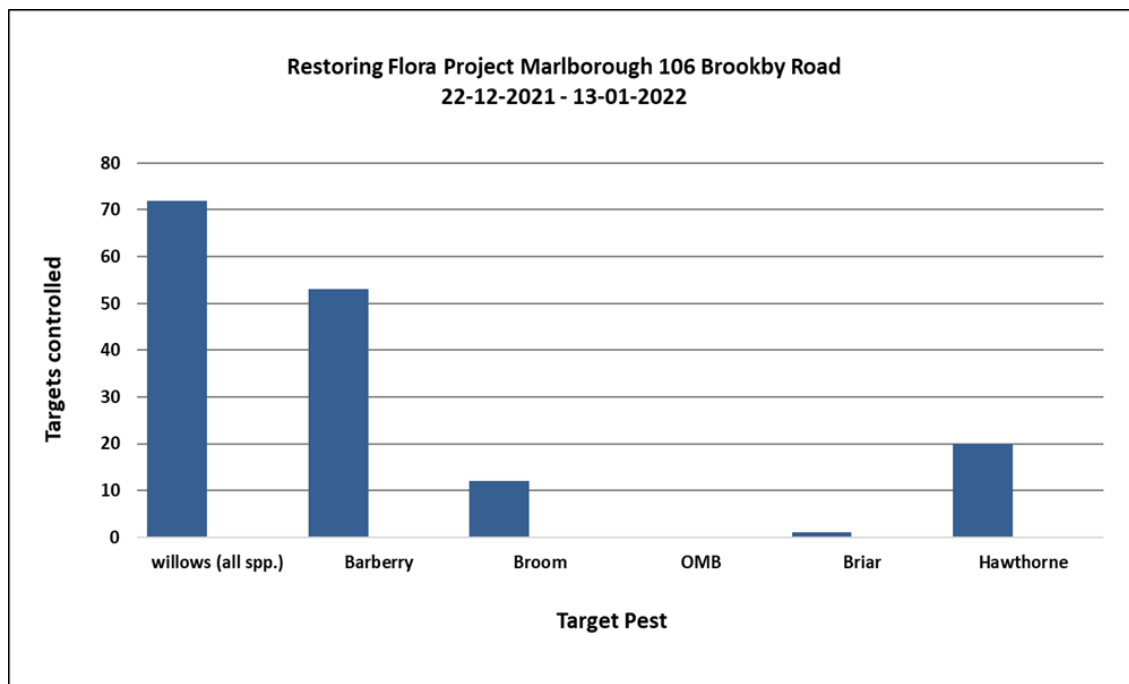


Figure 2. target weeds controlled within a small 1.85-hectare QEII covenant.



Figure 3. Kumanu Environmental working at a QEii covenant near Renwick

Environmental Science and Monitoring

Progress Report - Soil Mapping Project

(E355-004-008-06)

(Report prepared by Matt Oliver)

In 2020, Council engaged with Manaaki Whenua Landcare Research (MWLR) to improve soil mapping across Marlborough. The existing soil maps for the region were largely drawn in the 1960s with improvements made in the Wairau and Awatere Valleys in the 1980s and 90s. Improving soil mapping and soil characterisation in the region is important as pressure comes on limited land resources, demand for irrigation increases and pressure to improve freshwater quality increases. Council currently uses soil map data via Irricalc to allocate irrigation water. Future uses of the data (by council and the public) will include evaluation of nutrient management on farms, freshwater farm plan work and improving understanding of site suitability for different farming activities. This current project seeks to improve both soil maps and the characterisation of the mapped soils.

The work is funded by Ministry for Primary Industries alongside MWLR and Council. Council's share consists solely of pre-existing annual soil mapping funding and staff time. The project will run for 5 years and enable completion of work expected to take between 15-20 years if only Council resources were used.

The project has focused on the Kaituna, Linkwater, Rai and Pelorus areas to date and has made good progress over 2021. In this area 377 individual soil sites have been investigated and characterised (Figure 1).

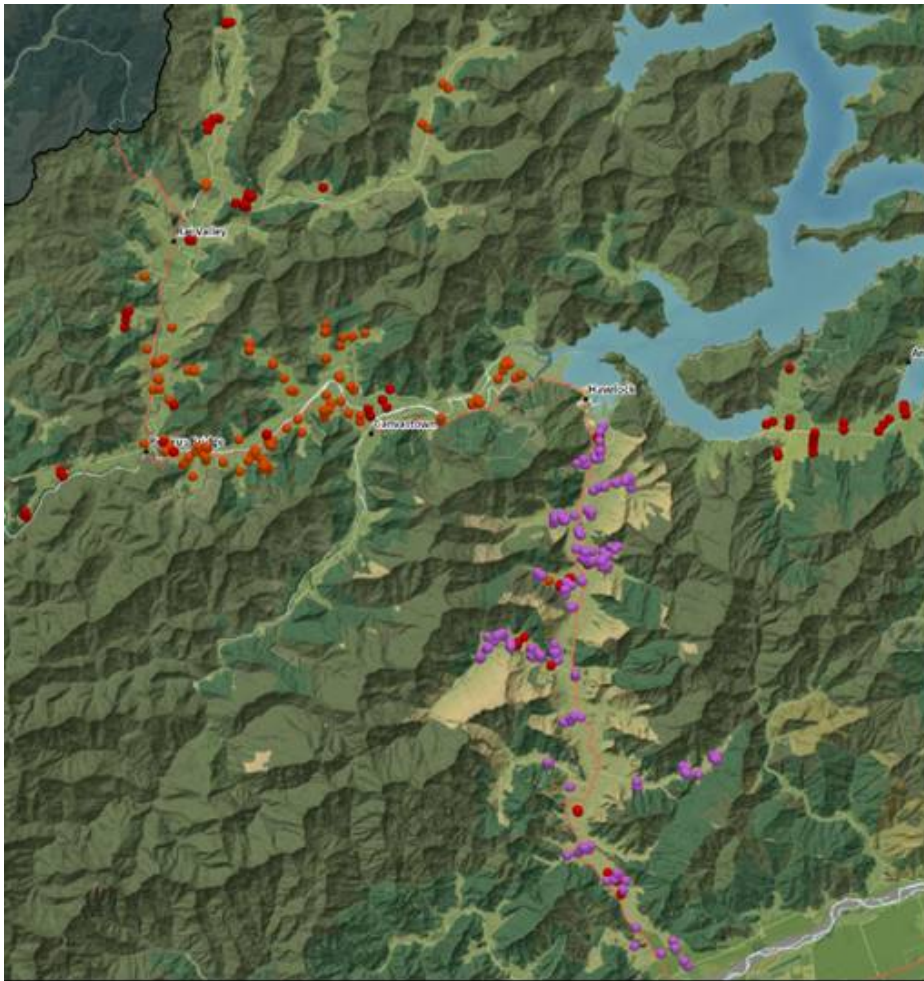


Figure 1: Soil survey sites. Different colours represent different time of collection. Higher site intensity represents greater variations in soil types found. Wide valleys tend toward greater variety compared to narrower valleys.

Each individual site represents about 30-60 minutes of work on site to dig the soil pit, auger the lower levels, characterise the soil and record the details (Figure 2). The results are collected both in hard copy and also in a ARCGIS Survey123 app which has been developed by MWLR and the MDC GIS team (Many thanks to Malcolm Jacobson for his input).



Figure 2: Left- Gerard Grelish from Manaaki Whenua Landcare Research working hard on the soil auger in Linkwater. Right- A Pelorus soil on the ground sheet ready for characterisation.

The next stage of work is to interpret the field data to match the soils found with existing soils found elsewhere in the country. It is likely that this will see local soils renamed to match standard national names. At the same time, other datasets such as imagery derived from LiDAR is analysed to understand the landscape in improved detail (Figure 3).

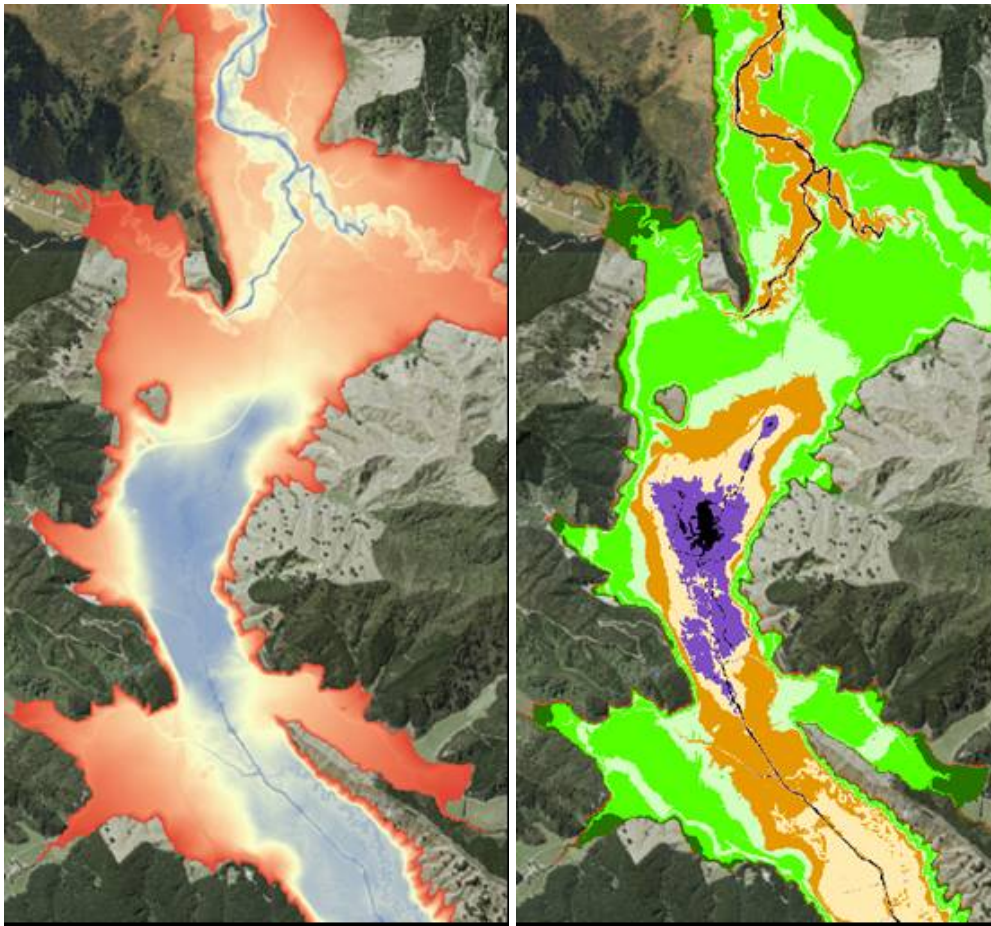


Figure 3: Left- A LiDAR derived Relative Elevation Model (REM) of the Okaramio area. Note the fine distinction of river courses (dark blue), low-lying land (pale blue), low river terraces (pale yellow) and higher land (red colours). Right- a reclassification of the REM to show height above river. This indicates likely soil boundaries.

When landscape (LiDAR) data is combined with the soil pit data, the MWLR S-Map system can determine soil types. However, as the LiDAR data is very fine scale, soil boundaries are often still hand-drawn to simplify maps to the desirable scale (Figure 4).

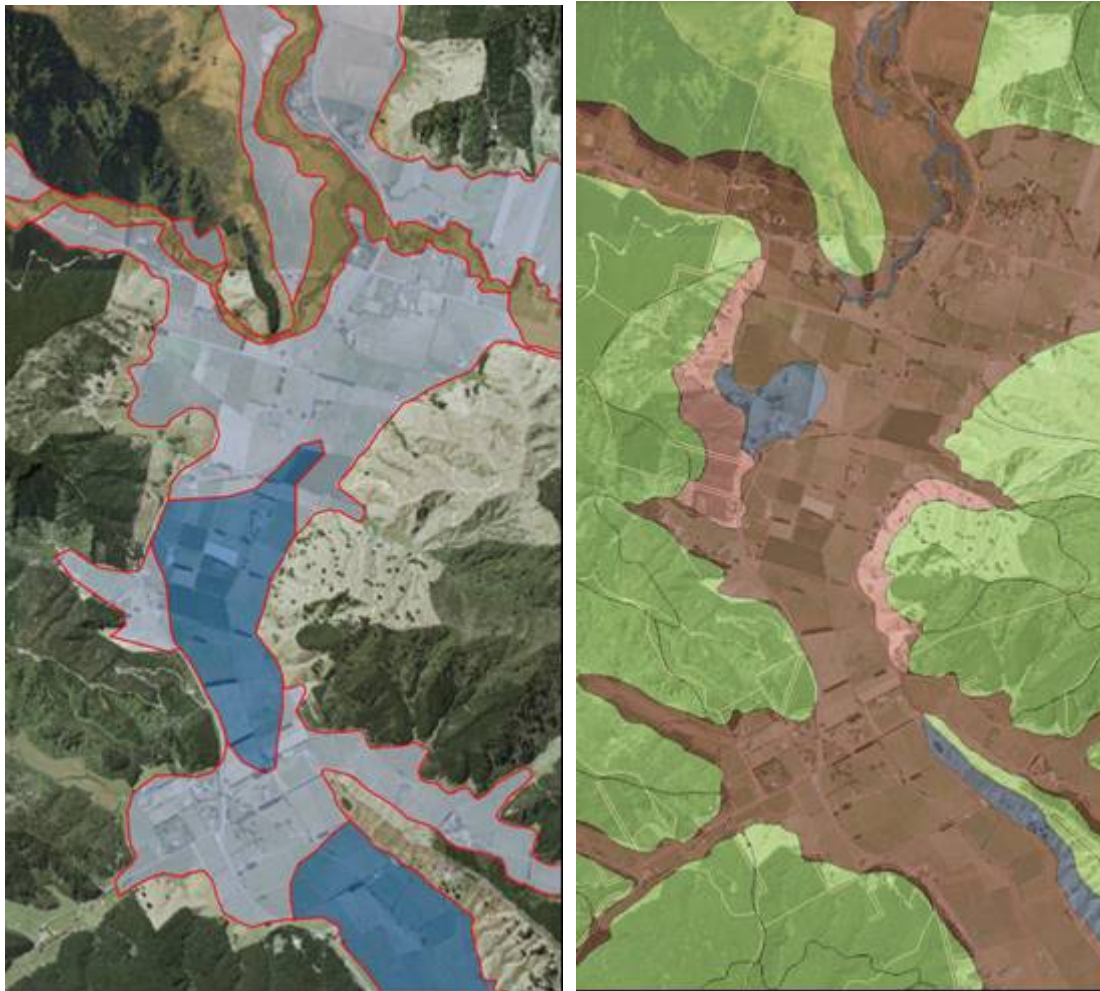


Figure 4: Left- Likely new soil map for the Okaramio area (1:30,000 scale). Dark blue= Motukarara soils, purple= Manaroa soils, brown= Koromiko soils. Right-Existing Fundamental soils (1960s) map, note that single dark brown polygon covering the remapped area. This soil is incorrectly described as described as Kaituna soil.

The next step is the uploading of the soil data and revised soil polygons to the S-Map platform. This occurs once annually in August. Future work for this project is to complete maps of Tuamarina, Wairau Valley, Blind River, Flaxborne and then to improve data underpinning the existing lower Wairau and Awater Valley maps.

The last step in the process is to develop simple soil factsheets to go along with the more complex soil characterisation work. These will be developed to enable better uptake of soil information by landowners and easier identification of soil s in the field. Once complete, extension workshops will be held in each of the mapped areas to help disseminate the new soil information and train landowners how to identify their soils.

Marlborough aquifer status midway of 2021/22 irrigation season (E345-007-001)

(Report prepared by Peter Davidson)

Aquifers levels vary significantly across the province mid-way through the 2021/22 irrigation season. In late January 2022 Wairau Aquifer levels at the long-standing Condors well were the lowest ever observed for this time of the season (Figure 1) whereas levels for the Rarangi Shallow Aquifer (Figure 2) and Omaka River Aquifer at Godfrey Road (Figure 3), were above their seasonal averages.

The reason for the low levels at Condors relative to elsewhere in the province is likely related to how the Wairau River is recharging groundwater rather than demand, which is the aspect being investigated by the national Gravel Bed Rivers project (GBR).

Levels at other MDC Wairau Aquifer monitoring sites are variable with low pressure at the Bar well but moderate pressures in Springlands (Murphys Road site in Blenheim) and the Wairau Aquifer partly

underlying Rarangi. Benmorven and Riverland Aquifer levels are similar to this time a year ago (Figure 4 & 5).

Records start from 1982

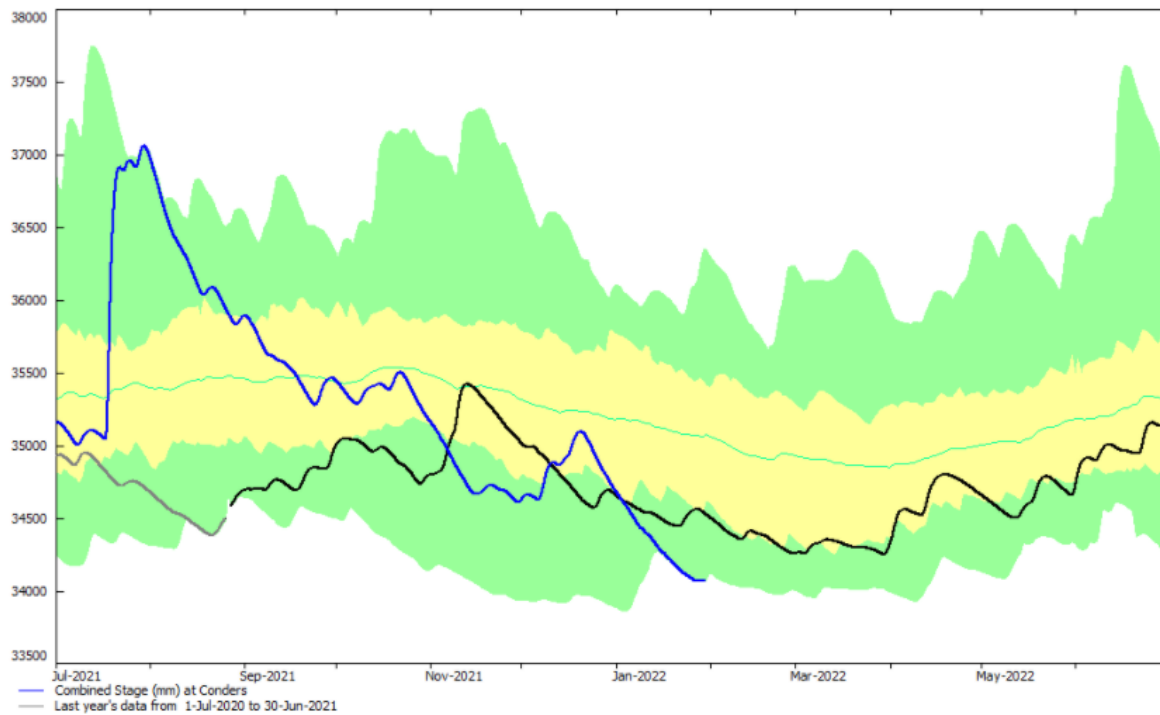


Figure 1: Wairau Aquifer Recharge Sector at MDC Conders well

Records start from 1989

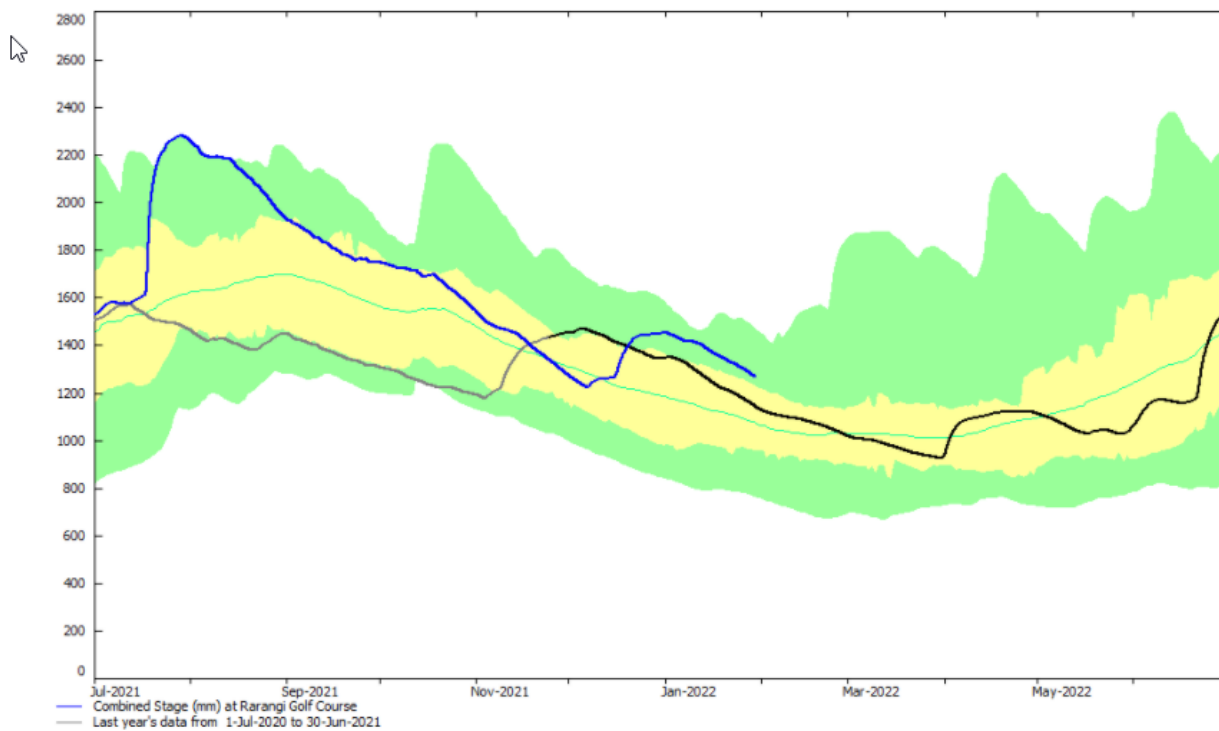


Figure 2: Rarangi Shallow Aquifer at golf course well

Records start from 1980

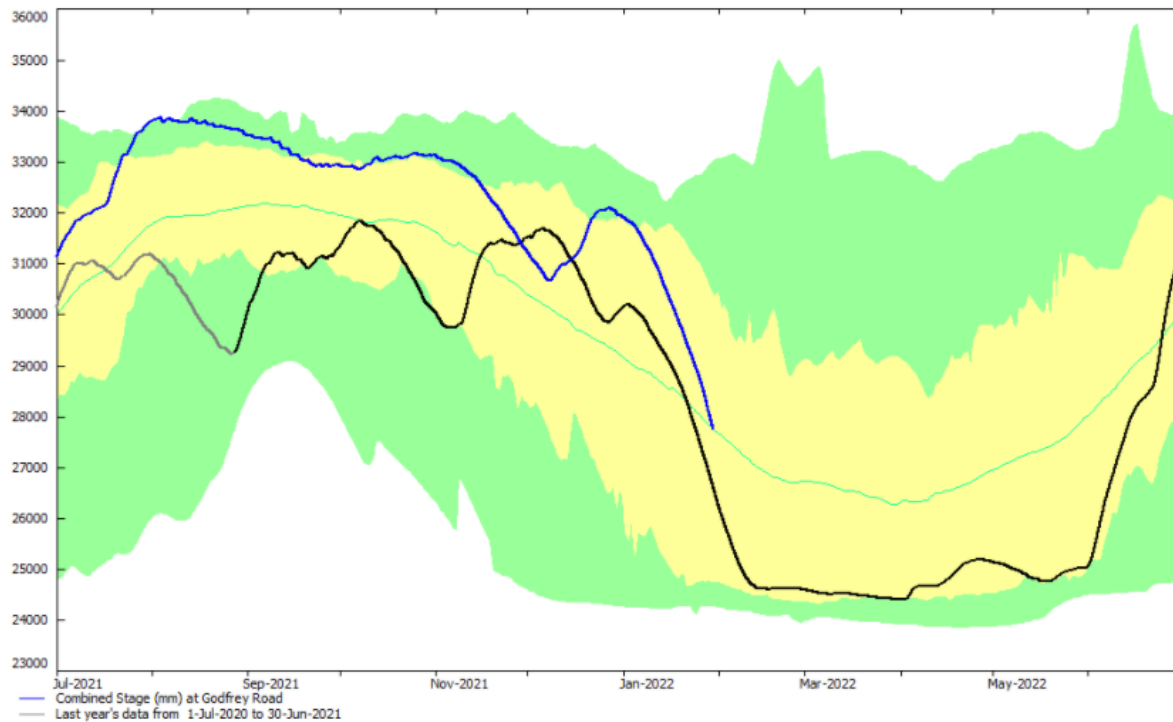


Figure 3: Omaka River Aquifer deep layer at MDC Woodbourne well

Records start from 1990

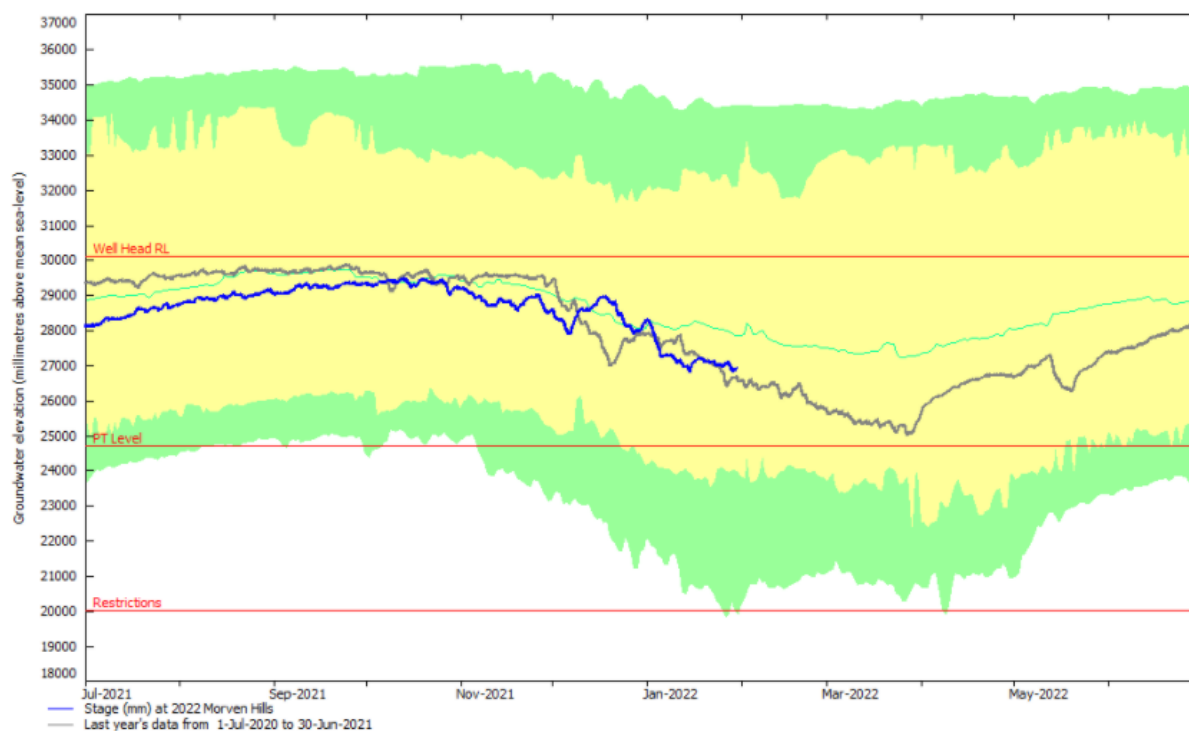


Figure 4: Confined Benmorven Aquifer at Morven Lane MDC well

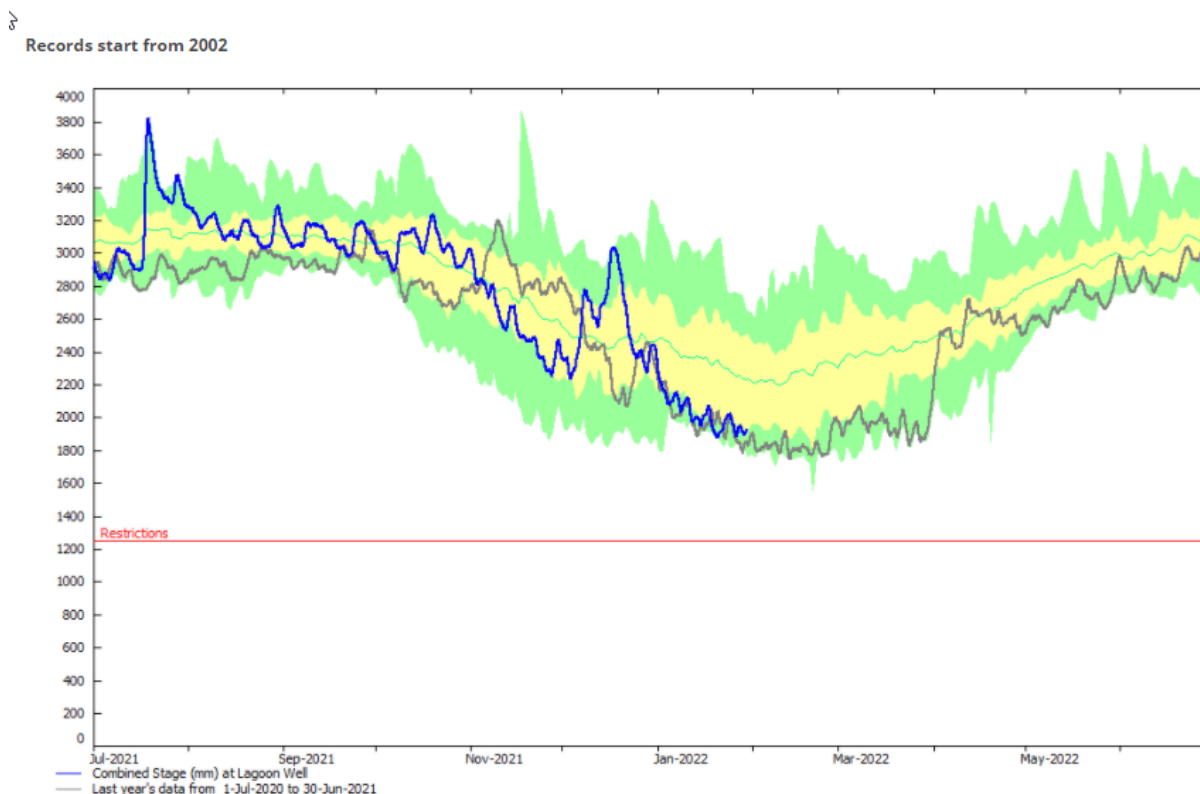


Figure 5: Confined Riverlands Aquifer at MDC Lagoon Replacement well

Draft 2022 groundwater quantity SoE report

(E345-007-001)

(Report prepared by Peter Davidson)

- MDC staff are in the process of preparing the combined groundwater quality/quantity State of the Environment (SoE) report.
- The Riverlands Aquifer combined quantity/quality SoE report has been on hold pending the resurvey of the MDC Alabama Road monitoring well (P28w/4402) to confirm the effect of the 2016 earthquake, which has recently been completed.
- Graphs and figures in the report will be updated and the report presented to the Environment Committee before the end of this financial year. The report will include a comprehensive picture of actual groundwater abstraction rates based on flow meter measurements.

NPS for Freshwater Management refinement of pMEP environmental limits

(E345-007-001)

(Report prepared by Peter Davidson)

- Researchers from The Technical University of Dresden hydrology department are working with Lincoln Agritech to overcome the technical difficulties with building a Wairau Plain combined aquifer computer model.
- An enlarged Wairau Aquifer computer model is needed for refining annual volumetric limits and testing alternative allocation methods for the pMEP. Currently the Wairau Aquifer recharge model results are upscaled, but this isn't the most correct approach for regional scale scenario testing.
- A Wairau Plain model has the advantage of representing the entire Wairau Plain and hydrological processes whereas the existing model of the Wairau Aquifer has artificial boundaries.

Draft National Environmental Standard for Drinking Water (E345-007-001)

(Report prepared by Peter Davidson)

- The government has released a draft of the proposed changes to the NES for Drinking Water (NES DW). The MDC Policy group is coordinating the MDC submission.
- The biggest driver for change was the Havelock North well field contamination where a number of people died as the result of drinking microbially polluted water. The Havelock North Inquiry findings (HNI) have heavily influenced the proposed NES DW alterations. The timing reflects a broad response to the provision of improved drinking water across NZ, including the establishment of a new regulator and the 3 Waters structure.
- Source water risk management areas (SWRMA's) are proposed for all centralised drinking water schemes with the exception of individual supplies in the new NES DW. MDC Science Group staff will be responsible for mapping the extent of these SWRMA's using its hydrological knowledge. MDC is ahead of the game with its version of SWRMA's called Groundwater Protection Areas (GPA's) assigned to all groundwater sourced municipal supplies.
- Knowledge of the location of water wells and those that are potentially a risk to aquifer security is a key finding of the HNI and justifies the recent redevelopment of the MDC WELLS & GEOLOGY database.

Gravel bed (braided) rivers (GBR) national hydrological study (E345-007-001)

(Report prepared by Peter Davidson)

- The final instrumentation was installed in trenches in the gravels beside the Wairau River in January 2022 following sonic drilling and logging of grain size composition in December 2021. Several monitoring wells in-undated with gravel by the July 2021 Wairau River flood were located and reactivated.
- Scott Wilson from Lincoln Agritech Ltd will update the committee in about May on the latest findings including the emerging concept of the braid plain aquifer (BPA) which is thought to control the recharge process between the river and aquifer.

Water Resource and Climate Summary to January 2022 (E320-001-001)

(Report prepared by Val Wadsworth 2 February 2022)

This report was prepared using data from Council's Environmental monitoring network, as well as sites operated by NIWA, FENZ, and data and summaries from the Marlborough Research Centre

Executive summary

It continues to be a roller coaster season, with a hot dry January after a wetter than average December, and a dry November.

Rainfall

January rainfall was well below average across most of the district, with a couple of isolated exceptions being the coastal Waima catchment, and the Waikawa catchment, which picked up rain from a couple of localised events. Any soil moisture retained from the above average December rainfall is long since gone, and the threat of irrigation restrictions on river supply sources is looming. However, the dark clouds to the west as this report is being prepared may actually be a bright spot on the horizon for some.

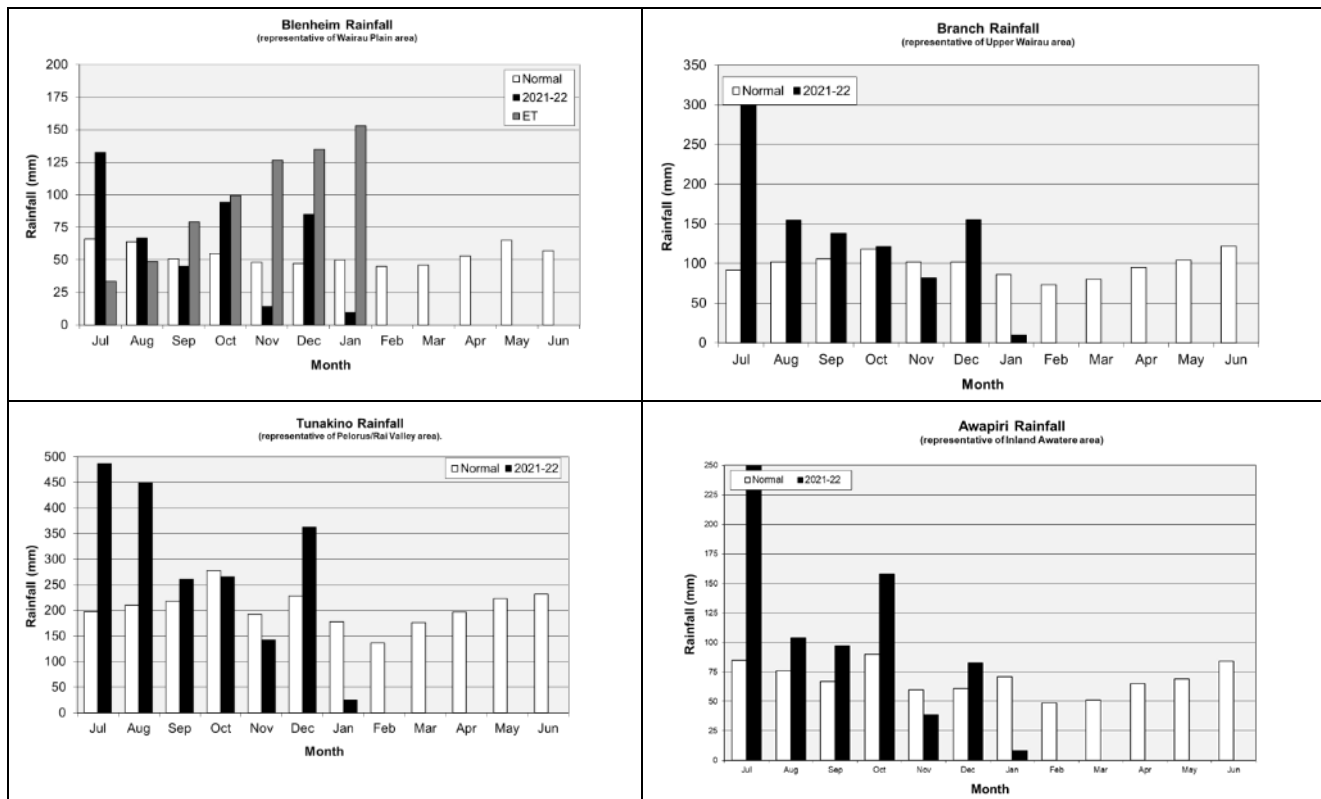
Rainfall totals for sites across the district are shown in the table below, together with annual totals for 2021, and percentage of average where there is sufficient reliable data to determine average. It is interesting to note that for most of the district 2021 was an above average rainfall year, however periods during the year were very dry, just illustrating that averages do not tell the whole story. The above average rainfall in many areas is the result of the extreme July rainfall event. Only a few East Coast sites recorded below average rainfall for 2021.

River flows

Due to time constraints river flow data has not been prepared, however in general flows are approaching average annual low flows. Class B consent restrictions for several rivers are already in force, with more to follow if the impending rain does not amount to much.

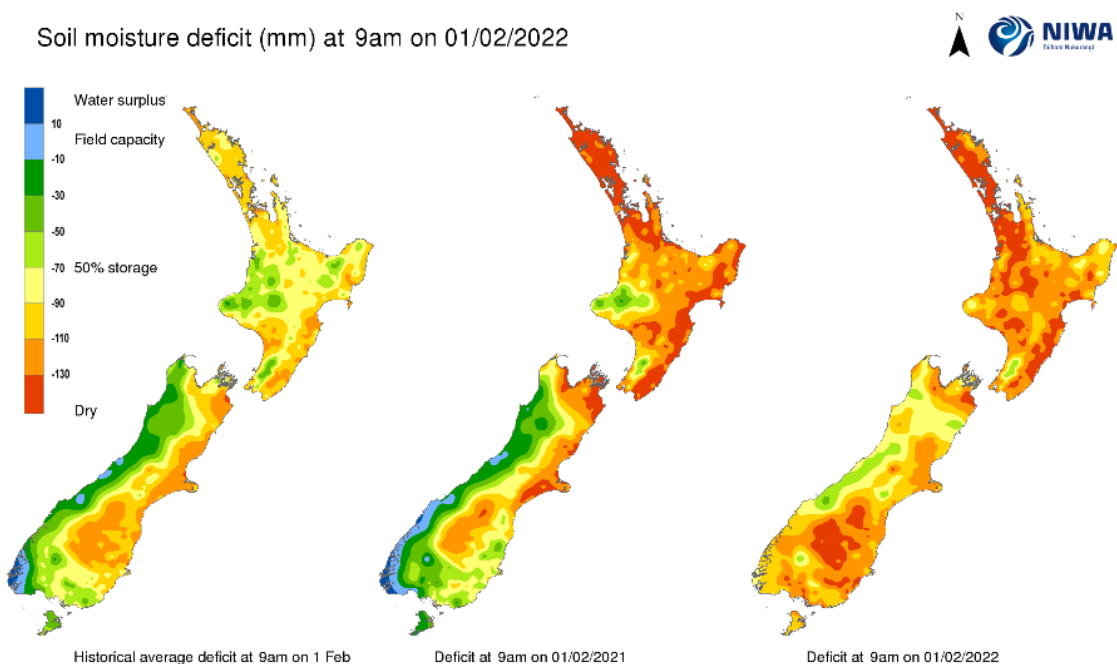
Rainfall figures	2021 total	Percentage of average	Jan-22 Total
Tunakino	3184	130%	25.0
Rai at Rai Falls	2973	142%	31.5
Rai Valley NRFA			26.8
Wakamarina at Twin Falls	2631	139%	36.0
Kaituna Rainfall at Higgins Bridge	1768	128%	13.0
Kenepuru Head NRFA	2331		9.2
Koromiko NRFA	1615		41.4
Picton Climate at Waitohi Domain	1461		28.2
Waikawa at Boons Valley	1583	104%	98.5
Waikakaho	1186	119%	12.0
Wairau at Narrows	1105	115%	8.0
Rarangi at Driving Range	1021	112%	8.5
Lansdowne NRFA			14.0
Wairau Valley at Southwold	1099	112%	9.0
Onamalutu at Hilltop Road NRFA	2237		18.6
Onamalutu at Bartletts Creek Saddle	2067	131%	13.0
Top Valley at Staircase Ridge	2269	140%	19.0
Red Hills	1682	126%	21.0
St Arnaud NRFA	1639		30.6
Malings	2032		25.5
Branch at Mt Morris			21.0
Branch at Branch Recorder	1460	117%	9.5
Wye at Charlies Rest	1166	123%	28.0
Waihopai at Spray Confluence	1068	129%	5.5
Tor Darroch NRFA	1377		22.0
Waihopai at Craiglochchart	787	116%	8.0
Omaka at Ramshead Saddle	1056	123%	6.5
Taylor at Tinpot	988	111%	15.0
Taylor at Taylor Pass Landfill	654	107%	7.5
O'Dwyers Road NRFA			13.2
Blenheim at MDC Office	711	118%	9.5
Beneagle at Farm Stream	724	97%	10.5
Flaxbourne at Corrie Downs	586	85%	28.0
Awatere at Awapiri	1073	133%	8.0
Awatere Glenbrae NRFA	629		10.8
Mid Awatere Valley NRFA	870		1.8
Molesworth NRFA	780		8.4
Lake Elterwater			25.5
Ward NRFA	711		41.0
Te Rapa	783	82%	74.0
Pudding Hill NRFA	847		12.4
Upper Clarence NRFA	618		12.0

The graphs of four representative sites below show the variation in rainfall since July last year, and particularly the markedly lower rainfall in January 2022. The Blenheim graph also shows the very high evapotranspiration rates in the last few months, significantly exceeding rainfall from September onwards.



Current soil moisture situation

Soil moisture has declined rapidly since the last significant rainfall just before Christmas and is now likely to be approaching or below wilt point in most areas. The NIWA graphs below illustrate this, on the left is the historical average, in the centre is this week last year, and this year is on the right.



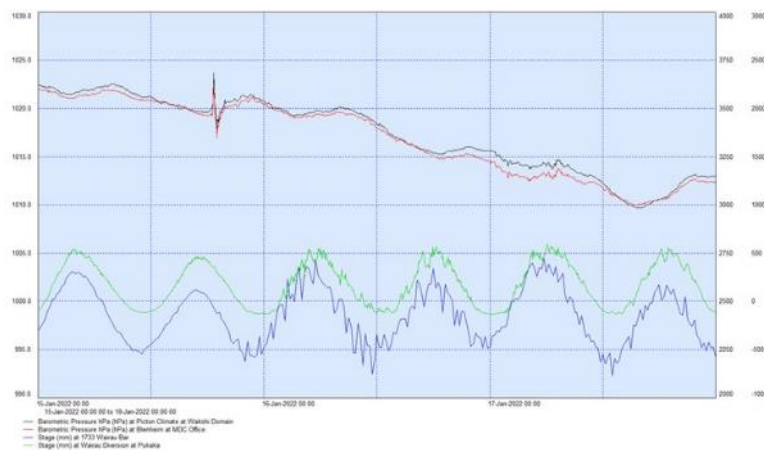
Tonga Eruption and Tsunami – Observed in Marlborough (E365-000-002)

(Report prepared by Mike Ede)

The effects of the recent Tonga volcanic eruption were seen in the Marlborough District Council's environmental monitoring network as well in other monitoring networks around the world. Here in Marlborough, the air pressure wave can be seen in our barometric pressure instruments and the pressure wave in the sea (tsunami) was also picked up by our river and groundwater levels recorders that are affected by the tide.

The pulse of air pressure, or sound wave, travels at around 1,230km/hr and arrived in Marlborough about 7:40pm on the 15th. The speed of a Tsunami wave however, varies considerably depending on the depth of the ocean, but an average speed of about 700 km/hr can be used in the open sea. When a tsunami reaches shallow water it slows down and a higher wave forms. Unless large, a tsunami is typically not visible like a normal wave at the beach, and it may be 5 minutes to 1hr from wave crest to crest.

Looking at the plot below from the 15 January to the 17 January, you can see a spike in the top two traces (red and black) as the sound (air pressure) arrived at our climate stations in Blenheim and Picton. The tsunami is obvious in the bottom two traces (green and blue), as saw tooth deviations from the tidal trace which continued for several days. Barometric pressure is shown on the left hand axis in hPa, while level is shown on the right hand axis in mm.



Environmental Science and Monitoring

Biodiversity Reporting Period (1/11/2021 – 21/01/2022)

Significant Natural Areas Programme

(E310-006-001)

(Report prepared by Mike Aviss)

The SNA Programme continues to engage with landowners all over the region to help achieve an improvement in biodiversity condition on private land. The highlights for this reporting period are:

Confirmation that a new population of the Critically Threatened pigmy button daisy found during a SNA monitoring trip in Port Gore is the largest population known and will quite likely reduce its threat ranking. A recent possum control operation in the same SNA has resulted in a major reduction in the possum browse visible in the forest. This was completed with assistance from the SNA fund.



Image: Pigmy button daisy on the forest floor in Port Gore

Wilding pine infestations which threatened to overwhelm significant limestone sites on two Katipo Coast properties were tackled. Bluff communities are very vulnerable and often support threatened species. This property also supports extensive dunes with populations of threatened pingao and *Muehlenbeckia astonii*.



Image: Pines threatening the limestone bluffs turning ginger as they die.

The coastal SNAs are also benefitting from a planting programme which will enhance the species diversity and condition of the sites. As more species are collected and propagated, the diversity of the plantings will increase. In the meantime, we are concentration on planting spinifex, pingao and ngaio.



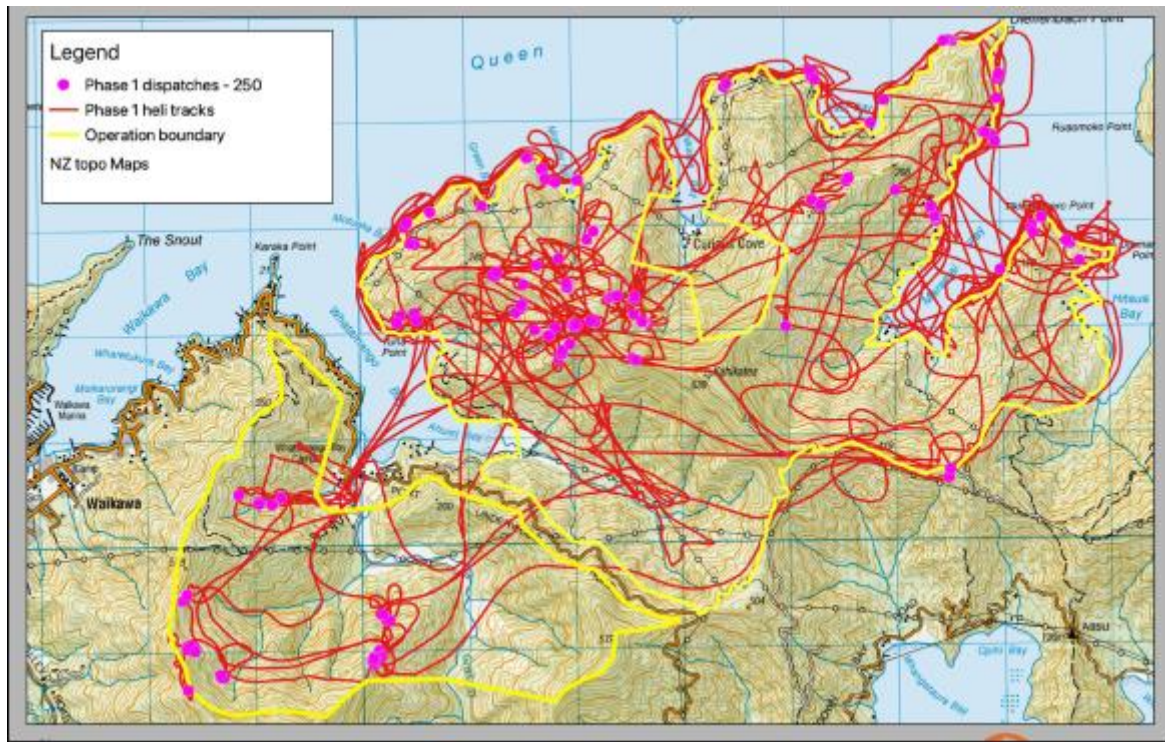
Image: Ngaio trees at planting time (left) and with five months growth (right). These trees will eventually shade out the invasive marram grass.



Image: Spinifex plants 5 months after planting with dead brown marram to the left of it.

Damaged signage at Marfells Beach was replaced to help reduce the ongoing loss of indigenous biodiversity along the coast over the busy summer season.

A group of landowners in Queen Charlotte Sound/Tōtaranui, from Whatamango to Hitaua Bays, banded together and employed a contract hunting company to reduce an out-of-control goat population. The SNA programme assisted financially to get it off the ground and over three operations, 395 goats were eliminated.



Para Swamp benefitted from 300 new swamp plants placed strategically to help form a physical barrier between the Whale Trail and game bird hunting areas, to help separate the two potentially conflicting users, and improve biodiversity at the same time.

Willow choked swampy gullies on the east side of SH1 at Para have also been given a reprieve from the willows, with funds supplied by landowners, Marlborough Roads and the SNA programme. These gullies are the cause of reinvasion of willows into main Para Swamp. Under the willows is a diverse indigenous forest waiting to escape and the results have been very pleasing this spring. This work is ongoing as more landowners engage with the idea.



Image: dense spring growth in the native understory benefitting from a lack of competition from thick tall willow forest which was controlled last Autumn.

“Our Air 2021” – Summary of Ministry of the Environment Report released 10 December 2021 (E300-004-003-001)

(Report prepared by Sarah Brand)

This report provides a summary of some key points from national and international air quality reports released at the end of 2021, highlights the situation for Blenheim noted in the national reports and provides an update on the status of the review of the National Environmental Standard for Air Quality (NESAQ).

Key Reports

Report Title	Release Date	Synopsis and Document Link
World Health Organisation Air Quality Guidelines 2021 (WHO AQG 2021)	23 September 2021	An update to the 2005 international guidelines intended to inform air quality management. https://www.who.int/publications/i/item/9789240034228 Please note that this report has not been attached due to its length (285-pages).
<i>Our air 2021: preliminary data</i>	14 October 2021	Presents the latest data on the state of New Zealand's air quality. https://environment.govt.nz/publications/our-air-2021-preliminary-data-release/ Refer Attachment 1
<i>Our air 2021</i>	10 December 2021	Evaluates monitored data against WHO Air Quality 2021 updated guidelines and the NESAQ. https://environment.govt.nz/publications/our-air-2021/ Refer Attachment 2

Background

Our air 2021 is the latest in a series of environmental reports produced by the Ministry for the Environment and Stats NZ. It is the third report in the series dedicated to air quality, following the 2014 and 2018 air domain reports, and is the second released under the Environmental Reporting Act 2015.

In October 2021 '*Our air 2021: preliminary data*' report was released to meet statutory obligations, but due to its timing, it was not able to include evaluations of the data against the updated World Health Organization's (WHO) 2021 air quality guidelines and was therefore preliminary only. The subsequent report '*Our air 2021*' supersedes the earlier report and reports on the emissions generated by a range of activities in Aotearoa New Zealand and compares these to both the 2005 and the new 2021 WHO AQ guidelines as well as the NESAQ.

Standards Reported Against

1) WHO Guidelines

The previous WHO guidelines were published in 2005, so this update was the first in 16 years and was based on a systematic review of more than 500 publications by world experts. As such, it builds on the advances in measurement and pollution assessment from a global database as well as epidemiological studies. The WHO guidelines are therefore based on an evaluation of the most recent science on health impacts from air pollution and identify air pollution levels above which there are significant risks to human health and provide indicative limits to protect communities from the long-term or chronic health impacts of air pollution in addition to short-term exposure guidelines. They are intended to inform air quality management, but, as international guidelines, are not legally binding in New Zealand. In most cases the revised 2021 WHO air quality guidelines are more stringent than the 2005 ones, reflecting the large body of evidence of detrimental effects of key pollutants on human health, even at low levels.

2) NESAQ

In contrast, the NESAQ sets legally binding levels of air pollution that must not be exceeded. These levels are informed by international research and guidelines (such as the WHO guidelines), but can also take into account other considerations, such as cost and feasibility of meeting the standard. Under the standards, limits for particulate matter and gaseous pollutants are defined to protect communities against detrimental health impacts. The standards focus on short-term exposure – that is, average concentrations over hourly or 24-hour time periods. The standards allow some pollutants to be above their threshold limits (i.e. an exceedance) a limited number of times per year.

The following table is a comparison of the 2005 and 2021 WHO Guidelines for particulate matter (PM), NO₂ and SO₂ and the NESAQ for particulate matter (PM) and proposed amendments to the NESAQ

Pollutant	Time Period	2005 WHO Guideline	2021 WHO Guideline	NESAQ (prior to WHO AQG release)	Units
PM _{2.5}	Annual	10	5	Proposed 10	µg/m ³
	24-hour	25	15	Proposed 25 (3 allowable exceedances)	µg/m ³
PM ₁₀	Annual	20	15	-	µg/m ³
	24-hour	50	45	50 (1 allowable exceedance)	µg/m ³
NO ₂	Annual	40	10	-	µg/m ³
	24-hour	-	25	-	µg/m ³
SO ₂	24-hour	20	40	-	µg/m ³

Key Findings of Our Air 2021

- PM₁₀ - concentrations at most locations (72%) had improved since 2011, but sites still have high concentrations at times. 76% of sites were higher than the 24-hour 2021 WHO guidelines at least once between 2017 and 2020, and almost half were higher than the 2021 WHO guidelines for annual PM₁₀ exposure.
- PM_{2.5} - concentrations at 50% of locations had improved since 2011. However, 95% of sites were higher than the 24-hour and annual 2021 WHO guidelines at least once between 2017 and 2020. The sites with the highest PM_{2.5} concentrations were above the guideline for around a quarter of the year. These high concentrations generally occurred during the colder months.
- NO₂ - concentrations at most locations (88%) had improved since 2011. But five of seven sites (71%) were higher than the 24-hour 2021 WHO guidelines at least once between 2017 and 2020, and two of these sites (both in high-traffic areas) were higher than the air quality guidelines an average of 300 days and 235 days respectively per year. This pollutant is not currently measured in Marlborough.
- SO₂ - Sulphur dioxide concentrations have improved at most locations (83%) since 2011. Sulphur dioxide concentrations still exceed air quality guidelines near some industrial sources. Again, this pollutant is not currently measured in Marlborough.
- Air Pollutant Emissions (Sources) - Wood burning for home heating is a major source of air pollution in New Zealand. Most particulate matter from wood smoke is PM_{2.5} (which is more harmful to human health than PM₁₀, due to its smaller particle size) and most is emitted in winter. Combustion in the manufacturing industries and construction is another large source of PM_{2.5}. Dust from unsealed roads contributes substantially to PM₁₀, although there is uncertainty around the exact magnitude of these emissions.

- Motor vehicle emissions continue to contribute to poor air quality in many urban areas (primarily in the form of PM_{2.5}, nitrogen dioxide, and carbon monoxide). Whereas emissions of some pollutants have reduced due to improved engine technology and fuel quality, many improvements have been offset by higher traffic volumes, more distance travelled, and intensification along transport corridors. In addition, vehicles are getting heavier, with larger engines.
- Health Impacts - In New Zealand, poor air quality results in significant human health impacts. While the relative impacts per 100,000 people appear to have improved between 2006 and 2016, the absolute number of people affected has increased due to population growth. Shortly we are expecting the release of an update to the Health and Air Pollution in New Zealand model (HAPINZ). At this time MfE may undertake a further review and report on their findings.
- COVID-19 Lockdown (2020) impacts on air quality - Restrictions temporarily decreased concentrations of several key pollutants across the country. Nitrogen dioxide, primarily generated by the combustion of fuel by motor vehicles, showed more of a decrease than particulate matter pollution, which comes from a range of sources. Nitrogen dioxide concentrations decreased by approximately half due to reduced vehicle traffic.

Blenheim Bowling Club

In Marlborough currently only PM₁₀ and PM_{2.5} are monitored for Blenheim at the Bowling Club in Redwoodtown. Specific mention of the Blenheim site was made in the report.

- Blenheim was one of nine sites where PM₁₀ was above the annual 2021 WHO AQG at least once each year between 2017 and 2020.

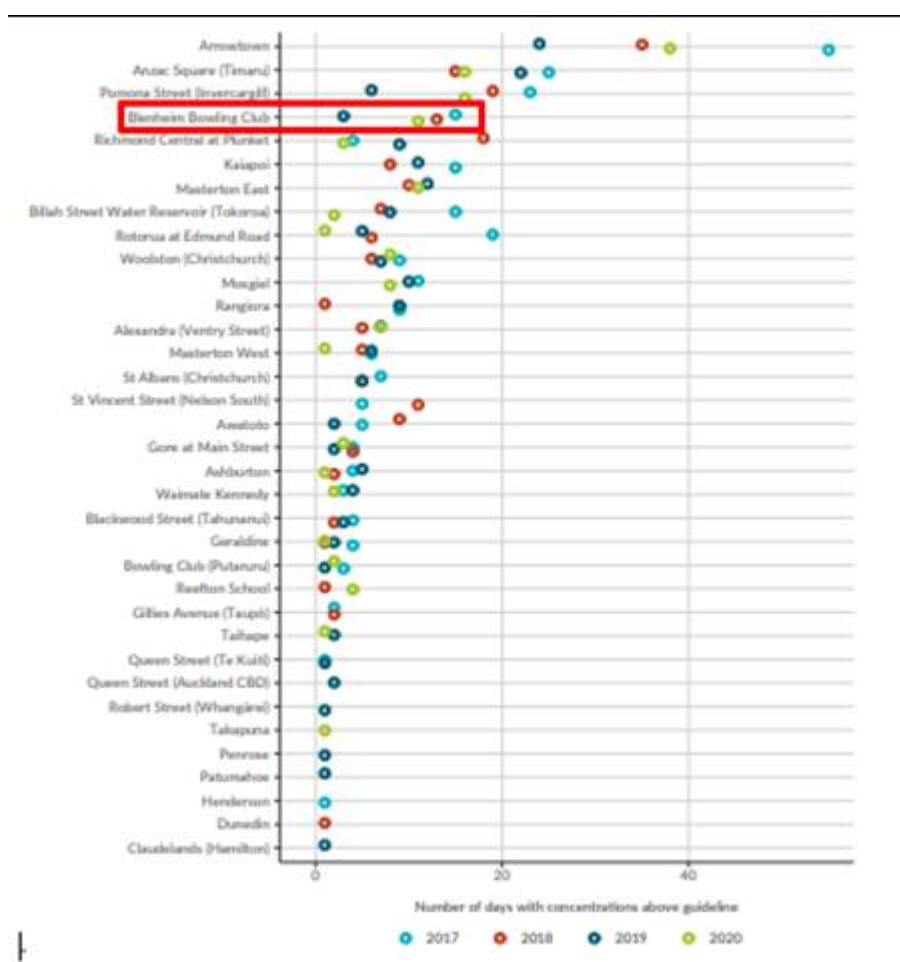


Figure 1 :Days above 24-hour 2021 WHO Air Quality Guideline for PM₁₀ 2017-2020

- Blenheim was above the PM_{2.5} 24-hour 2005 WHO AQG most often (28-73 times), and above the 2021 WHO AQG (97-122 times).

- Blenheim was above the PM_{2.5} annual 2005 WHO AQG and above the 2021 WHO AQG each year over the four period of 2017-2020.

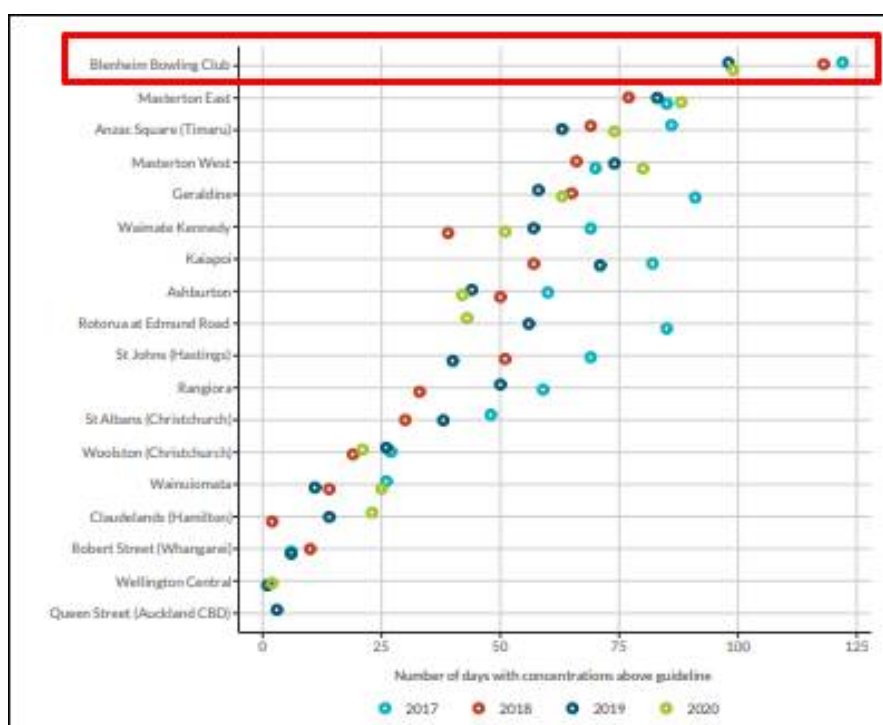


Figure 2 : Days above 24-hour 2021 WHO Air Quality Guideline for PM_{2.5} 2017-2020

The report clearly highlights that Blenheim did not meet the updated 2021 WHO AQG for PM over the selected four years. It remains to be seen what guideline levels the Ministry for the Environment (MfE) will use in the revised NESAQ but it is expected that guidelines will be stricter in line with 2021 WHO AQG. As such Blenheim will not be able to meet them without a significant reduction in the emissions of PM from domestic home heating.

National Environmental Standard for Air Quality 2011 (NESAQ)

A review of the NESAQ has been on the table since the release of “Our Air 2018” report and discussed for a significant period prior to this. Public consultation was held between February and July 2020 on proposed amendments to provisions to better control the release of fine particulates. However, MfE has stated that the timeframes for the NESAQ amendments are subject to the release of new evidence, including the updates to the World Health Organisation guidelines, which occurred September 2021 and an update to the Health and Air Pollution in New Zealand study (HAPINZ) which is due for release in the first quarter of 2022. The Resource Management reforms will also likely impact on any amendments as well but at this stage it is unclear just what that impact will be and any associated timeframes.



Our air 2021: preliminary data release

New Zealand's environmental reporting series

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Contents

Introduction to Our air 2021	4
About Our air 2021	4
Indicator findings	6
Particulate matter	6
PM ₁₀ concentrations	6
PM _{2.5} concentrations	7
Nitrogen dioxide concentrations	8
Sulphur dioxide concentrations	9
Ground-level ozone	10
Carbon monoxide concentrations	11
Air pollutant emissions (sources)	12
Health impacts of air pollution	13
References	14

Introduction to Our air 2021

This section provides background to *Our air 2021*, including the nature of this release and what standards we report against in this report.

About Our air 2021

Our air 2021 is part of the series of environmental reports produced by the Ministry for the Environment and Stats NZ. This report is a preliminary data release under the Environmental Reporting Act 2015. This report updates the indicators we have reported on in previous years (2014 and 2018) but does not introduce new ones.

This information release is preliminary because further work is underway on the human health impacts of air quality. We are evaluating data against the recently released 2021 World Health Organization (WHO) air quality guidelines (described below), which will form the basis of a subsequent release of *Our air* on 10 December 2021.

In addition, updated results from the Health and Air Pollution in New Zealand model, which provide us with important information on health impacts, are due to be released in early 2022.

It should be noted that while social restrictions implemented nationally in 2020 as a response to the COVID-19 pandemic temporarily decreased concentrations of several key pollutants across the country, *Our air 2021* does not specifically analyse the effect of these restrictions. However, other studies have examined the effect of Level 4 lockdown restrictions on air quality in Auckland (Patel et al., 2021) and nationally as restrictions eased through June 2020 (Talbot et al., 2021).

Standards we report against

This report evaluates monitored data against two primary standards or guidelines – one national and one international – to indicate potential impacts on human health.

The [National Environmental Standards for Air Quality](#) set limits for particulate matter and gaseous pollutants to protect communities against detrimental health impacts. The standard focuses on short-term exposure – that is, average hourly or 24-hour time periods. The standard allows some pollutants to be above the threshold limit (ie an exceedance) a few times per year.

The [World Health Organization \(WHO\) Air Quality Guidelines](#) also provide indicative limits to protect communities from the long-term or chronic health impacts of air pollution. The WHO guidelines are based on a synthesis of research on the health effects of air pollutants. Many regional councils and unitary authorities, which are responsible for monitoring and managing air quality in New Zealand, choose to report on levels of air pollutants against the WHO guidelines, in addition to the National Environmental Standards for Air Quality.

Revised World Health Organization guidelines and updated modelling of health impacts

During the final production stages of *Our air 2021*, the WHO released updated 2021 global air quality guidelines. This is the first update in 16 years, and comes after a systematic review of more than 500 publications by experts around the world. It builds on the advances in measurement and pollution assessment from a global database as well as epidemiological studies (WHO, 2021). In most cases the 2021 WHO guidelines are more stringent than the 2005 guidelines, reflecting the large body of evidence of detrimental effects of key pollutants on human health, even at low levels.

It was not possible to complete the analytical work against the 2021 guidelines in time for this release. This preliminary release reports on the 2005 WHO guidelines as these are currently referenced across New Zealand, and this enables comparability with *Our air 2018*.

As noted above, updated results from the Health and Air Pollution in New Zealand (HAPINZ) model are also underway, and we expect to receive these early next year (2022). This data will be used to update the indicator on health impacts of air pollution.

Indicator findings

This section provides a summary of key findings for each of the indicators included in this report: PM₁₀ concentrations, PM_{2.5} concentrations, nitrogen dioxide concentrations, sulphur dioxide concentrations, ground-level ozone, carbon monoxide concentrations, air pollutant emissions, and the health impacts of air pollution.

Particulate matter

In New Zealand and worldwide, the most significant human health impacts from poor air quality are associated with exposure to particulate matter (PM) (Health Effects Institute, 2018). Particulate matter is a term used for a mixture of solid particles and liquid droplets found in the air (US EPA, 2021). This report refers to two types of particulate matter:

PM₁₀: larger particles (but still small enough that they can be inhaled), generally 10 micrometres or less in diameter.

PM_{2.5}: finer particles, generally 2.5 micrometres or less in diameter. Because PM₁₀ includes particles smaller than 10 micrometres, PM_{2.5} is a subset of PM₁₀.

Note: Evaluation of data against the 2021 WHO guidelines will be released 10 December 2021.

PM₁₀ concentrations

Key findings

In the four-year period between 2017 and 2020:

- 25 of 46 sites (61 percent) had at least two exceedances of the 24-hour PM₁₀ National Environmental Standards for Air Quality over a 12-month period. Most exceedances were at sites classified as residential.
- Arrowtown (at 30 days), Pomona Street (Invercargill) (12 days), and Anzac Square (Timaru) (12 days) had the highest number of average daily exceedances of the 24-hour PM₁₀ National Environmental Standards for Air Quality per year.
- The majority (83 percent) of all exceedances recorded over this four-year period were in winter (June, July, August). A lesser amount (13 percent) were recorded in autumn (March, April, May).
- Three sites exceeded the annual average PM₁₀ 2005 World Health Organization guideline (20 µg/m³) for air quality at least once over the four-year period. These sites were: Anzac Square (Timaru), Pomona Street (Invercargill), and Arrowtown. Anzac Square (Timaru) had the most exceedances over this period, exceeding the guideline in 2017, 2019, and 2020.

For the 36 sites that were analysed for trends during the 10-year period between 2011 and 2020:

- 72 percent were improving (26 of 36) and 8 percent were worsening (3 of 36). No trend could be determined at 19 percent of sites (7 of 36).

Find out more

[Stats NZ PM₁₀ concentrations web page](#)

PM_{2.5} concentrations

Key findings

In terms of short-term exposure in the four-year period between 2017 and 2020:

- 84 percent of sites (16 of 19) were greater than the PM_{2.5} 2005 World Health Organization 24-hour average guideline. Most measurements above the World Health Organization guideline were at sites classified as residential.
- Blenheim Bowling Club (at 52 days), Masterton East (36 days), and Anzac Square (Timaru) (31 days) recorded the highest number of average daily exceedances of the 2005 World Health Organization 24-hour average guideline per year.
- The majority (82 percent) of all exceedances recorded over this period occurred in winter (June, July, August). Seventeen percent were recorded in autumn (March, April, May).

In terms of long-term exposure in the four-year period between 2017 and 2020:

- Seven sites had at least one exceedance for the annual mean PM_{2.5} 2005 World Health Organization guideline of 10 µg/m³ for air quality. These were Blenheim Bowling Club, Geraldine, Kaiapoi, Masterton East, Masterton West, Rotorua at Edmund Rd, and Anzac Square (Timaru). At four exceedances, Blenheim Bowling Club had the most exceedances over this four-year period, in 2017, 2018, 2019, and 2020.

For the eight sites that were analysed for trends in the 10-year period between 2011 and 2020:

- PM_{2.5} concentrations improved at four sites (50 percent), worsened at one site (12 percent), and trends were indeterminate at three sites (38 percent).

Find out more

[Stats NZ PM_{2.5} concentrations web page](#)

Nitrogen dioxide concentrations

Nitrogen dioxide (NO₂) is a gas primarily generated by burning fossil fuels, mainly by motor vehicles (particularly diesel vehicles), but also from industrial emissions and home heating.

There are health impacts from short-term and long-term exposure to nitrogen dioxide. Short-term exposure to high concentrations of nitrogen dioxide causes inflammation of the airways and respiratory problems, and can cause asthma attacks (US EPA, 2016). Short-term exposure may also trigger heart attacks and increase the risk of premature death (US EPA, 2016). Long-term exposure may cause asthma to develop and lead to decreased lung development in children. It may also increase the risk of certain forms of cancer and premature death (US EPA, 2016).

Note: Evaluation of data against the 2021 WHO guidelines will be released 10 December 2021.

Key findings

In terms of short-term exposure in the four-year period between 2017 and 2020:

- No site exceeded the National Environmental Standards for Air Quality short-term standard of 200 µg/m³ average over 1-hour.

In terms of long-term exposure in the four-year period between 2017 and 2020:

- Queen Street (Auckland) exceeded the 2005 WHO annual guideline in 2017 (43.9 µg/m³) and 2018 (43.9 µg/m³).
- Queen Street (Auckland) recorded the highest concentration of nitrogen dioxide (41.5 µg/m³) averaged over 2017–20. Riccarton Road (Christchurch) recorded the second highest concentration (29.9 µg/m³).
- Nitrogen dioxide concentrations at monitored sites were highest in winter (June, July, August).

Ten-year trends between 2011 and 2020 (Waka Kotahi NZ Transport Agency sites):

- Two-thirds of sites (72 of 110) had improving trends while 4 percent (4 of 110) were worsening. No trend could be determined for 31 percent of sites (34 of 110).

Find out more

[Stats NZ Nitrogen dioxide concentrations web page](#)

Sulphur dioxide concentrations

Sulphur dioxide (SO₂) is a colourless gas with a sharp, irritating odour. It is associated with combustion of fossil fuels (such as coal, diesel, and heavy fuel oil used in maritime vessels) and industrial processes (such as the production of fertilisers and the smelting of mineral ores containing sulphur).

At high levels, sulphur dioxide can have human health and ecological impacts. When inhaled, sulphur dioxide is associated with respiratory problems such as bronchitis. It can aggravate the symptoms of asthma and chronic lung disease and cause irritation to eyes. In ecosystems, it can damage vegetation, acidify water and soil (US EPA, 2017), and affect biodiversity.

Note: Evaluation of data against the 2021 WHO guidelines will be released 10 December 2021.

Key findings

In the four-year period between 2017 and 2020:

- No sites exceeded the short-term sulphur dioxide one-hour National Environmental Standards for Air Quality lower threshold of 350 µg/m³ or the upper threshold of 570 µg/m³.
- Four sites out of seven (57 percent) exceeded the 24-hour sulphur dioxide 2005 World Health Organization guideline threshold of 20 µg/m³. Totara St, Whareroa Marae, and Tauranga Bridge Marina (all in Mount Maunganui), had the highest average daily exceedances of the 24-hour 2005 World Health Organization short-term guideline over this period (81, 40, and 16 average exceedances per year respectively).
- Of all exceedances of the 2005 World health Organization 24-hour guideline recorded over this period, 32 percent were in summer (December, January, February) and 30 percent were recorded in spring (September, October, November).

Ten-year trends between 2011 and 2020:

- At five of six sites (83 percent) annual trends were improving.

Find out more

[Stats NZ Sulphur dioxide concentrations web page](#)

Ground-level ozone

Ozone (O₃) is a gas found naturally in the atmosphere. However, when it occurs at ground level, it is a pollutant generated by human activity and can have harmful effects.

Exposure to high concentrations of ground-level ozone can cause respiratory health issues and is linked to cardiovascular health problems and increased mortality. Those most at risk include people with asthma, children, older adults, and people who are active outdoors, such as outdoor workers. Exposure to ground-level ozone may also be associated with nervous system, reproductive, and developmental effects (WHO, 2013). High levels of ground-level ozone can also have harmful ecological effects: it can damage vegetation, reduce plant growth (affecting crop and forest yields), and harm sensitive ecosystems (US EPA, 2013).

Note: Evaluation of data against the 2021 WHO guidelines will be released 10 December 2021.

Key findings

In the four-year period between 2017 and 2020:

- Neither of the two monitored sites, Patumāhoe (Auckland) and Wellington Central, exceeded the National Environmental Standards for Air Quality 1-hour average threshold of 150 µg/m³ or the 2005 World Health Organization running 8-hour average guideline of 100 µg/m³.
- Ground-level ozone had higher concentrations during the mid-afternoon.
- Patumāhoe had a higher annual average ground-level ozone concentration (40.1 µg/m³) than Wellington Central (17.3 µg/m³).

Ten-year trends between 2011 and 2020:

- Patumāhoe showed an improving annual trend.

Find out more

[Stats NZ Ground-level ozone concentrations web page](#)

Carbon monoxide concentrations

Carbon monoxide (CO) is caused by the incomplete combustion of fuels, especially in petrol-fueled motor vehicles.

Carbon monoxide can have a range of health effects even after short-term exposure to relatively low concentrations. When inhaled, carbon monoxide enters the blood stream and attaches to haemoglobin in red blood cells, which transport oxygen around the body. This reduces the amount of oxygen that body tissues receive and can have adverse effects on the brain, heart, and general health (US EPA, 2010).

Note: Evaluation of data against the 2021 WHO guidelines will be released 10 December 2021.

Key findings

In the four-year period between 2017 and 2020:

- No site exceeded the National Environmental Standards for Air Quality running 8-hour average threshold of 10 mg/m³.
- No site exceeded the 2010 World Health Organization 1-hour average guideline of 35 mg/m³.
- Riccarton Road (Christchurch) had the highest average concentrations of carbon monoxide (0.4 mg/m³). The rest of the sites had average concentrations of 0.2 mg/m³.
- Across sites, peak concentrations of carbon monoxide occurred during morning and evening hours.
- Carbon monoxide concentrations were highest in winter (averaging 0.4 mg/m³ over the winter months – June, July, August).

Ten-year trends between 2011 and 2020:

- Of the 10 sites assessed for annual trends, seven were improving and three were indeterminate.

Find out more

[Stats NZ Carbon monoxide concentrations web page](#)

Air pollutant emissions (sources)

Understanding the key sources of air pollutants is critical to managing and improving air quality. Emissions inventories estimate the quantities of different pollutants emitted to the air by different sources, over a certain time period.

Nationally in 2019:

- The residential sector (primarily burning wood for home heating) contributed 30 percent of PM_{2.5} emissions and 41 percent of carbon monoxide emissions. Almost all particulate matter emissions generated by the residential sector were PM_{2.5}.
- Dust from unsealed roads was the dominant source of PM₁₀ (28 percent).
- On-road vehicles were the dominant source of nitrogen oxides (39 percent), primarily diesel vehicles.
- Burning coal was a large source of sulphur dioxide emissions (41 percent), primarily from manufacturing and construction and electricity generation. Domestic shipping (16 percent) and aluminium production (13 percent) were also significant sources of sulphur dioxide.

In the eight-year period between 2012 and 2019:

- Total emissions were lower in 2019 for all pollutants except PM₁₀. Annual emissions of carbon monoxide were down 15 percent compared to 2012 (by more than 87,000 tonnes).
- Transport emissions were lower in 2019 for all pollutants except sulphur dioxide, with emissions of carbon monoxide down 47 percent (by more than 85,000 tonnes) and nitrogen oxides down 12 percent (by more than 8,000 tonnes).
- Emissions from electricity generation were lower in 2019 across all pollutants. Most notably, sulphur dioxide emissions decreased by 40 percent (by more than 5,000 tonnes) due to lower emissions from coal burning.

Find out more

[Stats NZ Air pollutant emissions web page](#)

Health impacts of air pollution

Air pollution causes a wide range of health impacts. Because of the difficulty of separating air pollution effects from other causes, modelling is commonly used to estimate health impacts from air pollution. This indicator uses a modelling methodology informed by the Health and Air Pollution in New Zealand (HAPINZ, 2012) study, which was developed in accordance with international best practice (Kuschel et al, 2012).

Note: We are anticipating that this indicator will be updated soon, pending an update to the model. Updated information will be available on the Stats NZ website. This indicator used PM₁₀ as a proxy for all air pollution in New Zealand but the revision currently underway is investigating also reporting on PM_{2.5} and nitrogen dioxide.

Key findings

From modelling based on the current HAPINZ model:

- As shown in table 1, adult (older than 30 years) premature deaths linked to exposure to human-generated PM₁₀ were estimated to be 8 percent lower in 2016 than in 2006 (27 deaths per 100,000 people, compared to 29 in 2006).
- Total hospital admissions due to human-generated PM₁₀ were estimated to be 2 percent lower in 2016 than in 2006 (14 admissions per 10,000 people compared to 15 in 2006).
 - For cardiac illness, admissions were estimated to be 11 percent lower (5 per 100,000 people compared to 6 in 2006).
 - For respiratory illness, admissions were estimated to be 4 percent higher in 2016 than in 2006 (although rounding makes the admissions total the same: 9 admissions per 100,000 people in both years).
- Restricted activity days, in which symptoms were sufficient to prevent usual activities such as work or study, were estimated to be 12 percent lower in 2016 than 2006 (31,800 per 100,000 people compared to 36,300 in 2006).

Table 1: Modelled health effects from exposure to human-generated PM₁₀, 2006 and 2016

Health effect		Number of cases per 100,000 people	
		2006	2016
Premature mortality (adults 30+)		29	27
Hospital admissions	Cardiac hospital admissions	6	5
	Respiratory hospital admissions	9	9
	Total hospital admissions	15	14
Restricted activity days		36,300	31,800

Source: HAPINZ Exposure Model (Kuschel et al, 2012), Emission Impossible Ltd

Find out more

[Stats NZ Health impacts of PM₁₀ web page](#)

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Our air 2021

New Zealand's Environmental Reporting Series



Ministry for the
Environment
Manatū Mō Te Taiao

Stats^{NZ}
Tāhūrangi Kōwhiri

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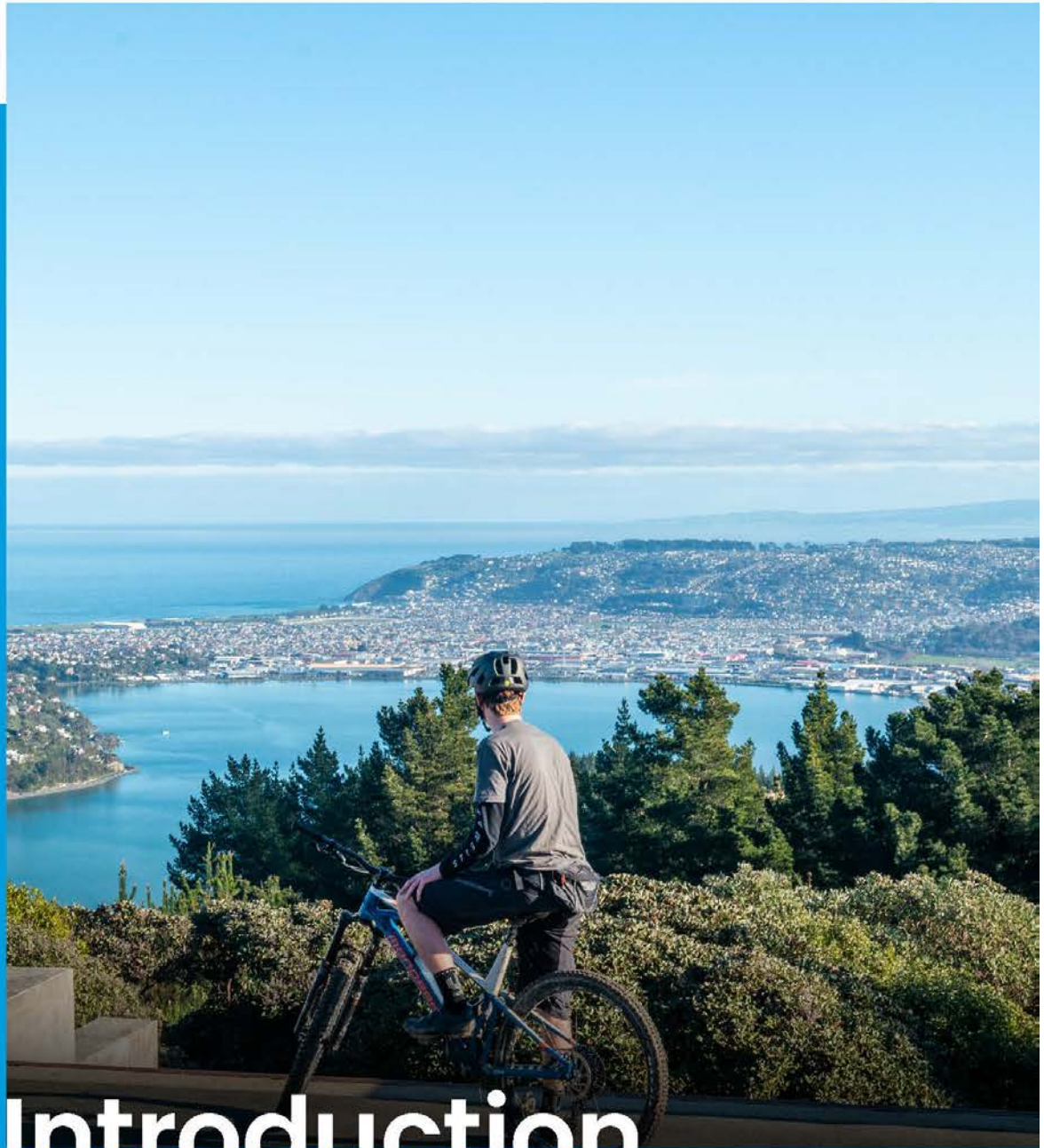
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► Contents

Introduction to Our air 2021	4
About Our air 2021	5
Understanding air and wellbeing	5
Standards we report against	5
Summary of key findings	7
Indicator findings	7
Research findings	7
Indicator findings	8
Particulate matter	9
PM ₁₀ concentrations	9
PM _{2.5} concentrations	13
Nitrogen dioxide concentrations	15
Sulphur dioxide concentrations	18
Ground-level ozone concentrations	20
Carbon monoxide concentrations	21
Sources of air pollutant emissions	23
Health impacts of air pollution	25
Towards a better understanding of our air	26
Monitoring	27
Making the link to impacts	27
References	28



Introduction to Our air 2021

Overlooking Dunedin
Photo: Clare Toia-Bailey, www.imagecentral.co.nz

This section provides background to *Our air 2021*, including why understanding the quality of our air is important. It also provides information on the legislation and guidelines this report makes comparisons against.

► About Our air 2021

This release of *Our air 2021* supersedes the earlier report *Our air 2021: preliminary data release*, released in October 2021. The earlier report was required to be published to meet statutory obligations, but due to its timing, it was not able to include evaluations of the data against the World Health Organization's 2021 air quality guidelines, and was therefore preliminary only. This updated report includes comparisons to these new guidelines, providing a more comprehensive understanding of the health impacts from air pollution based on the latest science.

Our air 2021 is the latest in a series of environmental reports produced by the Ministry for the Environment and Stats NZ. It is the third report in the series dedicated to air quality, following the 2014 and 2018 air domain reports, and is the second released under the Environmental Reporting Act 2015.

In 2019, the Parliamentary Commissioner for the Environment released his report, [Focusing Aotearoa New Zealand's environmental reporting system](#). The report identified how the environmental reporting system can be improved and recommended changes to the Environmental Reporting Act. These amendments will provide a stronger foundation to ensure we understand our environment and the impacts people are having on it.

Our air 2021 is a report in a transitional format to meet statutory requirements while we make the fundamental changes to the reporting system that have been recommended. This is a data-oriented release, with the primary focus on updating indicators. This report updates some of the indicators reported on in previous years but does not introduce new ones. Interactive graphs and maps can be found on the Stats NZ website (linked at the bottom of each indicator section of this report).

► Understanding air and wellbeing

We often take the air we breathe for granted, yet clean air is essential to our wellbeing. Air can become contaminated by particulate matter (particles suspended in the air) and gaseous pollutants. This can negatively affect human health, our quality of life, and natural ecosystems. Poor air quality can become a serious public health issue, with significant costs to society. *Our air 2021* reports on the emissions generated by a range of activities in Aotearoa New Zealand.

Greenhouse gas emissions and their impacts are not reported on within *Our air 2021* but can be found in [Our atmosphere and climate 2020](#).

► Standards we report against

This report evaluates monitored data against two primary standards or guidelines – one national and one international – to indicate potential impacts on human health.

The [World Health Organization guidelines](#) are based on an evaluation of the most recent science on health impacts from air pollution, and identify air pollution levels above which there are significant risks to human health. This is the only consideration used for setting the guideline levels. They are intended to inform air quality management, but, as international guidelines, are not legally binding.

In contrast, the [National Environmental Standards for Air Quality \(NESAQ\)](#) set legally binding levels of air pollution that must not be exceeded. The levels at which these standards are set are informed by international research and guidelines (such as the World Health Organization guidelines), but can also take into account other considerations, such as cost and feasibility of meeting the standard.

NATIONAL ENVIRONMENTAL STANDARDS FOR AIR QUALITY

The National Environmental Standards for Air Quality are regulations made under the Resource Management Act 1991. Under the standards, limits for particulate matter and gaseous pollutants are defined to protect communities against detrimental health impacts. The standards focus on short-term exposure – that is, average concentrations over hourly or 24-hour time periods. The standards allow some pollutants to be above their threshold limits (ie an exceedance) a limited number of times per year.

WORLD HEALTH ORGANIZATION AIR QUALITY GUIDELINES

While the National Environmental Standards for Air Quality have a short-term exposure focus, the World Health Organization (WHO) air quality guidelines (AQGs) also provide indicative limits to protect communities from the long-term or chronic health impacts of air pollution in addition to short-term exposure guidelines. The WHO guidelines are based on a synthesis of research on the health effects of air pollutants. Many regional councils and unitary authorities, which are responsible for monitoring and managing air quality in New Zealand, choose to report on levels of air pollutants against the WHO guidelines, in addition to the National Environmental Standards.

During the final production stages of *Our air 2021*, the WHO released updated air quality guidelines (WHO, 2021). This is the first update in 16 years and is a result of a systematic review of more than 500 publications by world experts. As such, it builds on the advances in measurement and pollution assessment from a global database as well as epidemiological studies (WHO, 2021).

In most cases the revised 2021 WHO air quality guidelines are more stringent than the 2005 ones (WHO, 2006), reflecting the large body of evidence of detrimental effects of key pollutants on human health, even at low levels (table 1).

Table 1: Comparison of recommended 2005 and 2021 World Health Organization air quality guideline levels

Pollutant	Time period	2005 air quality guideline	2021 air quality guideline	Units
Particulate matter 2.5 µm (PM _{2.5})	Annual	10	5	µg/m ³
	24-hour ^a	25	15	µg/m ³
Particulate matter 10 µm (PM ₁₀)	Annual	20	15	µg/m ³
	24-hour ^a	50	45	µg/m ³
Ozone (O ₃)	Peak season ^b	–	60	µg/m ³
	8-hour	100	100	µg/m ³
Nitrogen dioxide (NO ₂)	Annual	40	10	µg/m ³
	24-hour ^a	–	25	µg/m ³
Sulphur dioxide (SO ₂)	24-hour ^a	20	40	µg/m ³
Carbon monoxide (CO)	24-hour ^a	–	4	mg/m ³

Note

a: 99th percentile (ie 3–4 exceedance days per year)

b: Average of daily maximum 8-hour mean O₃ concentration in the six consecutive months with the highest six-month running-average O₃ concentration

µg/m³: micrograms per cubic metre

mg/m³: milligrams per cubic metre.

Our air 2021 assesses New Zealand's air quality against both the 2005 and 2021 WHO air quality guidelines. This report has included reference to the 2005 WHO air quality guidelines because these have been the reference thresholds for air quality measurements across New Zealand to date, and because this allows comparison to findings in *Our air 2018*.

We have also assessed our data against the revised 2021 WHO air quality guidelines, to enable us to evaluate New Zealand's air quality using the most up-to-date scientific understanding of good air quality.

► Summary of key findings

This section provides a summary of key findings for each of the indicators included in this report: PM₁₀ concentrations, PM_{2.5} concentrations, nitrogen dioxide concentrations, sulphur dioxide concentrations, ground-level ozone concentrations, carbon monoxide concentrations, air pollutant emissions, and the health impacts of air pollution.

INDICATOR FINDINGS

PM₁₀ (particulate matter of 10 micrometres diameter or less)

PM₁₀ concentrations at most locations measured (72 percent) have improved since 2011, but sites still have high concentrations at times – 76 percent were higher than the 24-hour 2021 World Health Organization (WHO) air quality guidelines at least once between 2017 and 2020, and almost half were higher than the 2021 WHO air quality guidelines for annual PM₁₀ exposure.

PM_{2.5} (particulate matter of 2.5 micrometres diameter or less)

PM_{2.5} concentrations at 50 percent of locations have improved since 2011. However, 95 percent of sites were higher than the 24-hour and annual 2021 WHO air quality guidelines at least once between 2017 and 2020. The sites with the highest PM_{2.5} concentrations were above the guideline for around a quarter of the year. These high concentrations generally occurred during the colder months.

Nitrogen dioxide

Nitrogen dioxide concentrations at most locations (88 percent) have improved since 2011. But five of seven sites (71 percent) were higher than the 24-hour 2021 WHO air quality guidelines at least once between 2017 and 2020, and two of these sites (both in high-traffic areas) were higher than the air quality guidelines an average of 300 days and 235 days respectively per year.

Sulphur dioxide

Sulphur dioxide concentrations have improved at most locations (83 percent) since 2011. Sulphur dioxide concentrations still exceed air quality guidelines near some industrial sources.

Ground-level ozone

Ozone concentrations in New Zealand are quite low compared to levels recorded in many other countries. Trends could only be determined at one of the two sites, which has improved since 2011. At this site, concentrations came very close to exceeding the peak season 2021 WHO air quality guidelines.

Carbon monoxide

Carbon monoxide concentrations at most locations (70 percent) have improved since 2011. Between 2017 and 2020, no sites exceeded the National Environmental Standards for Air Quality or WHO air quality guidelines.

Air pollutant emissions (sources)

Wood burning for home heating is a major source of air pollution in New Zealand. Most particulate matter from wood smoke is PM_{2.5} (which is more harmful to human health than PM₁₀, due to its smaller particle size) and most is emitted in winter. Combustion in the manufacturing industries and construction is another large source of PM_{2.5}. Dust from unsealed roads contributes substantially to PM₁₀, although there is uncertainty around the exact magnitude of these emissions.

Motor vehicle emissions continue to contribute to poor air quality in many urban areas (primarily in the form of PM_{2.5}, nitrogen dioxide, and carbon monoxide). Whereas emissions of some pollutants have reduced due to improved engine technology and fuel quality, many improvements have been offset by higher traffic volumes, more distance traveled, and intensification along transport corridors. In addition, vehicles are getting heavier, with larger engines.

Health impacts

In New Zealand, poor air quality results in significant human health impacts. While the relative impacts per 100,000 people appear to have improved between 2006 and 2016, the absolute number of people affected has increased due to population growth.

Note: We anticipate that this indicator will be updated in 2022, pending an update to the Health and Air Pollution in New Zealand model.

RESEARCH FINDINGS

COVID-19 lockdown (2020) impacts on air quality

Restrictions implemented in 2020 during the COVID-19 pandemic temporarily decreased concentrations of several key pollutants across the country. Nitrogen dioxide, primarily generated by the combustion of fuel by motor vehicles, showed more of a decrease than particulate matter pollution, which comes from a range of sources. Nitrogen dioxide concentrations decreased by approximately half due to reduced vehicle traffic.



Indicator findings

Wellington traffic
Photo: Ministry for the Environment

This section provides the key findings for each of the indicators (PM₁₀ concentrations, PM_{2.5} concentrations, nitrogen dioxide concentrations, sulphur dioxide concentrations, ground-level ozone concentrations, carbon monoxide concentrations, air pollutant emissions, and the health impacts of air pollution), an overview of how the data are collected and assessed, and links to more detailed information available on the Stats NZ web pages.

► Particulate matter

In New Zealand and around the world, the most significant human health impacts from poor air quality are associated with exposure to particulate matter (PM) (Health Effects Institute, 2018). Particulate matter is a term used for a mixture of solid particles and liquid droplets found in the air (US EPA, 2021). This report refers to two types of particulate matter:

- PM₁₀: larger particles (but still small enough that they can be inhaled), 10 micrometres or less in diameter
- PM_{2.5}: finer particles, 2.5 micrometres or less in diameter. Because PM₁₀ includes all particles smaller than 10 micrometres, PM_{2.5} is a subset of PM₁₀.

There is considerable evidence that inhaling PM is harmful to human health, especially when of smaller particle size, such as PM_{2.5} and finer. PM_{2.5} can be particularly harmful because these particles can become trapped in the small airways deep in the lungs. When particles are very fine (PM_{0.1}) they can enter the bloodstream and penetrate organs in the body (EFCA, 2019).

Short – and long-term exposure to PM, even at low levels, can lead to a range of health impacts especially in vulnerable people (the young, the elderly, and people with existing respiratory conditions). At the less-severe end, it can cause temporary and reversible effects such as shortness of breath, coughing, or chest pain. However, there is strong evidence of more severe effects, namely, illness and premature death from heart attacks, strokes, or emphysema (where the air sacs in the lungs are damaged). Exposure to PM can also cause lung cancer and exacerbate asthma. Studies point to possible links with diabetes and atherosclerosis (the accumulation of fat, cholesterol, and other substances on artery walls, reducing blood flow) as a result of increased inflammation caused by particulate matter (WHO, 2013).

Particulate matter emissions typically result from combustion (such as burning petrol, diesel, wood, or coal) and abrasion processes (such as brake and tyre wear or road dust). Combustion tends to create fine particles (PM_{2.5}), whereas abrasion generates coarser particles (PM₁₀). Particulate matter can also be generated through the reaction of gases in the atmosphere (referred to as secondary particulate matter), and a proportion of particulate matter is naturally occurring, for example, sea salt.

► PM₁₀ concentrations

A study by Talbot et al. (2021a, b) found that during the COVID-19 lockdown (alert level 4) in 2020, PM₁₀ concentrations decreased by between 11.5 and 34.1 percent across New Zealand. As the restrictions eased, concentrations of PM₁₀ increased. The scale of increase was more significant in southern regions, perhaps because the burning of wood for home heating is more prevalent during the colder months.

MEASUREMENT AND ASSESSMENT

Regional councils and unitary authorities monitor PM₁₀ concentrations in their regions. Data from 46 sites for state and 49 for trends, located across 14 regions, were used in this report.

In New Zealand, short-term exposure to PM₁₀ is assessed against the National Environmental Standards for Air Quality (NESAQ), which allows for a 24-hour average of 50 micrograms per cubic metre (µg/m³) (one exceedance per year is permitted under the standard). Long-term exposure is assessed against the 2005 World Health Organization (WHO) annual average air quality guidelines (AQG) of 20 µg/m³.

We also assess against the more stringent AQGs that the WHO recommended in September 2021 for PM₁₀: a 24-hour average of 45 µg/m³ and an annual average of 15 µg/m³.

Trends were analysed for sites with at least six complete years of data. All trends were assessed at the 95 percent confidence level. Where a trend was 'indeterminate', there was not enough certainty to determine a trend direction.

KEY FINDINGS

<p>In the four-year period between 2017 and 2020:</p>	<p>National Environmental Standards for Air Quality (NESAQ)</p> <ul style="list-style-type: none"> ▶ Twenty-five of 46 sites (54 percent) had at least two exceedances of the 24-hour PM₁₀ NESAQ (50 µg/m³) over a 12-month period. Most exceedances were at sites classified as residential. ▶ Arrowtown (at 30 days), Pomona Street (Invercargill) (12 days), and Anzac Square (Timaru) (12 days) had the highest number of average daily exceedances of the 24-hour PM₁₀ NESAQ per year. ▶ The majority of all exceedances (83 percent) recorded over this four-year period were in winter (June, July, August). Only a relatively small number (13 percent) were recorded in autumn (March, April, May). <p>World Health Organization (WHO)</p> <div> <p>2005 air quality guidelines</p> <ul style="list-style-type: none"> ▶ Three of 46 sites (7 percent) were above the PM₁₀ annual 2005 WHO AQG (20 µg/m³) at least once over the four-year period. These sites were: Anzac Square (Timaru), Pomona Street (Invercargill), and Arrowtown. ▶ Anzac Square (Timaru) was most often above the PM₁₀ annual 2005 WHO AQG, in 2017, 2019, and 2020. </div> <div> <p>2021 air quality guidelines</p> <ul style="list-style-type: none"> ▶ Thirty-five of 46 sites (76 percent) were above the PM₁₀ 24-hour 2021 AQG (45 µg/m³); most were at sites classified as residential. ▶ Arrowtown, Anzac Square (Timaru), and Pomona Street (Invercargill) were above the PM₁₀ 24-hour 2021 WHO AQG most often: 24–55, 15–25, and 6–23 days per year, respectively (figure 1). ▶ Twenty-two of 46 sites (48 percent) were above the PM₁₀ annual 2021 WHO AQG (15 µg/m³) least once. ▶ Nine sites were above the PM₁₀ annual 2021 WHO AQG at least once each year over this four-year period. These sites were Arrowtown, Ashburton, Blackwood St (Tahunanui), Blenheim Bowling Club, Geraldine, Gore at Main Street, Pomona Street (Invercargill), Timaru Anzac Square, and Woolston (Christchurch). </div>
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Figure 1: Days above 24-hour 2021 World Health Organization air quality guideline for PM₁₀, 2017-20

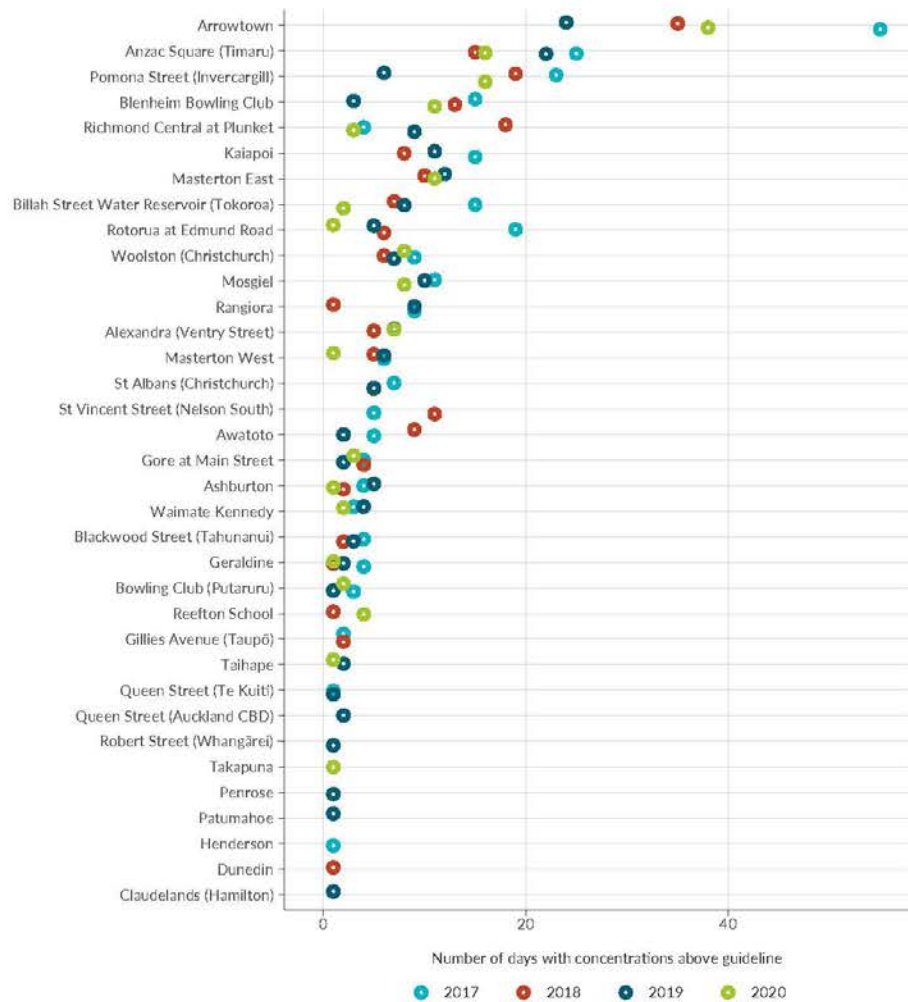
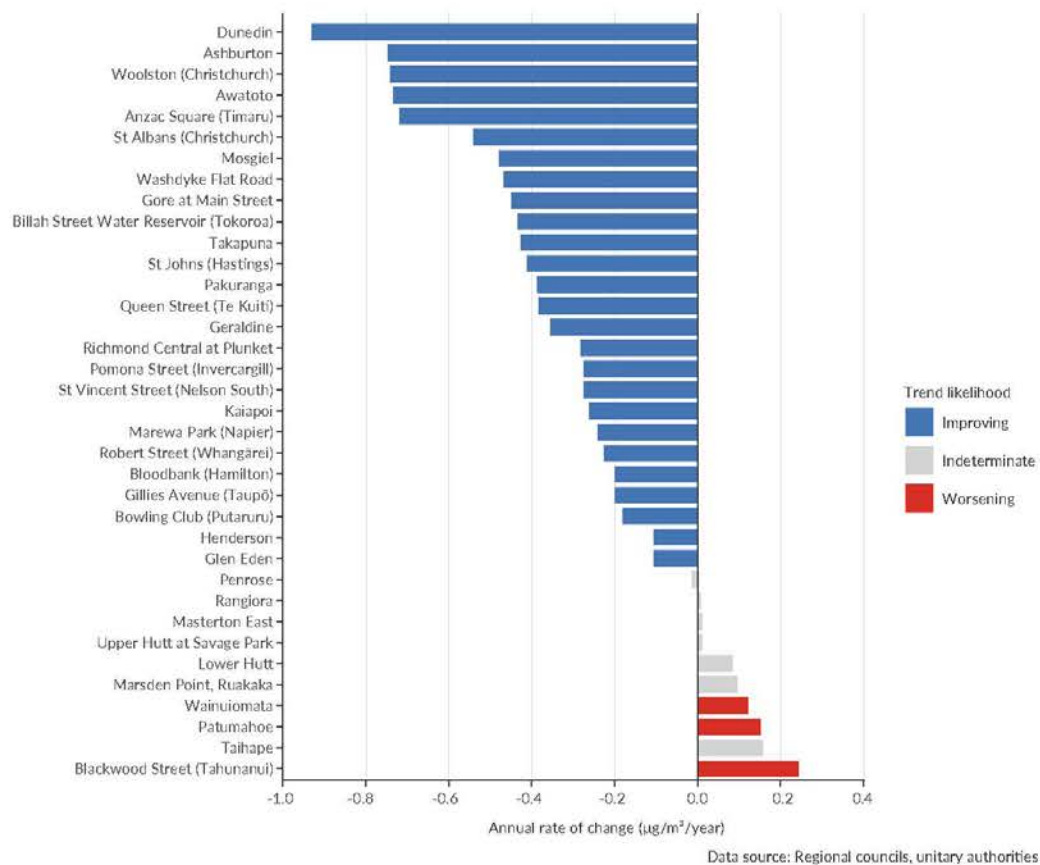


Figure 2: PM₁₀ trends, 2011–20**Find out more**See indicator: [PM₁₀ concentrations](#)

► PM_{2.5} concentrations

MEASUREMENT AND ASSESSMENT

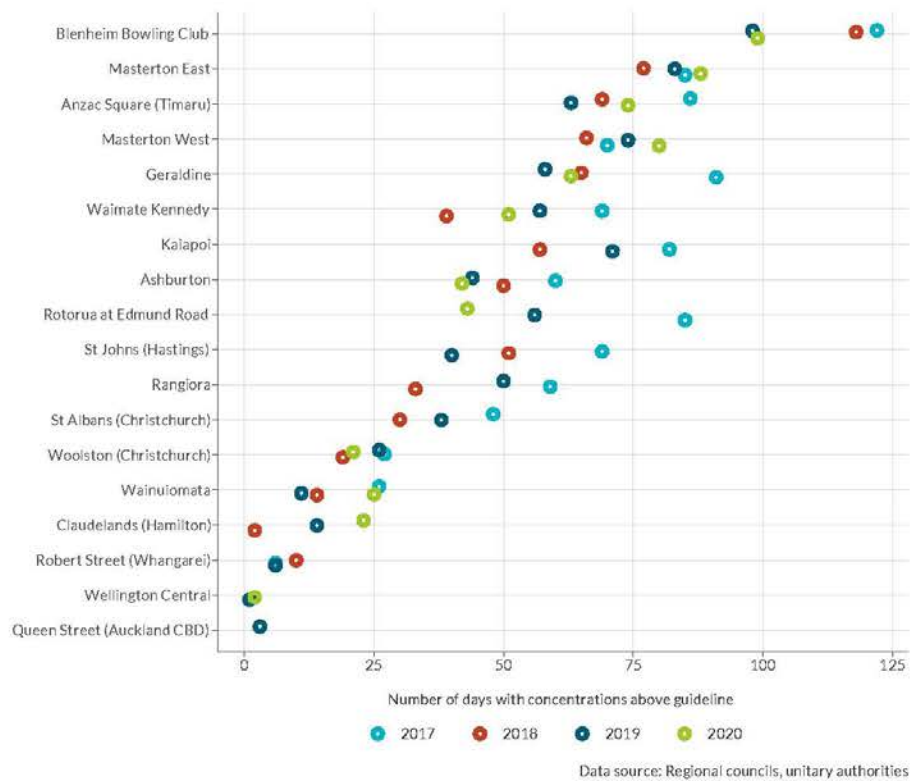
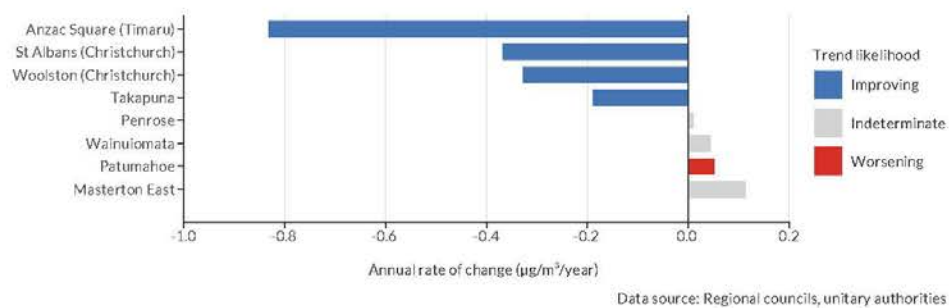
Regional councils and unitary authorities monitor PM_{2.5} concentrations in their regions. Data from 19 sites for state and 11 for trends, located across nine regions, were used in this report.

New Zealand is one of the few developed countries without a 24-hour average standard for PM_{2.5}. Consequently, short-term exposure to PM_{2.5} has been assessed against the 2005 WHO 24-hour average guideline of 25 µg/m³. Long-term exposure is assessed against the 2005 WHO annual average guideline of 10 µg/m³.

We also assess against the more stringent air quality guidelines that the World Health Organization recommended in September 2021 for PM_{2.5}: 24-hour average of 15 µg/m³ and an annual average of 5 µg/m³.

KEY FINDINGS

In the four-year period between 2017 and 2020:	World Health Organization (WHO)	
	2005 air quality guidelines	2021 air quality guidelines
	<ul style="list-style-type: none"> ▶ Sixteen of 19 sites (84 percent) were above the PM_{2.5} 24-hour 2005 WHO AQG (25 µg/m³); most of these sites are classified as residential. ▶ Blenheim Bowling Club, Masterton East, and Anzac Square (Timaru) were above the PM_{2.5} 24-hour 2005 WHO AQG most often: 28–73, 28–43, and 23–46 days per year, respectively. ▶ The majority (82 percent) of days above the PM_{2.5} 24-hour 2005 WHO AQG over this period occurred in winter (June, July, August), and 17 percent occurred in autumn (March, April, May). ▶ Seven of 19 sites (37 percent) were above the PM_{2.5} annual 2005 WHO AQG (10 µg/m³) at least once. These were Blenheim Bowling Club, Geraldine, Kaiapoi, Masterton East, Masterton West, Rotorua at Edmund Rd, and Anzac Square (Timaru). ▶ Blenheim Bowling Club was above the PM_{2.5} annual 2005 WHO AQG each year over this four-year period. 	<ul style="list-style-type: none"> ▶ Eighteen of 19 sites (95 percent) were above the PM_{2.5} 24-hour 2021 WHO AQG (15 µg/m³); most of these sites are classified as residential. ▶ Blenheim Bowling Club, Masterton East, and Anzac Square (Timaru) were above the PM_{2.5} 24-hour 2021 WHO AQG most often: 98–122, 77–88, and 63–86 days per year, respectively (figure 3). ▶ The majority (73 percent) of days above the PM_{2.5} 24-hour 2021 WHO AQG over this period occurred in winter (June, July, August), and 23 percent occurred in autumn (March, April, May). ▶ Eighteen of 19 sites (95 percent) were above the PM_{2.5} annual 2021 WHO AQG (5 µg/m³) at least once. ▶ Nine sites (Ashburton, Blenheim Bowling Club, Geraldine, Masterton East, Masterton West, Anzac Square (Timaru), Waimate Kennedy, Wainuiomata, and Woolston (Christchurch)) were above the PM_{2.5} annual 2021 WHO AQG each year over this four-year period.
For the sites analysed for trends in the 10-year period between 2011 and 2020:	<ul style="list-style-type: none"> ▶ On an annual basis, PM_{2.5} concentrations improved at four out of eight sites (50 percent), worsened at one site (13 percent) (figure 4), and trends were indeterminate at three sites (38 percent). ▶ Concentrations in winter improved at three out of eight sites, and one site (Patumahoe) had worsening PM_{2.5} concentrations in summer. The Woolston (Christchurch) site had improving PM_{2.5} concentrations across all seasons. 	

Figure 3: Days above 24-hour 2021 World Health Organization air quality guideline for PM_{2.5}, 2017–20Figure 4: PM_{2.5} trends, 2011–20**Find out more**See indicator: [PM_{2.5} concentrations](#)

► Nitrogen dioxide concentrations

Nitrogen dioxide (NO₂) is a gas primarily generated by burning fossil fuels, mainly by motor vehicles (particularly diesel vehicles) but also from industrial emissions and home heating. Because nitrogen dioxide concentrations are closely associated with vehicle emissions, they can be used as a proxy for other motor vehicle-related pollutants such as benzene, black carbon (a form of PM_{2.5}, also known as soot), and volatile organic compounds.

There are health impacts from short-term and long-term exposure to nitrogen dioxide. Short-term exposure to high concentrations of nitrogen dioxide causes inflammation of the airways and respiratory problems and can cause asthma attacks (US EPA, 2016). Short-term exposure may also trigger heart attacks and increase the risk of premature death (US EPA, 2016). Long-term exposure may cause asthma to develop and lead to decreased lung development in children. It may also increase the risk of certain forms of cancer and premature death (US EPA, 2016). Nitrogen dioxide also contributes to brown haze, which occurs in Auckland, and which is associated with an increase in hospital admissions.

Nitrogen dioxide also contributes to the formation of ground-level ozone and secondary particulate matter (when gases in the atmosphere react in the presence of sunlight), both of which can have negative health impacts.

Nitrogen dioxide can also have ecological impacts. It can cause injury to plant leaves and reduce growth in plants that are directly exposed to high levels (US EPA, 2008). In the atmosphere, nitrogen dioxide can combine with water to form nitrate, which has been shown to cause acidification and have negative effects on freshwater ecosystems. It can also affect ecosystems by acting as a nutrient (Payne et al, 2017).

New Zealand's COVID-19 response in 2020 led to a notable short-term improvement in air quality, particularly as a result of decreased nitrogen dioxide concentrations due to reduced traffic emissions (Talbot et al, 2021a, b). During the most restrictive alert level period (level 4), nitrogen dioxide concentrations reduced by 34 to 66 percent. The speed of the 'bounce-back' in concentrations varied according to location, but largely increased in line with increases in on-road vehicle volume as restrictions eased.

MEASUREMENT AND ASSESSMENT

The National Environmental Standards for Air Quality (NESAQ) for nitrogen dioxide requires regional councils and unitary authorities to undertake monitoring where nitrogen dioxide concentrations may be likely to breach the standard. Data from seven sites for state and nine for trends, located across three regions, were used in this report.

Because motor-vehicle emissions are the major source of nitrogen dioxide, the Waka Kotahi NZ Transport Agency also operates a network of passive nitrogen dioxide samplers at sites near roads, and urban background areas. These types of samplers do not meet regulatory standards but do allow for more widespread and cost-effective data collection. As such, this monitoring can provide information on concentrations but cannot be used to assess compliance with the nitrogen dioxide standard. Data from 186 sites for state and 110 for trends, located across 16 regions, were used in this report.

In New Zealand, short-term exposure to nitrogen dioxide is assessed against the NESAQ 1-hour average standard of 200 µg/m³ (nine exceedances are allowed per year), and long-term exposure is assessed against the 2005 WHO annual average guideline of 40 µg/m³.

We also assess against the more stringent air quality guidelines that the WHO recommended in September 2021 for NO₂: a 24-hour average of 25 µg/m³ and an annual average of 10 µg/m³.

KEY FINDINGS

<p>In the four-year period between 2017 and 2020:</p>	<ul style="list-style-type: none"> ▶ Queen Street (Auckland) recorded the highest nitrogen dioxide concentration (41.5 $\mu\text{g}/\text{m}^3$) averaged over 2017–20. Riccarton Road (Christchurch) recorded the second highest concentration (29.9 $\mu\text{g}/\text{m}^3$). ▶ Nitrogen dioxide concentrations at monitored sites were highest in winter (June, July, August). <p>National Environmental Standards for Air Quality (NESAQ)</p> <ul style="list-style-type: none"> ▶ No site exceeded the NESAQ short-term standard (1-hour average) of 200 $\mu\text{g}/\text{m}^3$. <p>World Health Organization (WHO)</p> <div> <p>2005 air quality guidelines</p> <ul style="list-style-type: none"> ▶ Queen Street (Auckland) was above the NO_2 annual 2005 WHO AQG (40 $\mu\text{g}/\text{m}^3$) in 2017 (43.9 $\mu\text{g}/\text{m}^3$) and 2018 (43.9 $\mu\text{g}/\text{m}^3$). </div> <div> <p>2021 air quality guidelines</p> <ul style="list-style-type: none"> ▶ Five of seven sites (71 percent) were above the 24-hour 2021 WHO AQG for nitrogen dioxide (25 $\mu\text{g}/\text{m}^3$); most sites were classified as residential. ▶ Queen Street (Auckland), Riccarton Road (Christchurch), and Penrose were above the 24-hour 2021 WHO AQG for nitrogen dioxide most often: on 294–309, 179–271, and 51–96 days per year, respectively (figure 5). ▶ Five of seven sites (71 percent) were above the annual 2021 WHO AQG for nitrogen dioxide of 10 $\mu\text{g}/\text{m}^3$ at least once a year. </div>
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Figure 5: Days above 24-hour 2021 World Health Organization air quality guideline for nitrogen dioxide, 2017–20

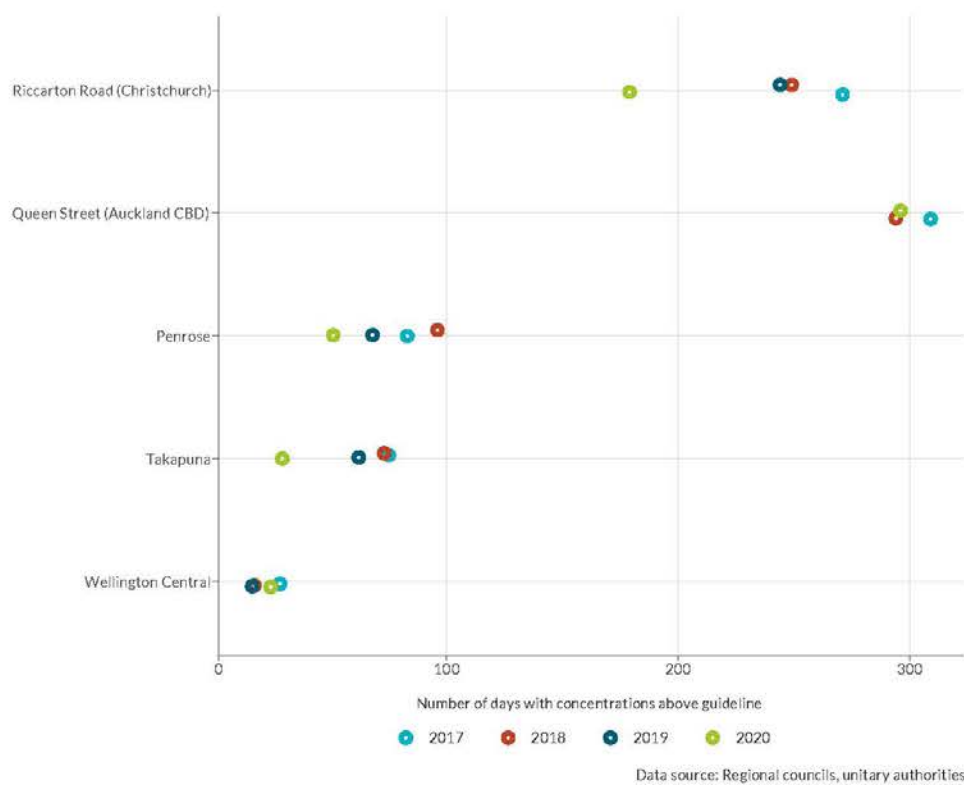
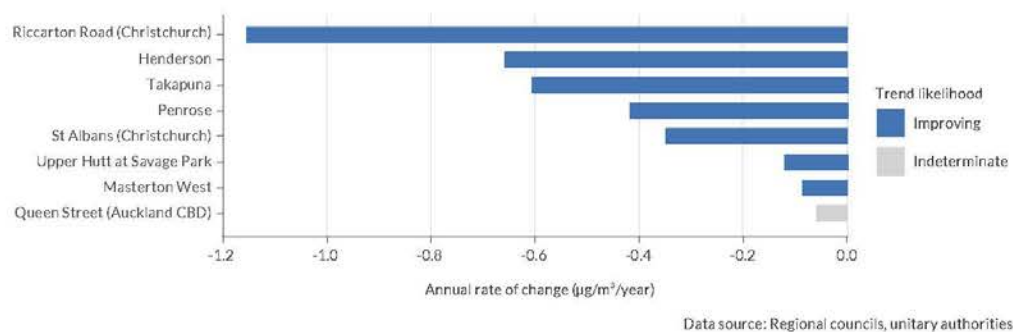


Figure 6: Nitrogen dioxide trends, 2011–20

**Find out more**See indicator: [Nitrogen dioxide concentrations](#)

► Sulphur dioxide concentrations

Sulphur dioxide (SO₂) is a colourless gas with a sharp, irritating odour. It is associated with combustion of fossil fuels (such as coal, diesel, and heavy fuel oil used in maritime vessels) and industrial processes (such as the production of fertilisers and the smelting of mineral ores containing sulphur). Geothermal and volcanic gases are natural sources of sulphur dioxide in New Zealand.

At high levels, sulphur dioxide can have human health and ecological impacts. When inhaled, sulphur dioxide is associated with respiratory problems such as bronchitis. It can aggravate the symptoms of asthma and chronic lung disease and cause irritation to eyes.

It can also interact with other compounds in the air to form sulphate particulate matter, a secondary pollutant. Sulphate particulate matter is associated with significant health effects because of its small size and acidity. It is also a cause of haze, which impairs visibility.

In ecosystems, it can damage vegetation, acidify water and soil (US EPA, 2017), and affect biodiversity.

MEASUREMENT AND ASSESSMENT

Regional councils and unitary authorities monitor sulphur dioxide concentrations in their regions. Data from seven sites for state and six for trends, located across three regions, were used in this report.

In New Zealand, short-term exposure to sulphur dioxide is assessed against the NESAQ 1-hour average standard of 350 µg/m³ (lower) (nine exceedances are allowed per year) and 570 µg/m³ (upper), and the 2005 WHO 24-hour average guideline of 20 µg/m³.

We also assess against the less stringent air quality guideline that the WHO recommended in September 2021 for sulphur dioxide: a 24-hour average of 40 µg/m³.

KEY FINDINGS

In the four-year period between 2017 and 2020:	National Environmental Standards for Air Quality (NESAQ) <ul style="list-style-type: none"> ► No sites exceeded the short-term sulphur dioxide one-hour NESAQ lower threshold (350 µg/m³) or the upper threshold (570 µg/m³). 	
	World Health Organization (WHO) <div> <div> 2005 air quality guidelines <ul style="list-style-type: none"> ► Four sites out of seven (57 percent) were above the 24-hour 2005 WHO AQG for sulphur dioxide (20 µg/m³). ► Totara St, Whareroa Marae, and Tauranga Bridge Marina sites (all in Mount Maunganui) were above the 24-hour 2005 WHO AQG for sulphur dioxide most often: on 43–105, 13–51, and 6–27 days per year, respectively. ► Of all days above the 24-hour 2005 WHO AQG for sulphur dioxide recorded during this period, 32 percent were in summer (December, January, February) and 30 percent were in spring (September, October, November). </div> <div> 2021 air quality guidelines <ul style="list-style-type: none"> ► Whareroa Marae, Totara St, and Tauranga Bridge Marina sites (all in Mount Maunganui) were above the 24-hour 2021 WHO AQG for sulphur dioxide (40 µg/m³). ► These sites were above the 24-hour 2021 WHO AQG for sulphur dioxide, on 1–6, 3–7, and 1–3 days per year, respectively (figure 7). </div> </div>	
For the six sites analysed for trends in the 10-year period between 2011 and 2020:	<ul style="list-style-type: none"> ► On an annual basis, trends at five of six sites (83 percent) were improving (figure 8). ► All seasonal trends were either improving or indeterminate. 	

Figure 7: Days above 24-hour 2021 World Health Organization air quality guidelines for sulphur dioxide, 2017–20

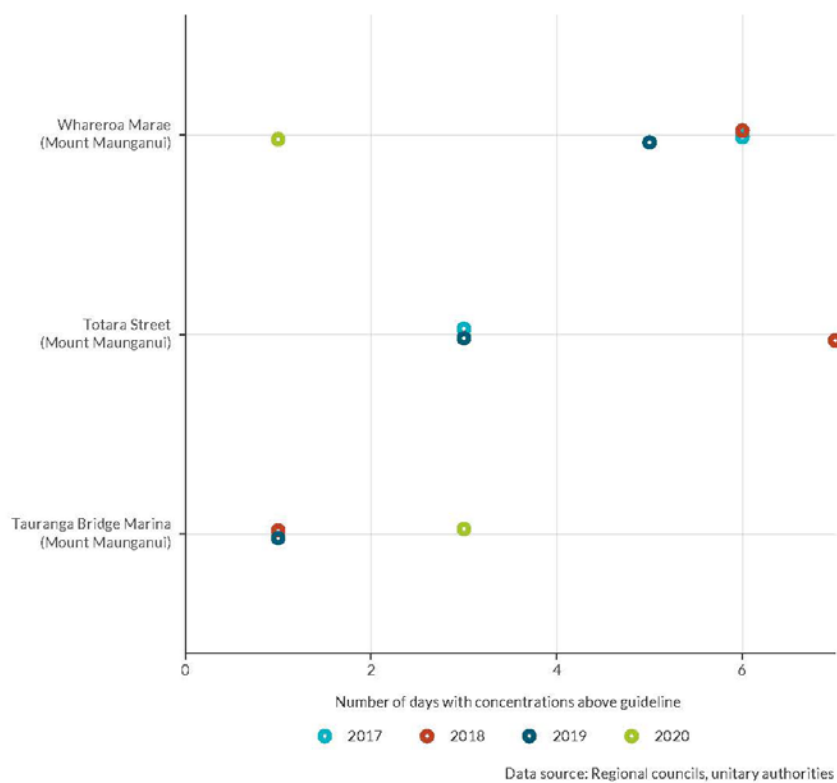
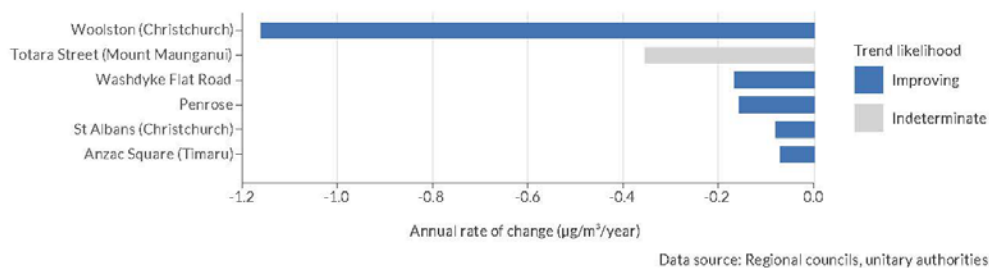


Figure 8: Sulphur dioxide trends, 2011–20

**Find out more**See indicator: [Sulphur dioxide concentrations](#)

► Ground-level ozone concentrations

Ozone (O₃) is a gas found naturally in the atmosphere. However, ozone at ground level is a pollutant primarily generated by human activity that can have harmful effects. Ground-level ozone forms when nitrogen oxides and volatile organic compounds (generated by sources such as motor vehicles and industrial processes) combine in the presence of sunlight.

Exposure to high concentrations of ground-level ozone can cause respiratory health issues and is linked to cardiovascular health problems and increased mortality. Those most at risk include children, older adults, people with asthma, and people who spend a lot of time outdoors, such as outdoor workers. Exposure to ground-level ozone may also be associated with effects on the nervous and reproductive systems, and other developmental effects (WHO, 2013).

High levels of ground-level ozone can also have harmful ecological effects: it can damage vegetation, reduce plant growth (affecting crop and forest yields), and harm sensitive ecosystems (US EPA, 2013).

MEASUREMENT AND ASSESSMENT

Two regional councils monitor ground-level ozone concentrations. Data from two sites (in Auckland and Wellington) for state and one site (in Auckland) for trends, were used in this report.

In New Zealand, short-term exposure to ground-level ozone is assessed against the NESAQ 1-hour average standard of 150 µg/m³ and the 2005 WHO eight-hour average guideline of 100 µg/m³.

We also assess against the air quality guidelines that the WHO recommended in September 2021 for ground-level ozone: an eight-hour average of 100 µg/m³ (no change) and a peak season¹ eight-hour average of 60 µg/m³.

KEY FINDINGS

<p>In the four-year period between 2017 and 2020:</p>	<ul style="list-style-type: none"> ► Patumahoe (Auckland) had a higher annual average ground-level ozone concentration (40.1 µg/m³) than Wellington Central (17.3 µg/m³). <p>National Environmental Standards for Air Quality (NESAQ)</p> <ul style="list-style-type: none"> ► Neither of the two monitored sites, Patumahoe (Auckland) and Wellington Central, exceeded the NESAQ one-hour average threshold (150 µg/m³). <p>World Health Organization (WHO)</p> <table border="0"> <thead> <tr> <th>2005 air quality guidelines</th><th>2021 air quality guidelines</th></tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> ► Neither of the two sites were above the eight-hour 2005 WHO AQG for ground-level ozone (100 µg/m³). </td><td> <ul style="list-style-type: none"> ► No sites were above the eight-hour or peak season 2021 WHO AQGs for ground-level ozone. ► The peak season daily maximum eight-hour mean in Patumahoe was 59.3 µg/m³ in 2019, just under the 60 µg/m³ guideline. </td></tr> </tbody> </table>	2005 air quality guidelines	2021 air quality guidelines	<ul style="list-style-type: none"> ► Neither of the two sites were above the eight-hour 2005 WHO AQG for ground-level ozone (100 µg/m³). 	<ul style="list-style-type: none"> ► No sites were above the eight-hour or peak season 2021 WHO AQGs for ground-level ozone. ► The peak season daily maximum eight-hour mean in Patumahoe was 59.3 µg/m³ in 2019, just under the 60 µg/m³ guideline.
2005 air quality guidelines	2021 air quality guidelines				
<ul style="list-style-type: none"> ► Neither of the two sites were above the eight-hour 2005 WHO AQG for ground-level ozone (100 µg/m³). 	<ul style="list-style-type: none"> ► No sites were above the eight-hour or peak season 2021 WHO AQGs for ground-level ozone. ► The peak season daily maximum eight-hour mean in Patumahoe was 59.3 µg/m³ in 2019, just under the 60 µg/m³ guideline. 				
<p>For the one site analysed for trends in the 10-year period between 2011 and 2020:</p>	<ul style="list-style-type: none"> ► On an annual basis, Patumahoe showed an improving trend. 				

Find out more

See indicator: [Ground-level ozone concentrations](#)

¹ Average daily maximum 8-hour mean O₃ concentration in the six consecutive months with the highest six-month running-average O₃ concentration.

► Carbon monoxide concentrations

Carbon monoxide (CO) is caused by the incomplete combustion of fuels, especially in petrol-fueled motor vehicles. However, exposure to carbon monoxide has been dramatically reduced since the introduction of emission standards in the year 2000, which required catalytic converters (an exhaust emission control device that converts toxic gases and pollutants into less-toxic pollutants) to be installed in most vehicles (Bluett et al, 2016).

Carbon monoxide can have a range of health effects even after short-term exposure to relatively low concentrations. When inhaled, carbon monoxide enters the blood stream and attaches to haemoglobin in red blood cells, which transport oxygen around the body. This reduces the amount of oxygen that body tissues receive and can have adverse effects on the brain, heart, and general health. Exposure to low levels can cause dizziness, weakness, nausea, confusion, and disorientation. However, higher levels can cause collapse, loss of consciousness, coma, and death (US EPA, 2010).

MEASUREMENT AND ASSESSMENT

Two regional councils monitor carbon monoxide concentrations. Data from six sites for state and 12 for trends, located across two regions (Wellington and Canterbury), were used in this report.

In New Zealand, short-term exposure to carbon monoxide is assessed against the NESAQ running 8-hour average standard of 10 mg/m³ (one exceedance permitted per year) and the 2010 WHO 1-hour average guideline of 35 mg/m³ (WHO, 2010).

We also assess against the air quality guidelines that the WHO recommended in September 2021 for CO: a 24-hour average of 4 mg/m³.

KEY FINDINGS

In the four-year period between 2017 and 2020:	<ul style="list-style-type: none"> ► Riccarton Road (Christchurch) had the highest average concentrations of carbon monoxide (0.4 mg/m³). The rest of the sites had average concentrations of 0.2 mg/m³ (figure 9). ► Across sites, peak concentrations of carbon monoxide occurred during morning and evening hours. ► Carbon monoxide concentrations were highest in winter (June, July, August), averaging 0.4 mg/m³. 				
	<p>National Environmental Standards for Air Quality (NESAQ)</p> <ul style="list-style-type: none"> ► No site exceeded the NESAQ running 8-hour average threshold (10 mg/m³). <p>World Health Organization (WHO)</p> <table border="1"> <thead> <tr> <th data-bbox="483 1361 890 1391">2010 air quality guidelines</th><th data-bbox="903 1361 1295 1391">2021 air quality guidelines</th></tr> </thead> <tbody> <tr> <td data-bbox="483 1395 890 1469"> <ul style="list-style-type: none"> ► No site was above the 2010 one-hour WHO AQG for carbon monoxide (35 mg/m³). </td><td data-bbox="903 1395 1295 1469"> <ul style="list-style-type: none"> ► No site was above the 24-hour 2021 WHO AQG for carbon monoxide (4 mg/m³). </td></tr> </tbody> </table>	2010 air quality guidelines	2021 air quality guidelines	<ul style="list-style-type: none"> ► No site was above the 2010 one-hour WHO AQG for carbon monoxide (35 mg/m³). 	<ul style="list-style-type: none"> ► No site was above the 24-hour 2021 WHO AQG for carbon monoxide (4 mg/m³).
2010 air quality guidelines	2021 air quality guidelines				
<ul style="list-style-type: none"> ► No site was above the 2010 one-hour WHO AQG for carbon monoxide (35 mg/m³). 	<ul style="list-style-type: none"> ► No site was above the 24-hour 2021 WHO AQG for carbon monoxide (4 mg/m³). 				
For the sites analysed for trends in the 10-year period between 2011 and 2020:	<ul style="list-style-type: none"> ► Of the 10 sites assessed for annual trends, seven were improving and three were indeterminate (figure 10). ► During summer, two sites (Ashburton and Masterton West) were worsening, and two sites were improving (Geraldine and Riccarton Road (Christchurch)). The remaining seven sites were indeterminate. 				

Figure 9: Carbon monoxide average daily concentration, 2017-20

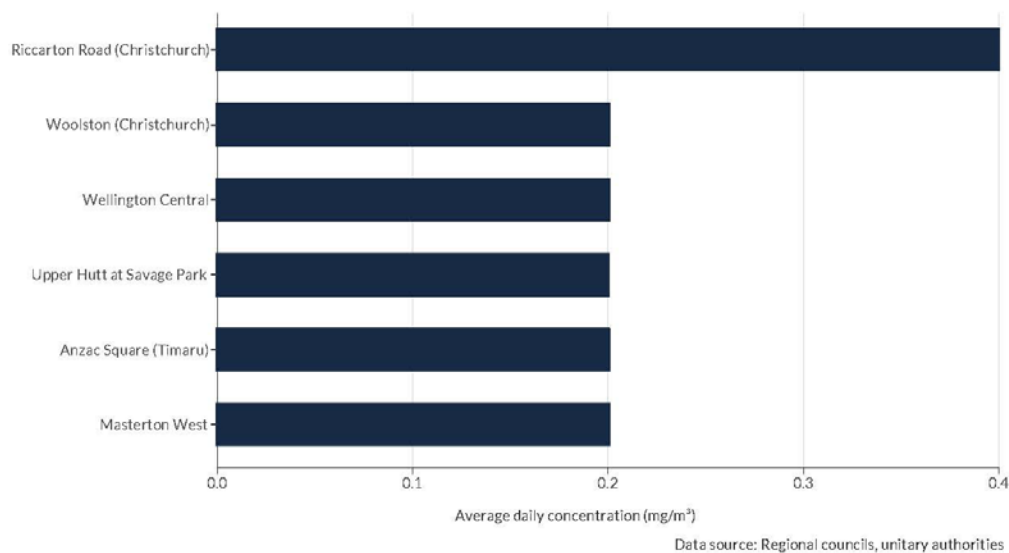
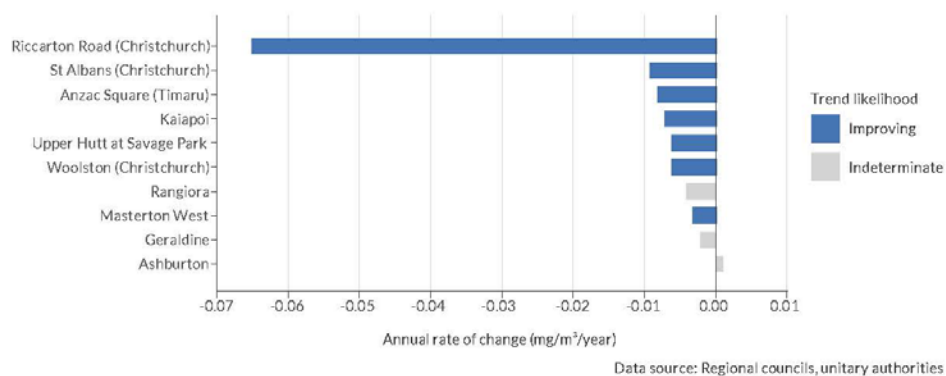


Figure 10: Carbon monoxide trends, 2011-20



Find out more

See indicator: [Carbon monoxide concentrations](#)

► Sources of air pollutant emissions

Understanding the key sources of air pollutants is critical to managing and improving air quality. Emissions inventories estimate the quantities of pollutants emitted to the air by various sources over a certain time period.

Emissions inventories can provide information on the relative contributions of different sources and how they change over time, but they have a level of uncertainty in their estimates. For this report, an air pollutant emissions inventory was developed to examine sources of particulate matter and gaseous pollutants.

The primary method in the inventory is to use readily available information at a national scale (such as fuel use or production volume) and translate it into the amount of pollution emitted. This method provides national-level emission estimates that are easily updatable, consistent over time, and more complete in terms of sources. An alternative method is direct measurement of emissions at the source, aggregated up to a national total.

MEASUREMENT AND ASSESSMENT

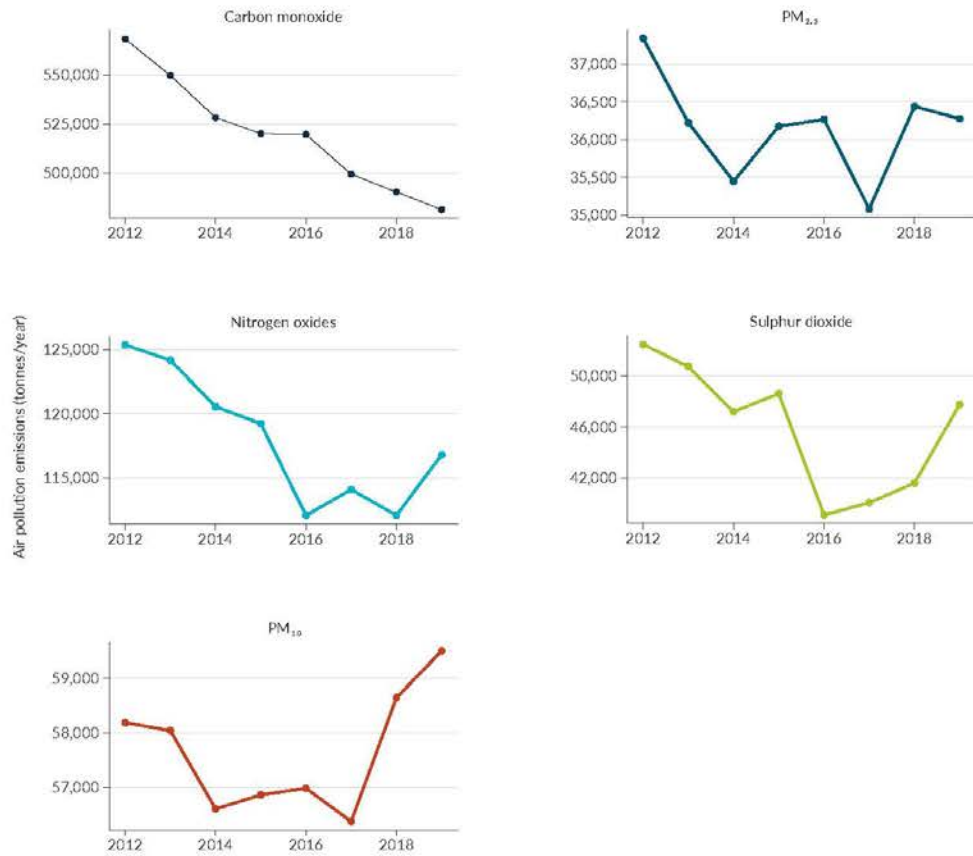
A national emissions inventory was developed for the following air pollutants in New Zealand – PM₁₀, PM_{2.5}, nitrogen oxides (NO_x), carbon monoxide (CO), and sulphur dioxide (SO₂).

This indicator presents data from 2012 up to and including 2019. The year covered by the Greenhouse Gas Inventory (which is a major input to the air pollutant emissions inventory) is 15 months behind the current calendar year to give countries time to collect and process the inventory data and prepare their submission (international reporting guidelines govern what the greenhouse inventory covers and when it is submitted).

KEY FINDINGS

Nationally in 2019:	<ul style="list-style-type: none"> ► The residential sector (primarily burning wood for home heating) contributed 30 percent of PM_{2.5} emissions and 41 percent of carbon monoxide emissions. Almost all particulate matter emissions generated by the residential sector were PM_{2.5}. ► Dust from unsealed roads was the dominant source of PM₁₀ (28 percent). ► On-road vehicles were the dominant source of nitrogen oxides (39 percent), primarily diesel vehicles. ► Burning coal was a large source of sulphur dioxide emissions (41 percent), primarily from manufacturing and construction and electricity generation. Domestic shipping and aluminium production were also significant sources of sulphur dioxide, at 16 percent and 13 percent respectively.
In the eight-year period between 2012 and 2019:	<ul style="list-style-type: none"> ► Total emissions were lower in 2019 than in 2012 for all pollutants except PM₁₀ (figure 11). Annual emissions of carbon monoxide were down 15 percent compared to 2012 (by more than 87,000 tonnes). ► Transport emissions were lower in 2019 for all pollutants except sulphur dioxide, with emissions of carbon monoxide down 47 percent (by more than 85,000 tonnes) and nitrogen oxides down 12 percent (by more than 8,000 tonnes). ► Emissions from electricity generation were lower in 2019 across all pollutants. Most notably, sulphur dioxide emissions decreased by 40 percent (by more than 5,000 tonnes) due to lower emissions from coal burning.

Figure 11: Sources of air pollution emissions, 2012-19



Data source: Stats NZ

Find out moreSee indicator: [Air pollutant emissions](#)

► Health impacts of air pollution

Air pollution causes a wide range of health impacts. There are numerous international studies on the effects that air pollutants can have on human health, but few studies have measured the health impacts in Aotearoa New Zealand. One New Zealand-based study found that living in a neighbourhood with a higher density of wood burners was associated with an increased risk (28 percent) of non-accidental emergency department visits in children younger than three years old (Lai et al, 2017).

MEASUREMENT AND ASSESSMENT

Due to the difficulty of separating air pollution effects from other causes, modelling is commonly used to estimate health impacts from air pollution. This indicator uses a modelling methodology informed by the Health and Air Pollution in New Zealand (HAPINZ) (2012) study, which was developed in accordance with international best practice (Kuschel et al, 2012).

Note: We are anticipating that this indicator will be updated soon, pending an update to the model. Updated information will be available on the Stats NZ website. This indicator used PM₁₀ as a proxy for all air pollution in New Zealand but the revision currently underway will report on PM_{2.5} and nitrogen dioxide.

KEY FINDINGS

From modelling based on the current Health and Air Pollution in New Zealand (HAPINZ) model (table 2):

- Premature deaths in adults of 30 years or older linked to exposure to human-generated PM₁₀ were estimated to be eight percent lower in 2016 than in 2006 (27 deaths per 100,000 people, compared to 29 in 2006).
- Total hospital admissions due to human-generated PM₁₀ were estimated to be two percent lower in 2016 than in 2006 (14 admissions per 10,000 people compared to 15 in 2006).
 - For cardiac illness, admissions were estimated to be 11 percent lower (five per 100,000 people compared to six in 2006).
 - For respiratory illness, admissions were estimated to be four percent higher in 2016 than in 2006 (noting that rounding makes the admissions total the same: nine admissions per 100,000 people in both years).
- Restricted activity days, when symptoms were sufficient to prevent usual activities such as work or study, were estimated to be 12 percent lower in 2016 than 2006 (31,800 per 100,000 people compared to 36,300 in 2006).

It should be noted that the improvement in health effects from air pollution demonstrated by the data above appears to be largely due to more people living in areas with lower PM₁₀ concentrations, such as Auckland, rather than a reduction in PM₁₀ levels overall. While concentrations have decreased markedly in some other areas, these make only a minor contribution to health impacts calculations because of the smaller populations that are exposed.

Table 2: Modelled health effects from exposure to human-generated PM₁₀ in 2006 and 2016.

		Number of cases per 100,000 people	
Health effect		2006	2016
Premature mortality (adults 30+)		29	27
Hospital admissions	Cardiac hospital admissions	6	5
	Respiratory hospital admissions	9	9
	Total hospital admissions	15	14
Restricted activity days		36,300	31,800

Source: HAPINZ Exposure Model (Kuschel et al, 2012), Emission Impossible Ltd

Find out more

See indicator: [Health impacts of PM₁₀](#)

Towards a better understanding of our air

This section provides an overview of developments underway to improve understanding of the impacts of air pollution on health and the environment.



*Air quality monitoring station, Woolston, Christchurch.
Photo: Isaac Bain, Ministry for the Environment*

Access to clean air is essential to health and wellbeing. But in New Zealand there are times and places when the air does not meet air quality standards or guidelines.

When air quality is poor, this can affect health, lifestyles, and natural ecosystems. The elderly, young people, and those suffering from existing health conditions are especially vulnerable to poor air quality. An improved understanding of both the state of New Zealand's air and the links to human health and environmental impacts can help decision-makers better manage these impacts.

As noted in the introduction, updated global air quality guidelines based on a new synthesis of health impacts of exposure to air pollution were published by the World Health Organization in September 2021. In most cases, guideline thresholds have been made more stringent from the previous 2005 ones, reflecting the growing evidence that air pollution can affect health even at low levels, and that for some pollutants there is likely no safe level of exposure (WHO 2021).

The analysis in this report, coupled with improved information about the health impacts of air pollution, demonstrates that, in some locations and some times of year, New Zealanders may be at risk of harm to their health from the air they breathe. This information is especially crucial for those of us that live or work near air pollution 'hotspots' outlined in this report.

► Monitoring

The most significant gap in understanding air quality in New Zealand relates to its monitoring. Currently, monitoring of air pollutants is limited in its coverage over space and time. Monitoring is generally only undertaken where significant air-quality risks have already been identified. A lack of a comprehensive national monitoring network limits our understanding of air quality variations within and between regions and airsheds, populations (eg city, suburban, rural), land uses (eg residential, commercial, industrial, agricultural, natural), as well as how it might change over time.

The lack of comprehensive air-quality monitoring coverage means there is also only limited data about the state and impact of air pollutants on natural ecosystems and biodiversity in New Zealand. In addition, current monitoring is limited to outdoor air quality information, yet New Zealanders spend up to 90 percent of their time indoors.

Finally, better data are needed on key air emission sources including hazardous industry emissions, such as benzene, methyl bromide, dioxins, and heavy metals. New Zealand is the only country in the OECD (Organisation for Economic Co-operation and Development) without a pollutant release and tracking register.

► Making the link to impacts

Updated information on health impacts and social costs from air pollution, utilising more recent New Zealand-specific health, population, and air-quality monitoring data, is under development. This update to the Health and Air Pollution in New Zealand model considers the effect of three pollutants, including PM_{2.5} and nitrogen dioxide along with PM₁₀. This work is critical to understanding the link between poor air quality and human health for New Zealanders.

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Catchment Management

Te Hoiere Project – Environmental Contracts Update (E355-021-02)

(Report prepared by Sioban Harnett)

The 'Early Win' subproject agreement for JfN 0021 has been drafted, negotiated and finally signed just prior to the Christmas break. This three-year project engages Forest & Bird to expand on previous pest plant and predator pest control, restorative planting and monitoring of indicator species in Public Conservation land in the Te Hoiere catchment.

Collaboration between DOC and Council has resulted in a contract being established for collection of eco-sourced seeds from a range of species native to the Te Hoiere catchment. These seeds will be grown on and, in time, the plants made available for riparian and wetland plantings.

A contract has been signed with a sizable, experienced local nursery and a further contract is in the process of being signed with another. Plant orders have been secured for autumn 2022.

A Request for Pricing and Information for Rural Fencing in the catchment was publicly advertised late last year. Two local businesses have come forward showing interest in the work. As well, incumbent fencers are being invited to apply.

Requests for Pricing and Information for both Planting and Pest Plant Control are currently being advertised. Incumbent operators are being invited to apply also.

Each successful applicant for all works will be provided with a contract for works, protecting both parties.

Catchment Care for At-Risk Catchments in Marlborough(E355-021-04)

(Report prepared by Rachel Russell)

Catchment Condition Surveys have now been completed in three of the four catchments involved with the Catchment Care for At Risk Catchments project. The latest survey in Tuamarina catchment was completed in December, bringing the total area surveyed to 3,115 hectares across the three catchments. The surveys identified 193km of streams, 61% of those are greater than one metre in width. Further analysis of these waterways determined that there are 38km unfenced on both sides and 39km of waterways fenced on one side only. This equates to 115km of fencing that may be required to improve water quality and meet the requirement of the recent Section 360 RMA Stock Exclusion Regulations. Further analysis of the data collected in Tuamarina catchment is underway and meetings with landowners will begin in early February.

Individual landowner meetings continue across all catchments to plan fencing, planting and other mitigation work. Since June 2021, 3,100m of fencing has been completed and another 2,970m is currently being built. A further 5,000m has been proposed, with an annual fencing target of 19km. 13,300m² of riparian planting has been identified through the surveys and meetings with landowners, this planting is targeted for Autumn 2022. In late December 1000 carex plants were planted alongside Are Creek in the Okaramio area.



Te Hoiere Project – Catchment condition surveys, quick wins and restoration (E355-021-02)

(Report prepared by Aubrey Tai)

A number of additional properties have been surveyed in Te Hoiere in December bringing the total area surveyed to 9,162 hectares. There are still some Catchment Condition Surveys to be carried out/ completed on a small number of properties across the Te Hoiere catchment.

Individual landowner meetings are gathering momentum as word spreads. Aubrey Tai who started in October as the Catchment Care Coordinator for Te Hoiere has spent many hours engaging with landowners since his arrival. To date, 17 farm visits have been completed with the majority of these engaged with potential mitigation works to begin in February including fencing, planting and weed control.

The goal for this year is to complete 15km of fencing and plant 1,700 native plants across 0.4 hectares. Since June 2021, 1,500m of fencing has been completed and another 600m is due to start in April. Riparian planting has been completed across 0.8 hectares, with 1,860 natives established. Plant release work including weed control has been completed across 2.7 hectares and continues to be a major focus.



Excitement was rife across Linkwater catchment as the first dung beetles were released in December 2021, quickly followed by a second release in January 2022. A further two releases in Linkwater will take place as beetles become available.



A tender process for planting, fencing and weed control has resulted in meetings with potential contractors keen to be involved in the project. Seed collection is underway in the catchment to support the eco sourced planting program.

Community workshops are planned for February/March that will cover Dung beetles, seed collection and weed control.

Taylor River Improvement Programme

(E355-021-01)

The Taylor River Improvement Programme is now in its final funding year. A good growing season means plantings are looking good and growing well. To date over 50,000 native plants have been planted along the banks of the Taylor River and its tributaries, and 4,227m of fencing has been installed to protect riparian plantings. This project is currently on time and on budget. The programme has been extremely well received by landowners, and even with these successful interventions, there are still several high profile sediment-producing sites that are yet to be addressed under the programme, and many landowners who have expressed interest in engaging will unfortunately not be included before the fund is exhausted.



Image: Taylor River plantings taken February 2021



Image: Taylor River plantings taken December 2021

Hill Country Erosion Fund

(E355-019-004)

Decent winter rains and a kind spring have resulted in good growth and high survival rates for Hill Country Erosion projects in what can be very challenging environments. Over 5000 natives were planted across 49 hectares of retired marginal hill country in the last planting season, while 2450 poplar poles were supplied to landowners to stabilise 70 hectares of erosion-prone grazing land. The majority of this work was undertaken in South Marlborough dry, east-coast hill country. In addition, 1000 tagasaste trees and 300 dryland oaks were supplied as trials to particularly challenging dry faces with a northerly aspect where poles and/or natives had previously failed. Interest from landowners in engaging with the Hill Country Erosion Programme continues to grow exponentially, as increased awareness of freshwater issues and a focus on catchment management leads landowners to address sedimentation issues at the source. Plantings and retirement are planned to double this coming season, and some promising commitments are already in place for 2022.



Image: Retirement of tunnel-gully erosion site at Ben Morven



Image: Erosion at Kaka Ridge identified during aerial survey



Image: Pole planting in Ward



MINUTES

Marlborough Landscape Group, held on Friday 19 November 2021
at 2.00 pm in the Committee Room,
Marlborough District Council

Present: Cllr Jamie Arbuckle (Co-Chairman), Tim Newsham (Co-Chairman), David Dillon, Helen Ballinger, Jan Johns, Siobhan Allen, Richard Hunter, Siobhan Allen, David Aires, LinLin Yang, Chris Beech, Alan Johnson, Bev Doole (Co-ordinator), Linda Kerr (Secretary MDC)

Apologies:

Rob Dunn, Mondo Kopua, Pete Hamil, Cllr Barbara Faulks, Kaz Holland

Guest:

Liz Webb, Wairau River Regional Park Management Plan Co-Ordinator

Confirmation of Minutes of Previous Meeting, 8 October, 2021

Moved Cllr Arbuckle/Chris Beach: "that the confirmation of the minutes of the previous meeting held on 8 October 2021 were a true and accurate record of the meeting".

Carried

Welcome:

Cllr James Arbuckle acknowledged the valuable work done by the Landscape Group throughout the year. He commented on the beneficial work done by individuals and as a group. Council is taking an interest in the Minutes from the meetings.

Jamie thanked Bev for her hard work and enthusiasm, stating she is the "glue" of the group. He asked members to confirm with Bev whether they are willing to continue for the next year.

Dave Aires informed the group that he is leaving the Marlborough District Council and going to Christchurch. He has spoken with Liz Webb about the regional park. Liz is taking on the role of the Wairau River Regional Park Management, Co-ordinator. Dave took Liz on a tour and she understands where we want to get to. The next part is the consultation process. Dave thanked the Landscape Group for their support.

Tim Newsham spoke about the high bar that has been set for Dave's replacement in Council. He spoke how Dave's departure is a great loss, particularly his ability to try to balance the Wairau River as a floodway and also a place for people to enjoy.

Cllr Arbuckle described the Wairau River Regional Park Plan as Dave's legacy project and thanked him for sowing the seed.

Bev added that Dave's involvement within the group was not only the regional park, but he also helped with landowner liaison for Greening Marlborough and his problem-solving approach was much appreciated. His work has reflected well on the Council and he will be missed.

Richard Hunter then spoke on behalf of iwi Maori and thanked Dave for all his support and direction. Richard wished him all the best in his new role at Environment Canterbury.

Guest Speaker Liz Webb, Wairau River Regional Park Management Plan Co-Ordinator

Liz introduced herself. She runs a small business, coaching and consulting firm in Blenheim. She has been in the region for four years and the reason she is here is to be part of the community, giving back, and learning and to be challenged. She worked on the Age Friendly Strategy survey.

Liz has worked with Council's economic team in the COVID recovery project. She is currently working on the economic strategy for the next 10 years for Marlborough and she has also worked with the Aquaculture Industry and local iwi.

Her role in the Wairau River Regional Park Project is to facilitate the process including developing iwi partnership, public consultation, and the final result of a management plan.

Liz is neutral and wants to make sure everyone's voices are heard. Liz is working with Glyn Walters on the best way to consult. Her first task is to develop a strategy for community engagement and working with iwi representatives on how they want to be involved.

She will be in contact with the Landscape Group to seek information and feedback. It is still intended that a Landscape Group member will be on the Community Advisory Group.

Correspondence

Rata tree response from Dynes Transport
Dave Aires resignation

Actions from the October Meeting:

Airport Carpark:

In response to the Group's request to keep the eucalyptus tree on the northern boundary, Dean Heiford asked the Group to identify the trees it wants retained. He indicated that the project would be staged and may not proceed to its original planned size. The sub-group of Helen, Richard, Jan and Chris will provide Dean with a list of the trees and order of priority by the end of November.

Tua Marina Rata Tree:

Tim sent a letter to Dynes Transport requesting they protect the tree as part of their truck park development. The company is going through a land use change with MDC because the site is zoned urban/residential and their use is industrial. The company provided a landscape plan that shows the rata tree still in place, with a barrier around it. Tim to write a response - the group is impressed with the overall site landscape plan but suggests the rata tree needs more greenspace/buffer zone around it to protect the root system and canopy. The land use change application is still being processed by Council U210869 and Cllr Arbuckle is waiting to hear if it will be publicly notified.

Reconnect with Rangitane:

Rangitane is undergoing change with a new manager and it is understood that the Board is restructuring. Richard is in the process of redeveloping the relationship.

Forestry Field Visit:

Siobhan did not think it was worthwhile for the group to go on a field trip as there are no current landscape issues; however it is a work in progress. The forestry industry is under pressure at the moment with low log prices and uncertainty in the Chinese market.

Glyphosate Use:

Tim and Jan are working to meet with MDC and Marlborough Roads and to discuss the spraying and ways to reduce the use of this chemical. If there is support, they suggest a professional is needed to lead a project based on what has been done in other districts. The aim is to create a step by step plan to make it easier for Council and Marlborough Roads to implement alternatives eg. Lincoln University is researching green infrastructure (eg inter-row and fence line plantings) instead of using glyphosate.

The Government is reviewing the future of glyphosate and Council needs to consider what to do if it is banned. Tim and Jan to ask this question at their meeting.

Greening Blenheim:

LinLin met Jane Tito, manager of Parks and Open Spaces, to see what sites might be available for the Greening Blenheim native forest project. Shep's Park was excluded because it has a QEII covenant; Polo Park needs to be kept open for horses. There is already a small planting at Marshall Places where access could be improved. However there is not further planting space due to floodway requirements.

Jane suggested approaching the Rivers Department to see if there is space available at Taylor Dam; however this is not within easy walking or cycling distance.

Clr Arbuckle said Council is developing a dog park at the end of George Conroy Drive, on a former landfill near the Taylor River. The site is 10-20ha which could be available for planting. It may be too dry for a native forest but should be investigated. Clr Arbuckle and Richard Hunter will raise at Assets and Services as part of the George Conroy Concept Plan. Richard suggested it could include a memorial park area for people donate or plant a tree to remember a family member.

Helen has been compensated with a petrol voucher for her work on the environmental grants panel.

1. Work Plan: Advocacy – Tree Protection

Picton Oak Tree:

The notable tree at 35 South Terrace will remain. Staff recommended that it stay because of its importance and protection through the Marlborough Environment Plan. Reports by three different tree specialists all said the tree was healthy. Council approved the recommendation but has requested a report on potential property damage and risk to pedestrians. The tree will also be managed with appropriate pruning.

Clr Arbuckle reported there have been more requests for removal of trees following the decision to take out a eucalyptus in Harling Park. The Council's tree policy, including obtaining an arboriculture report, is being followed. The Landscape Group is keeping a watching brief to ensure any recommendation for removal is in line with the tree policy.

Richard attended an NMIT meeting looking at research opportunities for their viticulture degree students, looking at biodiversity landscape issues within vineyards. They are keen to use modern technology, such as infra red photography and soil-type analysis, and Mataranga Maori to identify which trees are suitable to encourage bird life and biodiversity. There are a number of potential funding sources available.

2. Work Plan: Progress so far and Actions for 2022

Report back from Workstreams:

2.1 Climate Change

- Seek more trees and canopy cover for Blenheim, which would contribute to CO2 reduction and reduce heating effects. More areas under tree canopy in Blenheim means people do not have to escape to Picton or Pelorus River for significant some shade. It is hard to find a flat area under canopy in Blenheim to play freely with young children without worrying about hazards such as dogs, water, golf balls etc. Children's skin is sensitive to sun damage so we need a landscape area that takes these factors into consideration.
- Set aside an area to enable relatives of deceased persons to plant a tree.
- Add citrus trees to plantings on road verge.
- Support and advocate for more tree plantings across areas that are administered by Council's Parks and Open Spaces and Rivers departments. Would like to see more street trees planted, more shade at sport parks and developments such as the airport car park, subdivisions and opportunities around the Port development in Picton.
- Make progress on the Greening Blenheim forest idea in the next year.
- Supports large scale planting on Wither Hills Farm Park. Ecologist Colin Meurk's vision for this from the Riverlands Estate Project could be used. Consider developing a partnership with Climate Karanga around a vision for tree plantings on the Wither Hills or another large scale project.
- Advocate for more funding into Council work streams such as Working for Nature which currently has a budget of \$90K. There is real benefit in partnering with Community and Government to leverage further funding.
- Support an initiative from Lincoln University regarding green infrastructure in vineyards including carbon sequestration.
- Advocate for more tree/vegetation planting and vigorously defend existing trees, whether indigenous or exotic. Shade trees are an essential element, particularly in the urban environment, but sometimes deciduous trees are a better choice to avoid dark and slippery footpaths in winter.
- Climate change mitigation is not only about greening the landscape, but also about reducing the number of vehicles on our roads and streets. Support further development of safe cycle paths and lanes to promote commuting/cycling.
- Retain existing trees where possible for carbon sequestration, shade, amenity and mental health, throughout Marlborough but particularly Blenheim.

2.2 Farming

- The Government is encouraging farmers to look after wetlands, fence waterways and Significant Natural Areas, plant carbon sinks and set aside land for regeneration. The Landscape Group can help show good examples of farmers already looking after the landscape as part of their operations.
- Advocacy – damage to landscape caused by goats, deers, pigs, creating havoc in natural environment and eating carbon-sequestering plants. Need to see more understanding and investment in controlling these pests on farmland.
- Bev to liaise with David to organise a public field visit to his farm, showing benefits of landscape plantings and protection of SNAs.

2.3 Forestry

The industry does not think there are any landscape issues with how it operates. The Landscape group needs to provide examples of concerns to open up this discussion.

2.4 Wairau River Regional Park

This project is progressing, with the appointment of a co-ordinator to begin public consultation. A Landscape Group representative will be on the community advisory group for the project.

2.5 Go Green not Brown – See earlier discussion on Glyphosate.

General Business:

Meeting dates for 2022 starting at 2.00 pm:

4 February
1 April
10 June
19 August
14 October
25 November

Members are asked to commit to attending 4 out of 6 meetings.

Next meeting: 4 February 2022

Actions from the 19 November meeting:

Action	To do	Who
1.	Provide Dean Heiford with airport carpark development plan showing which trees to retain	Helen, Richard, Jan and Chris
2.	Reply to Dynes Transport suggesting more of a buffer zone around the rata tree.	Tim
3.	Wither Hills Farm Park plan review – Linda Craighead to update at next meeting	Bev
4.	Arrange meeting with MDC and Marlborough Roads on alternatives to glyphosate	Tim and Jan
5.	Check progress of Wither Hills Farm Park Management Plan.	Bev/Linda C
6.	Follow up with Assets and Services re potential for the George Conroy Reserve and Greening Blenheim project	Clr Arbuckle and Richard
7.	Public visit to Dillon farm plantings. Arrange for 2022.	Bev and David
8.	Confirm ongoing membership of the group.	All members to Bev by Feb 1.
9.	Outline forestry landscape issues to discuss with MFIA	All members to Bev by Feb 1.
10.	Viticulture workstream – landscape actions for 2022	Mondo, Jan, Chris

Building Control Group

Building Control - Building Consent Authority (BCA) & Territorial Authority (TA) Activity for December 2021.

Activity across the groups functions as a BCA and a TA continued to be strong throughout the month of December.

BCA Activity for December 2021

Total Consents issued

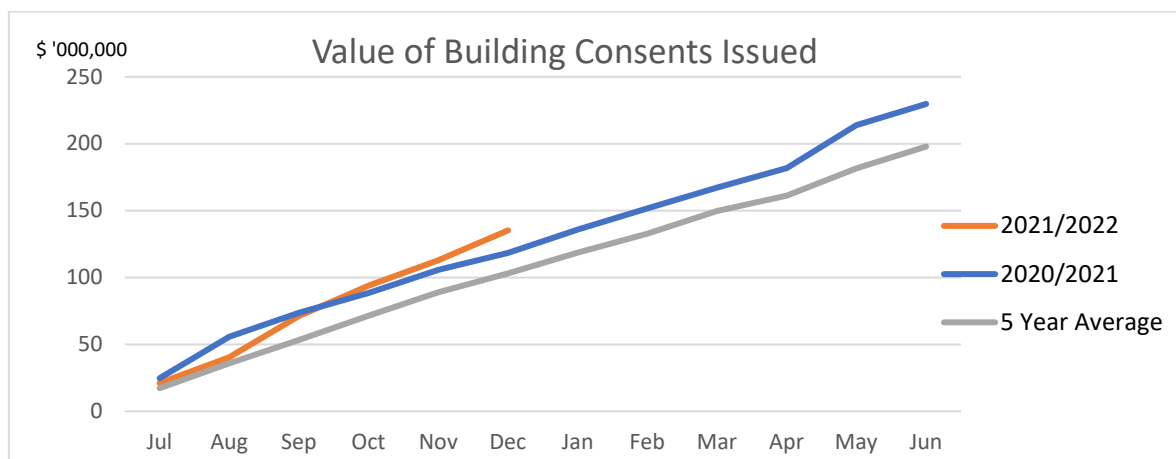
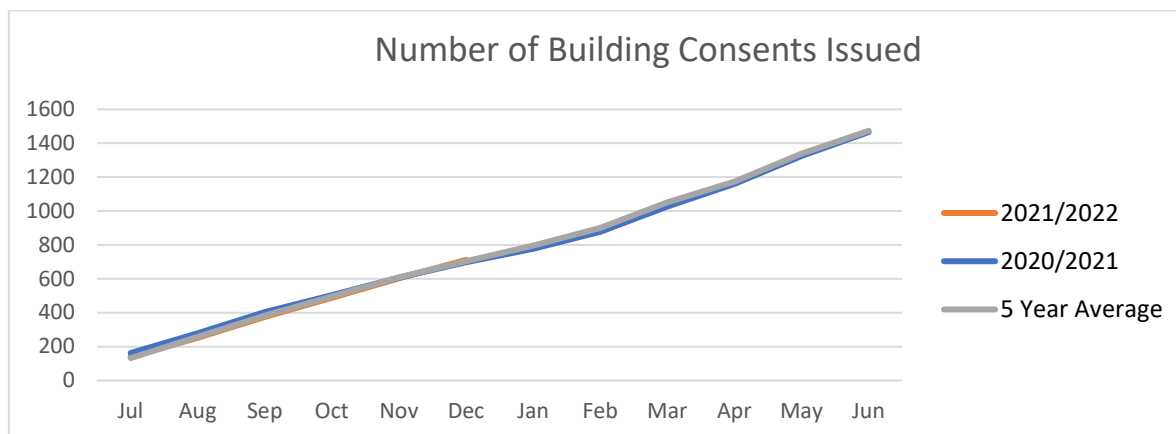
- Total of 97 consents, with a total value of \$19,634,189.50
- This total included 12 new dwellings, with a value of \$5,650,800.00

Total Consents received

- Total of 99 consents, with a total value of \$20,033,160.50
- This total included 17 new dwellings, with a value of \$9,974,042.00

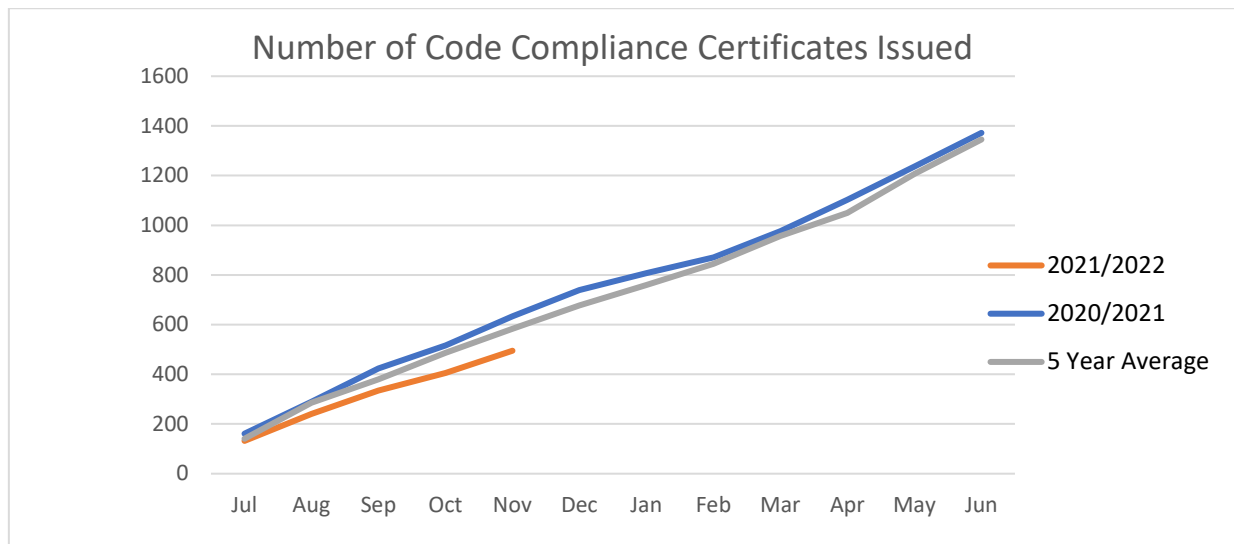
Processing stats for December 2021

For December the group issued 94% of the building consent applications within the required statutory timeframe of 20 days.



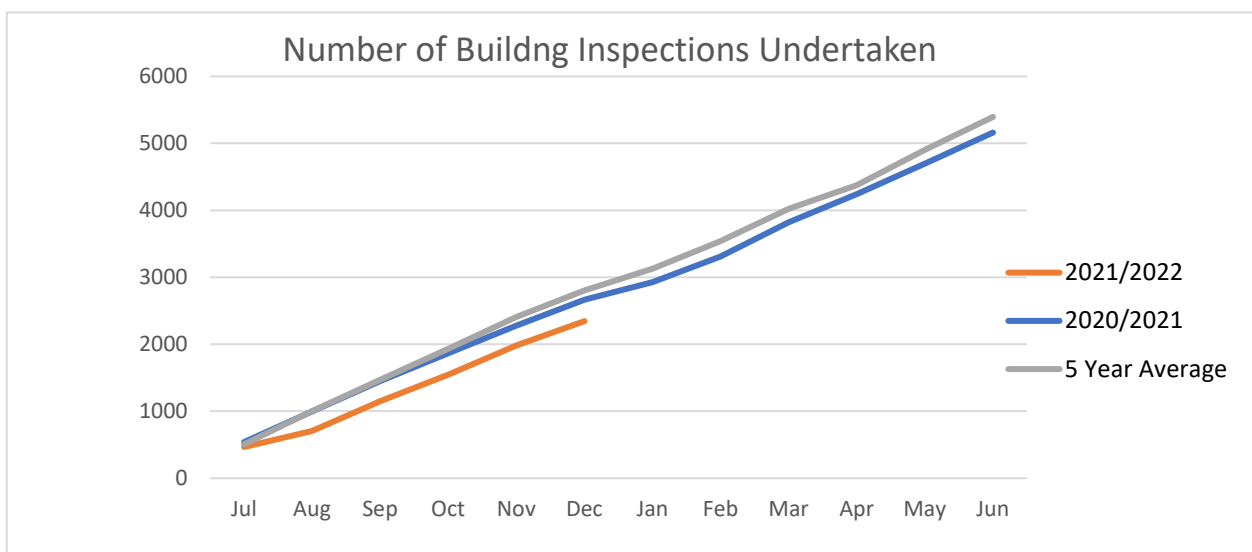
Code Compliance Certificates issued during December 2021

- Total of 94 CCC's, 100% of these were issued within 20 days.



Number of Inspections undertaken December 2021

A total of 362 inspections were undertaken in December, with an average booking time of 3 days. The number of inspections carried out to date is lower than other years and this is directly attributed to Covid lockdown in August/September.



Alcohol Licensing

A100-04

Attached is a schedule of applications for alcohol licences issued by Marlborough District Licensing Committee under delegated authority from 29 October 2021 to 20 January 2022.

Alcohol Licences issued by the Marlborough District Licensing Committee
From 29 October 2021 to 20 January 2022
Special Licenses

Licence Number	Applicant	Location	Event	Date/s
SPC/081/2021	Claudia Helen Small-Springlands School	12 Murphys Road, Blenheim	Fundraising auction	Monday 22 November, Tuesday 23 November, Wednesday 24 November 2021
SPC/095/2021	Blenheim Musical Theatre Incorporated	81A Lakings Road, Blenheim	Theatre Performance	From Wednesday 17 November to Saturday 4 December 2021
SPC/102/2021	Endeavour Live Limited	6B Lansdowne Street, Blenheim	Golden Sounds music concert	Thursday 6 January 2022
SPC/105/2021	Wairau River Wines Limited	770 Rapaura Road, Rapaura	Tennis Tournaments	Sunday 28 November 2021, Saturday 1, Sunday 2 and Monday 3 January 2022
SPC/106/2021	Wairau Valley Golf Club Incorporated	46 Morse Street, Wairau Valley	Golf Tournament fundraiser	Friday 19 November 2021
SPC/107/2021	Blenheim Bowling Club Incorporated	65 E Weld Street, Blenheim	Private functions	Saturday 6 November 2021 and Friday 26 November 2021
SPC/108/2021	Havelock Bowling Club Incorporated	7 Neil Street, Havelock	business house bowls	Every second Thursday from 4 November 2021 to 10 March 2022
SPC/109/2021	Blenheim Bowling Club Incorporated	65 E Weld Street, Blenheim	private events	Saturday 27 November and Friday 17 December 2021
SPC/114/2021	Marlborough Kart Club Incorporated	Wither Road, Blenheim	kart events	From Saturday 22 January to 11 December 2022
SPC/127/2021	Blenheim Polo Club Incorporated	117 A Redwood Street, Blenheim	Polo	Saturday 29 and Sunday 30 January 2022
SPC/144/2021	Joal Wine Group (NZ) Limited	1397 Waihopai Valley Road, Waihopai	Vinyl in the Vines	Sunday 23 January 2022
SPC/146/2021	Riverside Bowling Club Incorporated	60 Budge Street, Blenheim	Private Christmas party	Tuesday 21 December 2022
SPC/150/2021	Marlborough Harness Racing Club Inc	Old Renwick Road, Blenheim	Race meeting	Friday 14 January 2022, Sunday 16 January 2022
SPC/147/2021	Lawson's Dry Hills Wines Limited	1397 Waihopai Valley Road, Waihopai	Vinyl in the Vines	Sunday 23 January 2022
SPC/149/2021	Elemental Distillers Limited	1397 Waihopai Valley Road, Waihopai	Vinyl in the Vines	Sunday 23 January 2022
SPC/002/2022	Boom Town Brewing Co. Limited	1397 Waihopai Valley Road, Waihopai	Vinyl in the Vines	Sunday 23 January 2022
SPC/092/2021	Havelock Mussel Festival Incorporated	Havelock Domain	2022 Havelock Mussel Festival	Saturday 23/03/2022

Licence Number	Applicant	Location	Event	Date/s
SPC/103/2021	Marlborough District Brass Band Inc	15 Auckland Street Blenheim	Social Gathering of past and current members	Friday 4 February 2022
SPC/098/2021	Wairau River Wines Ltd	Havelock Domain	2022 Havelock Mussel Festival	Saturday 23/03/2022
SPC/100/2021	Kono NZ LP	Havelock Domain	2022 Havelock Mussel Festival	Saturday 23/03/2022
SPC/143/2021	Blenheim Bowling Club Inc	65E Weld Street Redwoodtown	Private functions	Friday 10/12/2021, Saturday 18/12/2021

New Premises Licences

Licence Number	Applicant	Licence Type	Premises	Expiry Date
OFF/030/2021	Rimapere Vineyards Ltd	Off Licence	Rimapere	17/11/2022
OFF/038/2021	Plunkett Estate Vineyard Ltd	Off Licence	Plunkett Estate Wines	17/11/2022
OFF/039/2021	Nicholas Hayward Ltd	Off Licence	Nicholas Hayward Ltd	17/11/2022
ON/032/2021	Sai Danish Trading Ltd	On Licence	Charcoal Indian	25/11/2022
ON/035/2021	Beme Enterprises Ltd	On Licence	Figaro's Cafe	25/11/2022
ON/038/2021	Benpen Ltd	On Licence	Lochmara Lodge	25/11/2022
OFF/041/2021	Eradius Wines Ltd	Off Licence	Eradius Wines	20/01/2023
OFF/046/2021	Marama Vintners Ltd	Off Licence	Marama Downs Wine	18/01/2023

Renewed Premises Licenses

Licence Number	Applicant	Licence Type	Premises	Expiry Date
CLUB/010/2021	Rarangi Golf Club Inc	Club Licence	Rarangi Golf Club	2/08/2024
ON/034/2021	Limavady Roe Ltd	On Licence	Seumus Irish Bar	20/08/2024
OFF/033/2021	Tinpot Hut Wines Ltd	Off Licence	Tinpot Hut Wines	12/09/2024
OFF/035/2021	Te Pa Family Vineyards Ltd	Off Licence	Te Pa Family Vineyards	13/11/2024
CLUB/017/2021	Riverside Bowling Club Inc	Club Licence	Riverside Bowling Club	28/08/2024
ON/051/2021	Post Office Hotel 2008 Ltd	On licence	Springlands Tavern	13/11/2024
OFF/044/2021	Post Office Hotel 2008 Ltd	Off licence	Springlands Tavern	13/11/2024
ON/036/2021	Fromm & Partner Ltd	On Licence	Fromm Winery	13/09/2024
ON/040/2021	The Yard Bar & Bistro Ltd	On Licence	The Yard Bar	25/09/2024
ON/039/2021	Blenheim Indoor Sports Ltd	On Licence	Blenheim Indoor Sports Centre	13/09/2024
OFF/040/2021	Constellations Brands NZ Ltd	Off Licence	Kim Crawford Winery	14/11/2024
OFF/042/2021	Sai Hospitality Ltd	On Licence	Mango Restaurant	1/10/2024
ON/048/2021	The Wine Station Ltd	On Licence	The Wine Station	2/11/2024
OFF/043/2021	The Wine Station Ltd	Off Licence	The Wine Station	2/11/2024

Licence Number	Applicant	Licence Type	Premises	Expiry Date
ON/050/2021	Raupo 2014 Ltd	On Licence	Raupo Cafe	31/10/2024
ON/046/2021	Hakuna Matata Café Ltd	On Licence	Hakuna Matata Cafe	22/10/2024

Temporary Authorities- Premise

Licence Number	Applicant	Licence Type	Premises	Expiry Date
ON/035/2018	Valda & Kaycee Ltd	On	Pelorus Hotel- formerly The Trout	9/02/2022
OFF/032/2018	Valda & Kaycee Ltd	Off	Pelorus Hotel- formerly The Trout	9/02/2022

New Manager Certificates

Certificate Number	Applicant	Premises	Expiry Date
CERT/096/2021	Anne Veronique Marie Belmas-Escalle	Rimapere	17-11-2022
CERT/104/2021	Kaycee Marie Polkinghorne	Trout Hotel	25-11-2022
CERT/118/2021	Tamara Christine Plunkett	Plunkett Estate Vineyards Limited	17-11-2022
CERT/130/2021	Joby Kollikolavil Jose	Chateau Marlborough	25-11-2022
CERT/132/2021	Hayley McCairns	Eradus Wines Limited	29-10-2022
CERT/136/2021	Kirsty Maree Hebbard	The Waitohi Sports Bar	17-11-2022
CERT/138/2021	Katherine Louise Bruce	Constellation Brands New Zealand Limited	17-11-2022
CERT/139/2021	Graham Murray Evans	Springlands Tavern	17-11-2022
CERT/140/2021	Allan George Waller	The Lodge At Te Rawa Limited	17-11-2022
CERT/142/2021	Karen Jane Sydne	Whitehaven Wines Cellar Door	25-11-2022
CERT/144/2021	Gwendoline Nicole Rachel Girard	The Good Home	09-12-2022
CERT/145/2021	Phillip Charles Hutchison	Vines Cafe	09-12-2022
CERT/146/2021	Rachel Alice Tully	Forrest Wines Limited	25-11-2022
CERT/147/2021	Marie Baptistine Guet	ASB Theatre	10-12-2022
CERT/148/2021	Juanita Mary Smart	ASB Theatre	10-12-2022
CERT/151/2021	Max Weston Bicknell	Mahi Wines	09-12-2022
CERT/153/2021	Samuel Tane Richmond	Four Square Spring Creek	25-11-2022
CERT/154/2021	Jenness Jean Rouché	The Millers Rest	25-11-2022
CERT/158/2021	Katie Amanda Pullan	Picton Fresh Choice	09-12-2022
CERT/159/2021	Margaret Isobel Mitchell	Picton Fresh Choice	09-12-2022
CERT/160/2021	Hayley Anne Hefford	Speights Ale House Blenheim	25-11-2022
CERT/163/2021	Penny Madeline Amy Shirley	Seamus Irish Bar	10-12-2022
CERT/165/2021	Shova Rawal	Chateau Marlborough	10-12-2022
CERT/166/2021	Sukhbir Karwal	Raupo Cafe & Restaurant	09-12-2022

Certificate Number	Applicant	Premises	Expiry Date
CERT/168/2021	Joseph William Trappitt	Sugar Loaf Winery	09-12-2022
CERT/169/2021	Mathis Florin Gaiser	Le Cafe	10-12-2022
CERT/149/2021	Christine Ann Foley	Cork & Keg	15-12-2022
CERT/156/2021	Ma Eufemia Teresa Clemente	Picton Four Square	16-12-2022
CERT/164/2021	Garrett Craig Ryan	Moa Brewing Company Limited	17-01-2023
CERT/170/2021	Atish Kumar	The Tamarind Restaurant	12-01-2023
CERT/172/2021	Kathryn Shona Marie O'Donnell	Pak'n Save Blenheim	15-12-2022

Renewed Manager Certificates

Certificate Number	Applicant	Premises	Expiry Date
CERT/049/2014	Shannon Mikal Rowe	The Jolly Roger Bar & Restaurant	05-12-2024
CERT/168/2014	Stephen Michael Pellett	Stanley Estates Limited	06-11-2024
CERT/292/2014	Belinda Louise Jackson	Lawsons Dry Hills	14-01-2025
CERT/259/2015	Saulo Camillo Nunes	Gramado's Restaurant & Bar	10-11-2024
CERT/262/2015	Robin Gilfred Day	Crow Tavern	09-11-2024
CERT/315/2015	Nicola Anne Hewett	Cloudy Bay Vineyards Limited	23-12-2024
CERT/148/2017	Keri Jayne Lankshear	Indevin Group Limited	16-11-2024
CERT/149/2017	Taylor Ruby Marie Lewis	Four Square Spring Creek	29-11-2024
CERT/157/2017	Annette Muriel Black	Havelock Four Square	08-12-2024
CERT/018/2018	Dennise Roberts	Babich Wines	02-02-2025
CERT/022/2020	Elizabeth Margaret McMullen	Forrest Wines Limited	30-09-2024
CERT/040/2020	Suellen Sobol Pelissari	Forrest Wines Limited	29-06-2024
CERT/219/2015	John Warren Michael Beavon	Marlborough Tour Company Limited	18-12-2024
CERT/290/2015	Benjamin John Cowley	Auntsfield Estate Limited	19-12-2024
CERT/306/2015	Dorothy Margaret Fitzpatrick	Blenheim Indoor Sports Centre	12-12-2024
CERT/315/2015	Nicola Anne Hewett	Cloudy Bay Vineyards Limited	23-12-2024
CERT/148/2017	Keri Jayne Lankshear	Indevin Group Limited	16-11-2024
CERT/149/2017	Taylor Ruby Marie Lewis	Four Square Spring Creek	29-11-2024
CERT/155/2017	Alison Ann Baylis	Saint Clair Wines	18-12-2024
CERT/157/2017	Annette Muriel Black	Havelock Four Square	08-12-2024
CERT/018/2018	Dennise Roberts	Babich Wines	02-02-2025
CERT/022/2020	Elizabeth Margaret McMullen	Forrest Wines Limited	30-09-2024
CERT/040/2020	Suellen Sobol Pelissari	Forrest Wines Limited	29-06-2024
CERT/100/2020	Alain Nicolas Hauswirth	Rock Ferry Wines Limited	29-09-2024
CERT/103/2020	Jason Devlin Morrow	Countdown Springlands	13-11-2024
CERT/109/2020	Nadine Brenda Lowe	Countdown Blenheim	13-11-2024

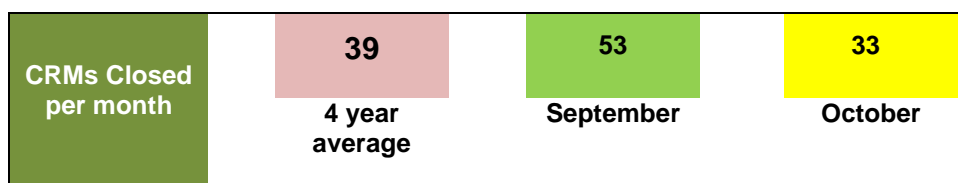
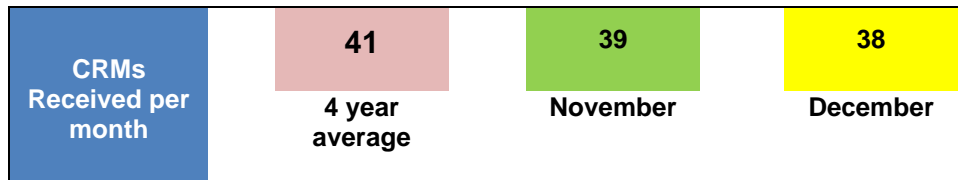
Certificate Number	Applicant	Premises	Expiry Date
CERT/111/2020	Olivia Mary Roth	Countdown Blenheim	13-11-2024
CERT/112/2020	Sharee Ann Vitale	Slip Inn Store	20-10-2024
CERT/116/2020	Phillip Rayner	Blenheim Musical Theatre Incorporated	13-11-2024
CERT/121/2020	Hamish George O'Donnell	Fairweathers	13-11-2024
CERT/126/2020	Katherine Elizabeth Smith	Picton Fresh Choice	09-12-2024
CERT/135/2020	Gordon Victor Ritchie	Highfield Terravin Limited	23-11-2024
CERT/136/2020	Jason Carl Denize	The Millers Rest	13-11-2024
CERT/140/2020	Stefan Gross	Seumus Irish Bar	20-11-2024
CERT/149/2020	Angela Joy Wilson	Wairau River Wines Limited	09-12-2024
CERT/153/2020	Amy Kathleen Maxwell	Misty Cove Wines	15-12-2024
CERT/154/2020	Tracey Marie Fairhall	Socially Good Enterprises Limited	11-12-2024
CERT/157/2020	Jacob Graham Anderson	Scotch	09-12-2024
CERT/162/2020	Billy Chew Chai Tan	Yealands Estate Wines Limited	02-02-2025
CERT/163/2020	Deborah Anne Gull	Yealands Estate Wines Limited	02-02-2025
CERT/135/2021	Khoa Ngoc Dang Le	The Portage	28-10-2024
CERT/137/2021	Kate Elizabeth Shadbolt	The Station Cafe	31-10-2024

Compliance Group Update – December 2021

(Report prepared by Jamie Clark)

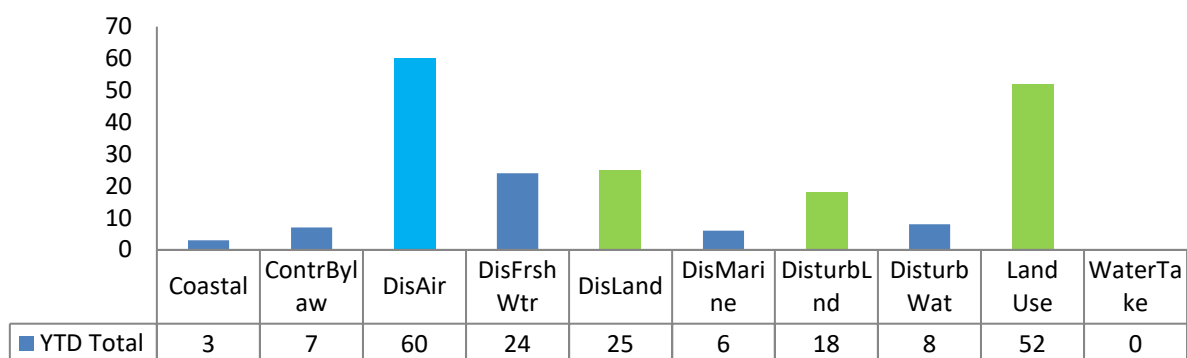
Environment Protection Section

CRMS Received for period of November and December 2021 which also includes the average number of CRMS received over the period 2018-2021.

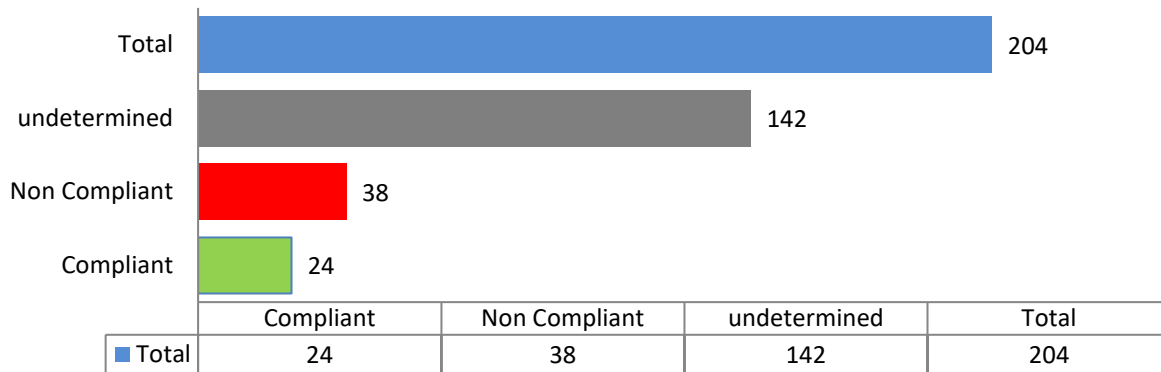


CRMS Closed for period of November and December 2021 which also includes the average number of CRMS received over the period 2018 to 2021.

Type of RMA Complaints Received YTD (July 2021 - June 2022 Total)



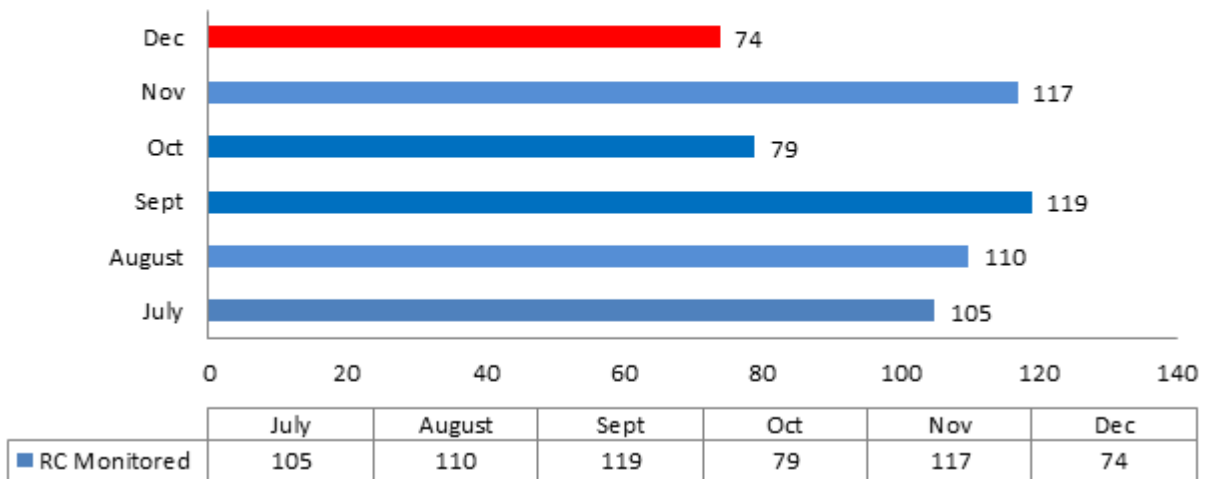
Initial Compliance Status for complaints recieved for period of : July 2021 to June 2022



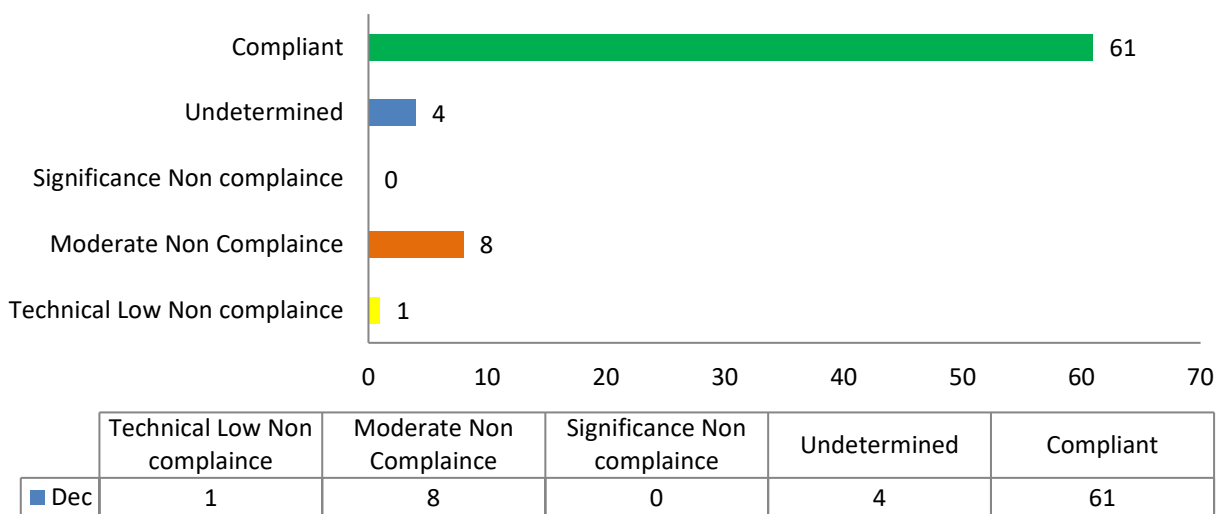
Monitoring

Number of **Consents Monitored** for period July to December 2021.

Resource Consents Monitored for July - December 2021



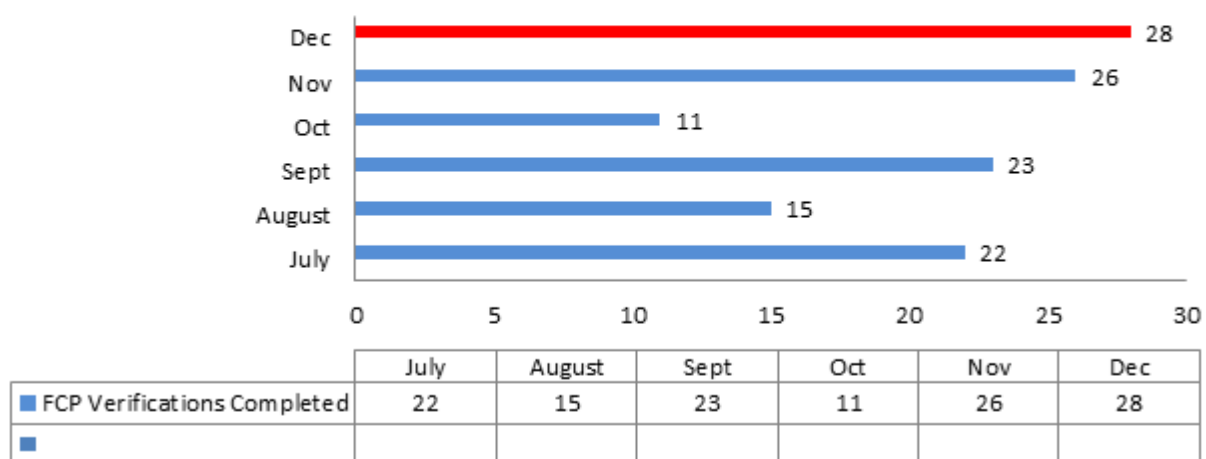
Compliance Status of Monitored Consents for December 2021



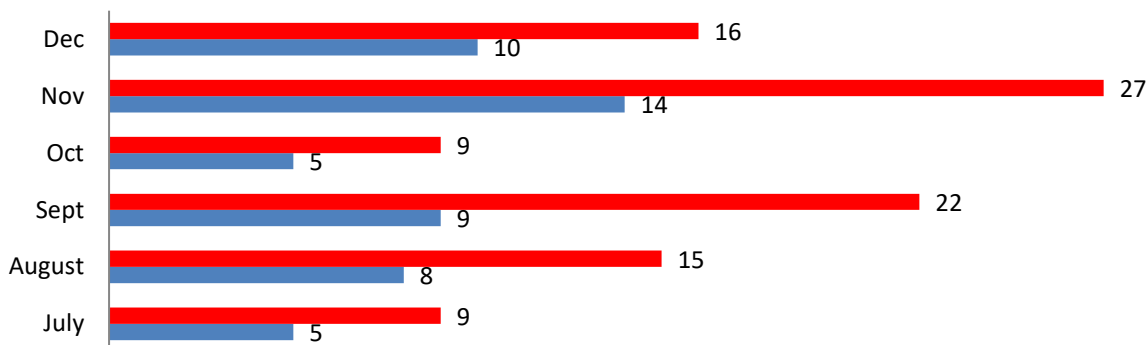
Environmental Health Section

Number of Verifications (inspections) completed for period July to December 2021.

Food Control Plans Verifications Completed July - December 2021



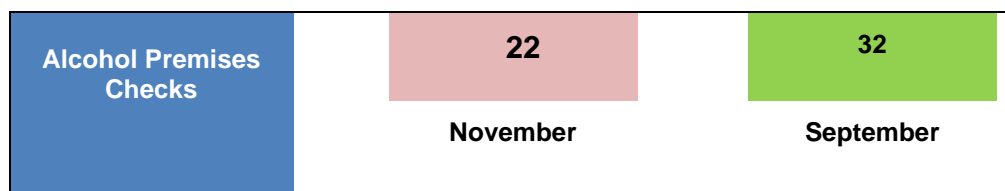
Corrective Actions Issued for period July - December



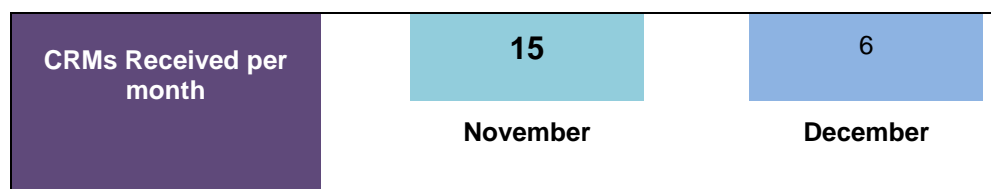
	July	August	Sept	Oct	Nov	Dec
■ Total Number of corrective actions issued for premises	9	15	22	9	27	16
■ Total Number of premises issued Corrective Action	5	8	9	5	14	10

The number of corrective actions has again increased. It's highlighted that some premises required more assistance than others.

Number **Alcohol Inspections** for **November & December 2021**.



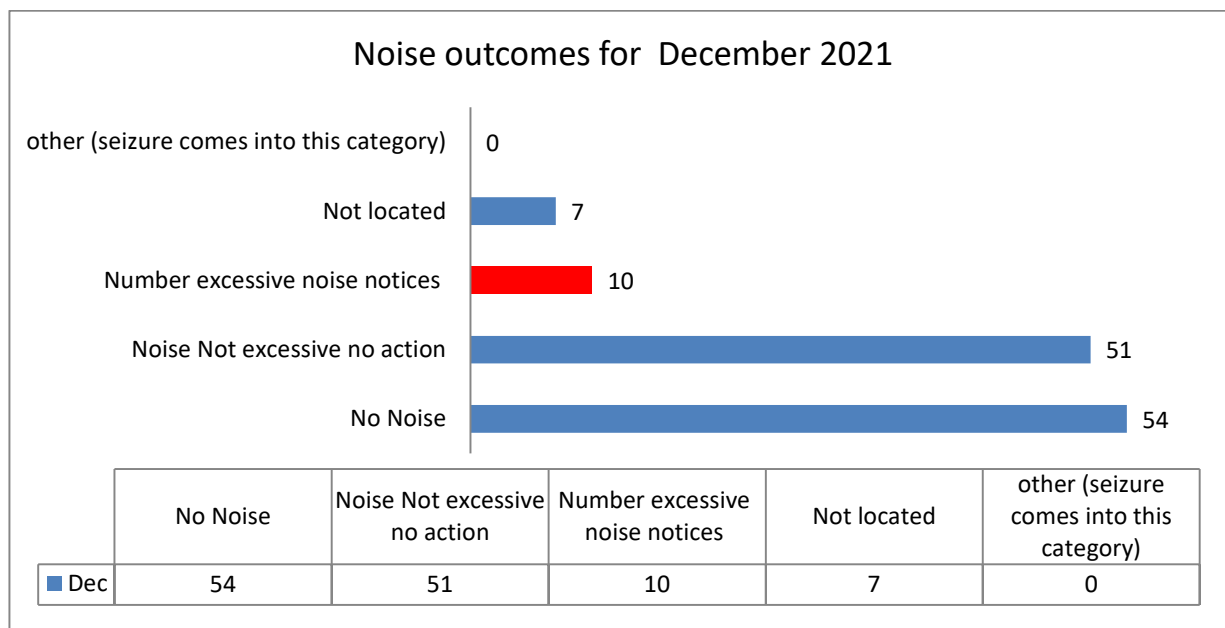
Number of **complaints received** for period of **November & December 2021**.



Noise Control

Figures for December 2021

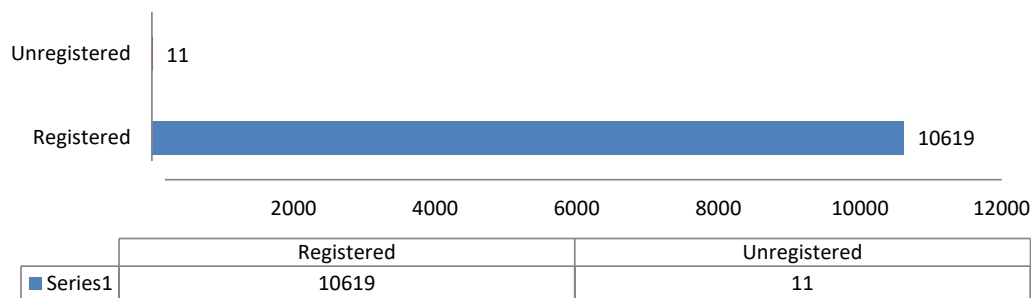
Noise Complaints Received	122
Noise Direction Notices Issued	10
Seizure of Equipment	0



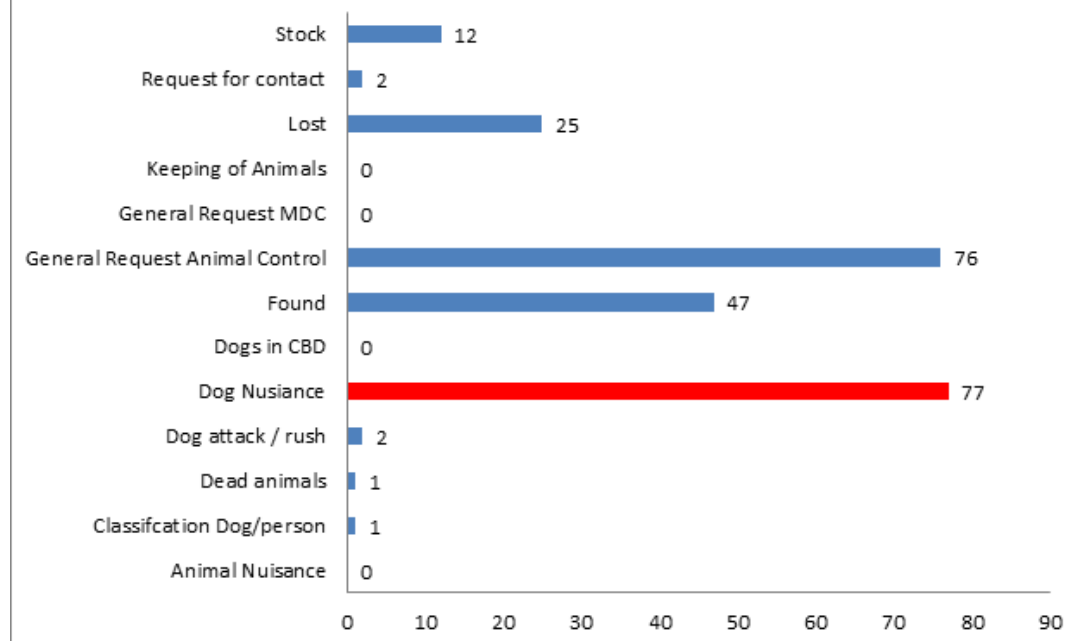
Animal Control

Current number of known Dogs registered is: **10619**

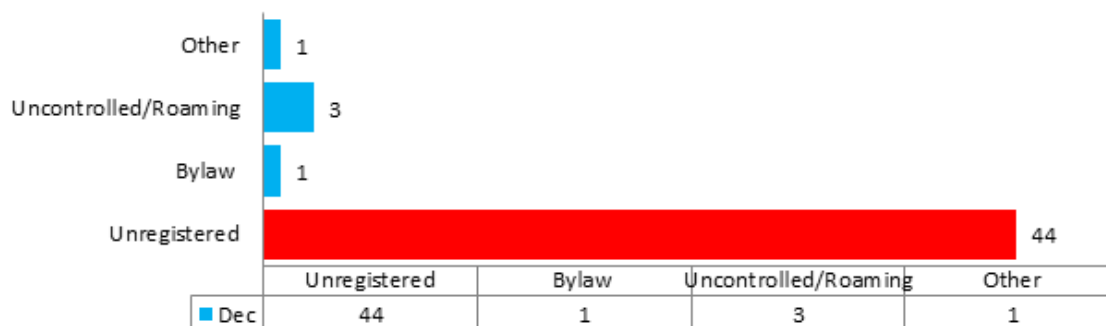
Dog Registration 2021 to 2022



Animal Control CRMS Received for December 2021

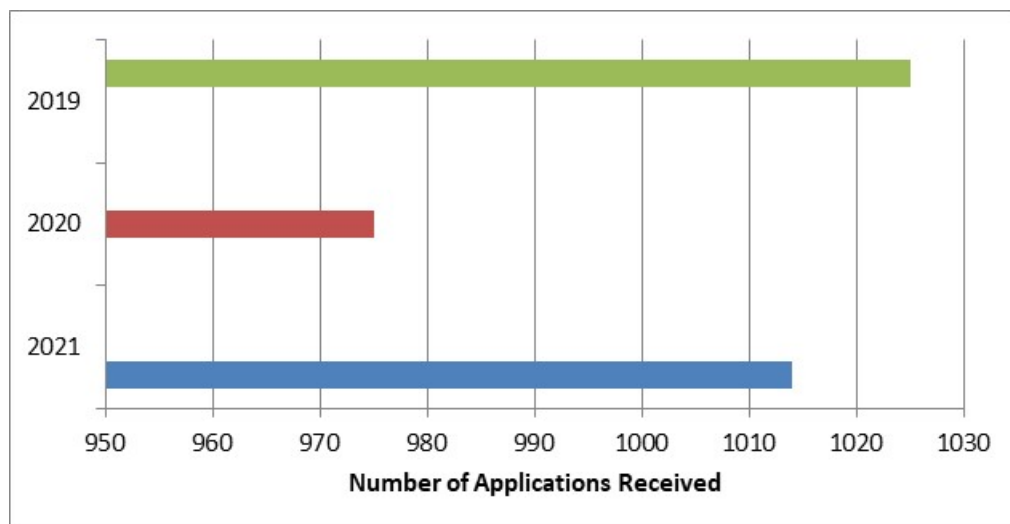


Infringements issued for December 2021

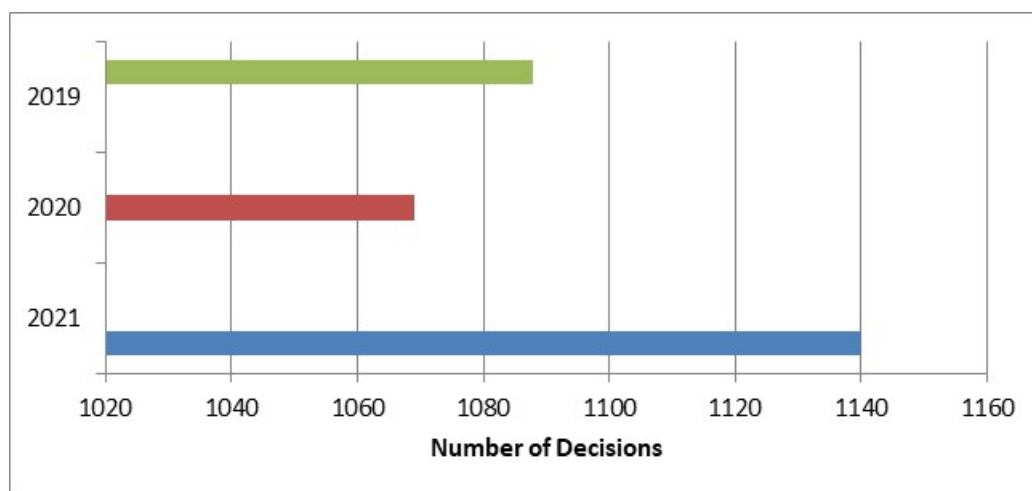


Resource Consents Section

Despite the continued impacted of Covid-19 the 2021 calendar year was relatively busy for the Resource Consent Team. Overall, the number of applications received was slightly more than 2020 and slightly less than 2019. During the 2021 calendar year Council received **1014** applications. Of that total, **891** were new applications for resource consent. Council also received **114** applications for variations to resource consent conditions under section 127, **8** extensions to lapse date under section 125 and **1** objection to conditions under section 357. In the same period in 2020 Council received **975** applications and in 2019 Council received **1025** applications.



In the 2021 calendar year Council issued more decisions than the previous two years with **1,140** decisions. Of that total, **999** were for new applications for resource consent. Council also issued **129** section 127 decisions (variations to resource consent conditions); **11** section 125 (extension to lapse date) and **1** objection to conditions under section 357. In the same period in 2020 Council issued **1069** decisions and 2019 Council issued **1088** decisions.



The RC Team issued the Summer edition of the RC Team newsletter in December 2021. The Team's latest newsletter focused on providing our stakeholders with the information they needed to plan ahead for the Christmas/New Year break. This included details on when the Council offices would be closed and the non-working days under the Resource Management Act. There were also articles on the upcoming Resource Management System reform and the implications for resource consenting and details on the Hearing's portal on the Council website. The RC Team newsletter is always very well received by our customers. It is widely distributed via email and is also available on the Council website. Previous issues can also be found on the Council website.

There have been a number of staffing changes in the RC Team over the last couple of months. Emma Hunter has been promoted into an Environment Planner position. Emma was a part time Resource Management Administration Officer in the RC Team. She is part way through a Masters in Planning degree.

Emma is working in the regional team processing coastal and land use applications. Jenny Folster has had a change of title to Technical Lead – Land Use. The new title acknowledges Jenny's experience and contribution to the Resource Consent Team and the wider Council working in the area of land use consents. Jenny is very busy with a number of significant and complex land use applications and pre-applications. The RC Team has welcomed two new staff members in December and January. Simon Petrie started with the team late last year. Simon is a recent graduate from the University of Otago with a BSc double major in Chemistry and Geography and an MSc in Geography. Simon is originally from Blenheim and attended Marlborough Boys College. He has a strong environmental and community focus and is now working in the regional team processing water permit applications. Beth Bovey commenced in her new role with the team early January. Beth is the new part time Resource Management Administration Officer replacing Emma. She comes with a wealth of experience after over 30 years as the office manager at Flight Timbers.

Resource Consent Approvals Under Delegated Authority

The following applications have been approved under delegated authority pursuant to Council's Instrument of Delegation pursuant to the Local Government Act 1974, and the relevant clause thereof as identified below.

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
1.	348	Parsons Road Vineyard Limited	U211006	Land Use Activity	Create a right of way over a portion of Lot 1 DP 6411 appurtenant to Lot 1 DP 554304	3103 State Highway 63, Wairau Valley	10/12/2021

The following applications have been approved under delegated authority pursuant to Council's Instrument of Delegation pursuant to the Resource Management Act 1991, and the relevant clause thereof as identified below.

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
1.	104B	P D Watson	U170818	Change or Cancellation of Resource Consent Conditions	Change conditions 1, 3 and 4 to enable the relocation of existing swing mooring M3699	Pigyard Bay, Kenepuru Sound	02/11/2021
2.	104B	J Bradley	U210236	Subdivision (Allotment Creation)	Create two allotments	688 Queen Charlotte Drive, Havelock	02/11/2021
3.	104B	P S Crothers	U210580	Coastal Permit (Mooring)	Establish new swing mooring M3809	Waitata Bay, Pelorus Sound/Te Hoiere	02/11/2021
4.	104B	P S Crothers, R J Crothers and J P Crothers	U210581	Coastal Permit (Mooring)	Establish new swing mooring M3810	Waitata Bay, Pelorus Sound/Te Hoiere	02/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
5.	104B	Outer Limits Limited	U210649	Water Permit (Take Water) Water Permit (Use Water)	Take Wairau Aquifer FMU water from well; use water for the irrigation	Middle Renwick Road, Blenheim	02/11/2021
6.	104B	D McBreen	U210853	Coastal Permit (Mooring)	Replacing U050596 to reposition and upgrade existing mooring M2791	Grove Arm, Queen Charlotte Sound/Totaranui	02/11/2021
7.	104B	Turn Point Limited	U210817	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land via an existing onsite wastewater management system	Turn Point, Four Fathom Bay, Pelorus Sound	02/11/2021
8.	104B	A B & A S M Coburn	U210874	Land use (Building)	Construct a garage that will encroach the western boundary recession plane	142 Middle Renwick Road, Springlands, Blenheim	02/11/2021
9.	104B	New Zealand Defence Force	U200851	Discharge Permit (to Air) x 2	Discharge contaminants to air from two existing 1172 kW coal-fired boilers and ten existing diesel fired boilers: discharge contaminants to air from existing spray painting and electroplating facilities	Woodbourne Airbase, Woodbourne, Middle Renwick Road, Blenheim	03/11/2021
10.	104B	J C Pickering	U210606	Land Use (Land Disturbance)	Undertake land disturbance of more than 25 cubic metres of potentially contaminated soil per 500 square metres and to change the use of land	305 Middle Renwick Road, Springlands, Blenheim	03/11/2021
11.	176A	New Zealand Defence Force	U210827	Outline Plan of Works	Install a 'perimeter' fence around the full southern portion of the (RNZAF) Base Woodbourne, located to the south of Middle Renwick Road (SH6) and an internal 'flight line' fence within the Base	Base Woodbourne (south side of SH6/Middle Renwick Road), Woodbourne	03/11/2021
12.	104B	J S & J A Worsfold	U210672	Discharge Permit (to Land)	Discharge treated domestic wastewater to land	25 McCormicks Road, Whatamango Bay, Picton	04/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
13.	104B	P S Crothers	U210699	Coastal Permit (Mooring)	Establish a new swing mooring M3820	Waitata Bay, Pelorus Sound/Te Hoiere	04/11/2021
14.	104B	Blenheim Gospel Hall Trust	U210741	Land Use (Activity)	Construct and use a community facility (church) on the eastern/front portion of the property	162 Redwood Street, Blenheim	04/11/2021
15.	104B	Joval Wine Group (NZ) Limited	U210837	Land Use (Activity)	Hold a single special event known as "Vinyl in the Vines" providing food, wine & music	1397 Waihopai Valley Road, Waihopai Valley	04/11/2021
16.	104B	Delegat Limited	U210648	Land Use (Dam) Water Permit (Dam Water) Water Permit (Divert Water) Water Permit (Take Water) Water Permit (Use Water) Land Use (Land Disturbance)	Construct a storage reservoir of up to 13.75 meters in height; dam up to 700,000 cubic metres of water within a storage reservoir; divert sub-surface water beneath a storage reservoir; abstract up to 22,355 cubic metres per day of Wairau River C Class FMU water from an existing infiltration gallery and two proposed galleries for placing into storage	4838 State Highway 63, Wairau Valley	08/11/2021
17.	104B	MC Farming Limited	U210849	Subdivision (Allotment Creation)	Create two rural allotments	1145 Avon Valley Road, Waihopai Valley	08/11/2021
18.	104B	KiwiRail Holdings Limited	U210850	Land Use (Activity)	Soil disturbance on a HAIL site (retrospective works) that does not comply with Regulations in the NES for Contaminated Soil on land gazetted for railway purposes at the Spring Creek Freight Hub/Yard	Goulard Road, Spring Creek	08/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
19.	104B	Marlborough Kaikoura Trail Trust	U210738	Land Use (Activity); Land Use (Activity); Land Use (River Surface or Bed Activity); Land Use (Land Disturbance)	Construct and operate a cycle/walking trail in the Rail Corridor (Designation K1) from Para Road to Bush Road; construct a cycle/walking trail in Significant Wetland W820; construct and maintain cycle/walking bridges over Staggs Stream and the Tuamarina River, and to remove sediment from Para Stream; undertake land disturbance at 24 different locations to construct a cycle/walking trail.	Para Wetland	08/11/2021
20.	104B	Fulton Hogan Limited	U210871	Water Permit (Take Water) Water Permit (Use Water)	Take Wairau Aquifer FMU water from well W20008 up to a maximum rate of 14,119 cubic metres per year: use water for the irrigation of up to 7 hectares of vineyard	62 Pak Lims Road, Renwick	08/11/2021
21.	104B	P B Hood	U210873	Coastal Permit (Mooring)	Establish a new elasticated swing mooring M3826	North West Bay, Pelorus Sound/Te Hoiere	08/11/2021
22.	104B	G V McCutcheon	U040682	Change or Cancellation of Resource Consent Conditions	Change condition 11 for existing swing mooring 2390 to enable the consent to be transferred	Thompson Bay, Anakiwa, Grove Arm	09/11/2021
23.	104B	E J & M E Nation and R C & H A Turner	U110171	Change or Cancellation of Resource Consent Conditions	Change conditions of Coastal Permit (Mooring) to enable existing mooring M3300 to be used as a stern-tie mooring	South of Spenser Bay, Queen Charlotte Sound	09/11/2021
24.	104B	B T A M Taylor	U180561	Change or Cancellation of Resource Consent Conditions	Change conditions to enable existing swing mooring M1893 to be used by a vessel up to 16.5 metres in length	Te Rua Bay, Tory Channel	09/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
25.	104B	Indevin Estates Limited	U190411	Change or Cancellation of Resource Consent Conditions	Extend the date for installing water use meters at Bankhouse Condition 3 Water Permit (Use Water) consents (190411.04 and 190411.05)	1025 State Highway 63, Waihopai	09/11/2021
26.	104B	E L and A L Ryan	U210621	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water	Take B Class Awatere FMU water from an existing intake; use water for the irrigation; take B Class Awatere FMU water from an existing intake; use water for ancillary uses; take C Class Awatere FMU water from an existing intake	241 Marama Road, Seddon	09/11/2021
27.	104B	HMTB Properties Limited	U210762	Subdivision (Allotment Creation)	Consent to authorise the existing dwelling on Lot 1 to encroach into the recession plane and 1m setback from the new right of way boundary	113 Howick Road, Blenheim	09/11/2021
28.	104B	S M & L G Hones	U210848	Land Use (Activity)	Retrospective consent for a second dwelling which does not have a 400 square metre dedicated use Minimum Net Allotment Area and does not have direct access from the living area to the outdoor amenity area	37A Taylor Pass Road, Blenheim	09/11/2021
29.	104B	P A Mansfield	U210621	Coastal Permit (Mooring)	Coastal permit to establish a new swing mooring (M3814)	Waitata Bay, Pelorus Sound/Te Hoiere	10/11/2021
30.	104B	D M Kennedy	U210887	Coastal Permit (Mooring)	Replacing U050162 to upgrade existing mooring M2767	Waterfall Bay, Onahau Bay, Queen Charlotte Sound/Totaranui	10/11/2021
31.	104B	Giesen Group Limited	U210895	Land Use (Activity) x5	Install and operate 5 Orchard Rite 2430 frost fans with a CAT engine	367 Upton Downs Road, Awatere Valley	10/11/2021
32.	104B	Cloudy Bay Vineyards Limited	U210933	Land Use (Activity)	Exceeds the maximum height of buildings	230 Jacksons Road, Rapaura	10/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
33.	104B	L Bamford	U210542	Land Use (Activity); Subdivision (Allotment Creation)	Authorise the pergola of the existing dwelling to encroach into the recession plane on the northern boundary; subdivide to create two residential allotments	26 Mowat Street, Blenheim	11/11/2021
34.	104B	M W C & J S Sutherland	U210811	Land Use (Bore); Subdivision (Boundary Adjustment)	Install a bore for domestic purposes on proposed Lot 2 (created on the subdivision); create two lots as a boundary adjustment	39 & 41 Severne Street, Blenheim	11/11/2021
35.	104B	Philip Scott Alloway for the Candish- Alloway Jetty Partnership	U210605	Coastal Permit; Land Use (Activity)	Coastal permit to construct a new jetty, linkspan and floating pontoon; construct a 5.0 x 5.0 metre timber platform and access steps including associated vegetation clearance and earthworks.	Broughton Bay, Kenepuru Sound	12/11/2021
36.	104B	T H Smit and F W Van Bruggen-Smit as Trustees of the Tim and Franzi Trust	U210620	Subdivision (Allotment Creation)	Create two allotments	65 Cob Cottage Road, Riverlands	12/11/2021
37.	104B	L S & S J Masters	U210769	Coastal Permit (Mooring)	Coastal permit to establish a new swing mooring M3824	Raspberry Bay, Mahau Sound	12/11/2021
38.	104B	New Zealand Defence Force	U210879	Land Use (Activity)	Undertake soil disturbance on a HAIL site for contaminated soil	Ulm Crescent, Base Woodbourne, Woodbourne	12/11/2021
39.	104C	Wakatu Resources Limited	U210637	Marine Farm	New coastal permit to relocate and operate using conventional longline methods	Rocky Bay, Admiralty Bay	15/11/2021
40.	104B	W J and D K Watson	U210818	Subdivision	Vary Condition 1 E of Consent Notice 11040625.1	1876 Port Underwood Road Port Underwood, Picton	15/11/2021
41.	104B	D R & C G Shoemark	U210857	Land Use (Activity)	Construct a garage which encroaches on the recession planes along the north and east boundary	9 Macey Crescent, Witherlea, Blenheim	15/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
42.	104B	K I J Orchard and D A Dawson	U210865	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land via an existing onsite wastewater management system	Cissy Bay Road, Cissy Bay, Pelorus Sound/Te Hoiere	15/11/2021
43.	104B	C J & J J Young	U210877	Land Use (Activity)	Soil disturbance does not comply with Regulation	49E Park Terrace, Blenheim	15/11/2021
44.	104B	Pernod Ricard Winemakers New Zealand Limited	U210900	Land Use Consent	Construct a pole shed addition on that will encroach the minimum boundary setback requirements	261 Conders Bend Road, Renwick	15/11/2021
45.	104B	Waterfall Bay Limited	U210905	Coastal Permit	Coastal permit to relocate and upgrade existing mooring	Waterfall Bay, Onahau Bay, Queen Charlotte Sound/Totaranui	15/11/2021
46.	87BA	Denise West	U210928	Land Use (Activity)	Construct a garage that will encroach into the recession plane	113A Waikawa Road, Picton	15/11/2021
47.	104B	B J Harrow	U210701	Coastal Permit	Coastal permit to establish a new swing mooring	Kumutoto Bay, Queen Charlotte Sound/Totaranui	16/11/2021
48.	104B	Vita Brevis Limited	U210880	Land Use (River Surface or Bed Activity)	To authorise an existing infiltration gallery in the Omaka Riverbed	Tyntesfield Road, Waihopai Valley	16/11/2021
49.	104B	Dianna June Schulz and Josephine Faye Elliott	U210908	Land Use (Activity)	Relocate a garage that does not meet the setback requirement	31 Devon Street, Picton	16/11/2021
50.	104B	J and L Mangos	U210945	Land Use (Activity)	Construct a shed that will encroach the southern boundary.	30 Ranui Street, Waitawa, Picton	16/11/2021
51.	104B	G B Guthrie and K A Guthrie as trustees of Cameron Guthrie Trust	U210682	Subdivision (Allotment Creation)	Subdivide Lot 4 DP 2747 into four residential allotments	171 Battys Road, Blenheim	17/11/2021
52.	104B	Mada Properties Limited	U210777	Coastal Permit	Coastal permit to construct a new boatshed, decking, slipway and steps	Aratawa Bay, Bay of Many Coves, Queen Charlotte Sound/Totaranui	17/11/2021
53.	104B	W R Barnett	U180287	Coastal Permit	Coastal permit to establish an elastically swing mooring	Te Aroha Bay, Arapaoa Island, Queen Charlotte Sound/Tōtaranui	17/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
54.	104B	Outer Limits Limited	U210870	Land Use (Land Disturbance)	Undertake filling in excess of 50 m3 on proposed Lot 12 (southern half of 48 Rene Street)	48 Rene Street, Springlands, Blenheim	17/11/2021
55.	104B	Pine Valley Vineyards Limited Partnership	U210438	Water Permit (Take Water); Water Permit (Use Water); Land Use (River Surface or Bed Activity); Water Permit (Divert Water)	Take A Class Wairua River FMU water; take C Class Wairua River FMU water; take A Class Wairua River FMU water; use water for the irrigation; use water for ancillary purposes; maintain an infiltration gallery in Pine Valley Stream and to occupy the streambed with the infiltration gallery; temporarily divert Pine Valley Stream water during the maintenance of an infiltration gallery	107 Pine Valley Road, North Bank	18/11/2021
56.	104B	Taimate Trustees Limited	U210810	Water Permit (Take Water) x 5 Water Permit (Dam Water) x 3	Abstract Flaxbourne (Central) Class B FMU water; dam up to 45,000 cubic metres of water within a storage reservoir; dam up to 16,000 cubic metres of water within a storage reservoir; dam up to 12,000 cubic metres of water within a storage reservoir	State Highway 1 and Taimate Road, Ward	18/11/2021
57.	104B	E D Townley Limited	U210883	Land Use (Activity) x 7	Install and operate seven FrostBoss C59 frost fan	2765 State Highway 64, Wairau Valley	18/11/2021
58.	104B	Jean-Pierre Hilty	U210890	Discharge Permit (To Land)	Discharge treated domestic wastewater to land	633 Port Underwood Road, Whatamango	18/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
59.	104B	NZSF Rural Land Limited	U210930	Water Permit (Take Water) x 8	(1) abstract A Class Awatere River FMU water from two existing galleries in the Awatere River and an existing intake in Altimarloch Stream; (2) abstract B Class Awatere River FMU water from two existing galleries in the Awatere river; (3) use water for the irrigation of up to 209.3 hectares of vineyard; (4) use water for frost protection of 18.84 hectares of vineyard; (5) abstract A Class Awatere River FMU water from two existing galleries in the Awatere River and an existing intake in Altimarloch Stream; (6) use water for ancillary uses; (7) abstract C Class Awatere River FMU water from two existing galleries in the Awatere River; (8) abstract C Class Awatere River FMU water from an existing intake in Altimarloch Stream	Awatere Valley Road, Altimaroch, Awatere Valley	18/11/2021
60.	104B	J W Oswald	U150117	Coastal Permit	New coastal permit for existing swing mooring	Kumutoto Bay, Queen Charlotte Sound/Tōtaranui	19/11/2021
61.	104B	Marlborough District Council	U170281	Land Use (Land Disturbance)	Establish, operate and maintain a Cleanfill disposal site	Reserve Road, Blind River	19/11/2021
62.	104B	Brigham MacDonald	U210653	Subdivision; Land Use (Activity)	Subdivide Wairau Sec 24A & 24B Block XII and Wairau Sec 24C Block into two lots, as a boundary adjustment; authorise habitable buildings on proposed Lots 1 and 2	318 & 336 Wairau Bar Road, Spring Creek.	19/11/2021
63.	104B	Rowan Lee Homes Limited	U210720	Land Use (Activity)	Operate a show home with professional office and associated signage	10 Rose Manor Drive, Springlands, Blenheim	19/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
64.	104B	Pernod Ricard Winemakers New Zealand Limited	U540789	Land Use (Activity)	Install and operate on (1) FrostBoss C59 frost fan with a John Deere engine	180 Brancott Road, Fairhall	19/11/2021
65.	104B	J P Cowan, M R Cowan and Cowan Corporate Trustee Limited as trustees of the Cowan Family Trust	U210782	Discharge Permit (to Land)	Discharge treated domestic wastewater from an existing primary wastewater system	North West Bay, Te Hoiere/Pelorus Sound	23/11/2021
66.	104B	Umukuri Bay Limited	U210843	Discharge Permit (to Land)	Discharge treated domestic wastewater to land from an existing wastewater system	Onauku Bay, East Bay, Arapaoa	23/11/2021
67.	104B	Archihaus Limited	U210893	Subdivision (Allotment Creation)	Subdivide into two residential allotments	8 Mary Street, Blenheim	23/11/2021
68.	104B	776 Rapaura Road Properties Limited	U210909	Water Permit (Take Water); Water Permit (Use Water) x 2	Take Wairau Aquifer FMU water from well; use water for irrigation; use water for commercial purposes within an accommodation, restaurant and bar establishment	776 Rapaura Road, Rapaura	24/11/2021
69.	104B	I K Hooper and N L Hooper	U200959	Discharge Permit (to Land)	Discharge treated domestic wastewater to land	391 Mahau Road, Mahau Sound	24/11/2021
70.	104B	Tree Value Limited	U210743	Subdivision (Boundary Adjustment)	Subdivide Lot 2 into two allotments as a boundary adjustment	22 Richardson Ave, 43 Aerodrome Road, Burleigh, Blenheim	25/11/2021
71.	104B	Vita Brevis Limited	U200772	Water Permit (Take Water)	Take Omaka River A Class FMU water from an existing gallery	139 Tyntesfield Road, Waihopai Valley	25/11/2021
72.	104B	Ronald Yu Saguin	U210863	Land Use (Land Disturbance)	Soil disturbance of approximately 85 cubic metres of soil on a listed Land Use Register site	7 Gibbons Place, Grovetown	25/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
73.	104B	P D Wratt	U210911	Subdivision (Allotment Creation); Land Use (Activity)	Subdivide Lot 3 DP 2697 into two allotments; authorise the encroachment by the existing dwelling on Lot 1 into the recession plane of the new right of way along the eastern boundary, and to authorise the vehicle crossing servicing Lots 1 & 2 to be positioned within the setback from the road intersection	47 Dillon Street, Blenheim	25/11/2021
74.	104B	C G F & H J Morgan	U210960	Land Use (Activity)	Construct an extension to the existing dwelling, which will encroach within the 25 metre setback from the western boundary	240 Old Renwick Road, Springlands, Blenheim	25/11/2021
75.	104B	French Pass Motels and Sea Safaris Limited	U140798	Coastal Permit	Coastal permit to validate an existing swing mooring	Elmslie Bay, French Pass	26/11/2021
76.	104B	B R & M J Kiddey, and C A Hastie	U210919	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land from an existing wastewater system	Ruakaka Bay, Queen Charlotte Sound/Tōtaranui	26/11/2021
77.	104B	Vita Brevis Limited	U210982	Water Permit (Take Water)	Take Omaka River A Class FMU water from an existing gallery	139 Tyntesfield Road, Waihopai Valley	26/11/2021
78.	104B	Magna Carter Enterprises Limited	U210948	Coastal Permit	Coastal permit to establish a new swing mooring	Raspberry Bay, Mahau Sound	26/11/2021
79.	104B	Ministry of Education (Riverlands School)	U190883	Water Permit (Take Water) x 2	Vary condition 4; Extend lapse date	17-21 School Road, Riverlands	29/11/2021
80.	104B	The Ministry of Education (Marlborough Boys College)	U190892	Water Permit (Take Water) x 2	Change condition 4; Extend the lapse date of resource consent	5 Stephenson Street, Blenheim	29/11/2021
81.	104B	Ministry of Education (Redwoodtown School)	U190893	Water Permit (Take Water)	Vary conditions 2 and 4	90 Cleghorn Street, Blenheim	29/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
82.	104B	Marlborough Kaikoura Trail Trust	U210508	Land Use (Activity); Land Use (River Surface); Land Use (Land Disturbance)	Construct and operate a cycle/walking trail; construct a cycle/walking bridge; undertake excavations	3430 State Highway 1, Riverlands	29/11/2021
83.	104B	Marlborough Lines Limited	U210705	Land Use Consent	Undertake land disturbance in excess of 50m3 including on an identified HAIL site	5 Wither Road, Blenheim	29/11/2021
84.	104B	D T Good	U210913	Land Use (Land Disturbance)	Excavate approximately 95 cubic metres of material for building foundations, vehicle access and general site works	102 Marlborough Ridge Drive, Fairhall	29/11/2021
85.	104B	Waka Kotahi New Zealand Transport Agency	U210965	Land Use (River Surface or Bed Activity); Water Permit (Divert Water)	Undertake works in the streambed to temporarily divert Utawai Creek; and repair culvert	Utawai Creek State Highway 1, Awatere Valley	29/11/2021
86.	104B	W K Dick	U040719	Coastal Permit	New coastal permit for 3 tonne swing mooring (No.62)	Oyster Bay, Port Underwood	30/11/2021
87.	104B	The Ministry of Education (Rai Valley School)	U190895	Water Permit (Take Water) x 2	Vary conditions 3 and 5: Extend the lapse date	6700 Main Road, Rai Valley	30/11/2021
88.	104B	The Ministry of Education (Fairhall School)	U190897	Water Permit (Take Water) x 2	Vary resource condition; Extend the lapse date	384 New Renwick Road, Blenheim	30/11/2021
89.	104B	The Ministry of Education (Marlborough Girls College)	U200206	Water Permit (Take Water) x 2	Abstract Wairau Aquifer FMU water; Use Wairau Aquifer FMU water for general uses associated with running schools including swimming pool filling and grounds watering: change conditions 3 & 5.	37 McLauchlan Street, Blenheim	30/11/2021
90.	104B	R J McLean and J McLean	U200690	Subdivision	Subdivide Lot 61 DP 676 to create three allotments	33 David Street, Blenheim	30/11/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
91.	104B	Marlborough Kaikoura Trail Trust	U210623	Land Use (Activity); Land Use (River Surface or Bed Activity); Land Use (Land Disturbance)	Construct a cycle/walking track; construct a cycle/walking bridge; undertake cut and fill excavations	State Highway 1, Seddon	30/11/2021
92.	104B	G D & J G Stubbs	U210823	Land Use (Land Disturbance); Land Use Consent (River Surface or Bed Activity)	Excavate soil; install a pipe headwall and flood gate	31 David Street, Blenheim	30/11/2021
93.	104B	Johnson Estate Limited	U210922	Land Use (Land Disturbance)	Abstract A Class Omaka River FMU water from wells; use water for the irrigation; use water for commercial uses (winery, cellar door, function centre, and office use); abstract A Class Omaka River FMU water from wells; use water for ancillary uses	227 Waihopai Valley Road, Waihopai Valley	30/11/2021
94.	104B	Jonty William Rae Burdon, Danielle Mary Tribe	U210942	Discharge Permit (to Land)	Discharge treated domestic wastewater to land from a new secondary wastewater system	State Highway 1, Picton	30/11/2021
95.	104B	D H & P J Clouston	U210981	Land Use (Activity)	Construct extensions to the existing dwelling that will encroach into the boundary set back on Lot 1 DP 10221	34 Old Renwick Rd, Springlands, Blenheim	30/11/2021
96.	104B	P G Richmond, K E Richmond and Wain & Naysmith Trustees No.12 Limited as trustees of Richmond Family Trust	U210828	Land Use (Activity)	To convert a detached sleepout into a second dwelling	109 Boons Valley Road, Waikawa	01/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
97.	104B	Te Whanau Hou Grovetown Lagoon Incorporated	U210904	Land Use (River Surface or Bed Activity); Land use (Land Disturbance)	Construct a footbridge over an unnamed waterway adjacent to Grovetown Lagoon; undertake excavations within 8 metres of an unnamed waterway adjacent to Grovetown Lagoon	Cemetery Road, Grovetown Lagoon	01/12/2021
98.	104B	W S Griffiths	U140910	Coastal Permit	New coastal permit (replacing U991393) to upgrade an existing boatshed fronting	Havelock, Pelorus Sound/Te Hoiere	02/12/2021
99.	104B	P A & D R Bowater	U150323	Coastal Permit x 2	New coastal permit (replacing U991420) for existing swing mooring M837 in Tuna Bay; new coastal permit (replacing U991420) for existing swing mooring M838 in Tuna Bay	Tuna Bay, Tennyson Inlet, Pelorus Sound	02/12/2021
100	104B	Bow to Stern New Zealand Limited	U160672	Coastal Permit	New coastal permit (replacing U050288) for existing mooring M1363 in Double Bay	Double Bay, Kenepuru Sound	02/12/2021
101	104B	W H Harris Limited	U160736	Coastal Permit	New coastal permit (replacing U001417) for existing mooring M1140 in Te Mahia Bay	Te Mahia Bay, Kenepuru Sound	02/12/2021
102	104B	The Ministry of Education (Whitney Street School)	U190877	Water Permit (Take Water)	Extend lapse date of resource consent	Whitney Street, Blenheim	02/12/2021
103	104B	The Ministry of Education (Rapaura School)	U190891	Water Permit (Take Water)	Extend the lapse date of resource consent	353 Hammerichs Road, Rapaura	02/12/2021
104	104B	Ministry of Education (Redwoodtown School)	U190893	Water Permit (Take Water)	Extend lapse date	90 Cleghorn Street, Blenheim	02/12/2021
105	104B	Harvey Norman Properties (NZ) Limited	U210631	Land Use (Activity); Land Use (Land Disturbance)	Establish and operate a Harvey Norman store; undertake earthworks	Westwood Business Park, Blenheim	02/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
106	104B	Jeffries Farming Company Limited	U210727	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Use Water)	Take Wairau Aquifer FMU water from well 10115; use water for the irrigation; use water for miscellaneous uses	525 Dillons Point Road, Blenheim	02/12/2021
107	104B	P J L and L M Gledhill	U210921	Land Use (Activity)	Construct a dwelling which increases the site coverage of permanent buildings	111 Hawker Lane, Koromiko Airpark, Koromiko	02/12/2021
108	104(1)(a)	Wakatu Resources Limited	U210528	Coastal Permit (Marine Farm)	New Coastal Permit (replacing MFL253) for the continuation, using conventional longline methods	Gorse Bay, Te Whanganui/Port Underwood	03/12/2021
109	104B	D K Watson and W J Watson	U210548	Land Use (Activity); Discharge Permit (to Land); Land Use (Land Disturbance)	Construct a dwelling and garage; Discharge secondary treated domestic wastewater to land; Undertake excavation on a slope	1876 Port Underwood Road, Port Underwood	03/12/2021
110	104B	McAulay Limited	U210744	Subdivision; Land Use; Land Use	Subdivide Section 10 Township of Wairau Valley into two allotments; authorise the dwelling on proposed Lot 1; authorise the erection of a dwelling on proposed Lot 2	33 Morse Street, Wairau Valley	03/12/2021
111	104B	T A & K Madsen	U210761	Discharge Permit (to Land)	Consent to discharge treated domestic wastewater to land from an existing wastewater system on Section 19 Block XI Gore SD and on the adjoining Sounds Foreshore Reserve.	Endeavour Inlet, Queen Charlotte Sound/Totaranui	06/12/2021
112	104B	Trustpower Limited	U210987	Land Use (Activity)	Remediate the slumped areas below the Wairau Canal on Lot 11 DP6494	Wairau Canal	06/12/2021
113	104B	R & T J Mitchell	U210940	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land from an existing wastewater system	Lochmara Bay, Queen Charlotte Sound	06/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
114	104B	Canvastown School	U190899	Water Take x 2	Change conditions for installation date for the meter and data logger; vary condition to change the data logger installation date.	5044 State Highway 6, Canvastown	06/12/2021
115	104B	Grovetown School	U190898	Water Take	Extend the lapse date of U190898.1	Vickerman Street, Grovetown	06/12/2021
116	104B	Linkwater School	U190896	Water Take	Change conditions for installation date for the meter and data logger	1357 Queen Charlotte Drive, Linkwater	06/12/2021
117	104B	Rapaura School	U190891	Water Take	Change condition for installation date for data logger	353 Hammerichs Road, Rapaura	06/12/2021
118	104B	Marlborough District Council	U210903	Land Use (Land Disturbance); Water Permit (Divert Water); Land Use (Land Disturbance)	Undertake earthworks and clean filling within a groundwater protection area; undertake dewatering within the groundwater protection area; To undertake soil disturbance requiring consent under the National Environmental Standards (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health	23 Terrace Road, Renwick	06/12/2021
119	104B	A L & S E Twisleton	U210246	Land Use (Activity)	Consent to establish and operate a commercial activity (helicopter business) from a hangar	86 Hawker Lane, Koromiko Airpark, Koromiko	06/12/2021
120	104B	B N & E F Watkins	U201027	Coastal Permit (Structure)	Resource consent to occupy the Coastal Marine Area with an existing jetty; to remove an existing railway iron and car tyre retaining wall structure and fill; and to construct a replacement rock revetment sea wall, incorporating an extension to the existing jetty.	Fronting Lot 3 DP 316889, Tory Channel/Kura Te Au	06/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
121	104B	Marlborough District Council	U210925	Land Use (Land Disturbance)	Carry out earthworks for the repair and widening and ongoing maintenance of the Lower Bobs Bay Walking Track at Victoria Domain, including the use of wheeled and/or tracked machinery within 8 metres of the coastal marine area.	Lower Bobs Bay Track, Victoria Domain, Picton	06/12/2021
122	104B	John William Wilkes	U141047	Mooring	Change condition 13 to allow for a change to mooring M532	Duncan Bay, Tennyson Inlet, Central Pelorus West	07/12/2021
123	104B	R C & E J & J R Day	U210760	Subdivision (Boundary Adjustment); Subdivision (Allotment Creation); Land Use (Land Disturbance); Land Use (Activity)	Subdivision of Lot 18 into 2 allotments; Subdivision of Lot 18 into 4 Allotments; Undertake earthworks; Provide for vehicle crossings.	Croisilles Road, Hope Drive and Soucis Lane, Okiwi Bay	07/12/2021
124	104B	Blenheim School	U190900	Water Take x 2	Extend the lapse date of U190900.1; vary conditions to change the meter and data logger installation dates	11 Seymour Street Blenheim	07/12/2021
125	104B	Springlands School	U190880	Water Take x 2	Vary condition to change the data logger installation date; extend the lapse date of U190880.1	12 Murphys Road, Blenheim	07/12/2021
126	104B	Waitaria Bay School	U190879	Water Take x 2	Change conditions for installation date for the meter and data logger;	5668 Kenepuru Road, Kenepuru Sound	07/12/2021
127	104B	Canvastown School	U190899	Water Take	Extend the lapse date of U190899.1	5044 State Highway 6, Canvastown	07/12/2021
128	104B	Waitaria Bay School	U190879	Water Take	Extend the lapse date of resource consent	5668 Kenepuru Road, Waitaria Bay	07/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
129	104B	Tua Marina School	U190878	Water Take x 2	Change condition 4 U190878.1 to change installation date for the data logger; extend lapse date of resource consent.	Campbells Road, Tua Marina	07/12/2021
130	104B	Marlborough District Council	U210826	Land Use (Activity)	Vary condition 1 of consent to allow for change in exterior finish of the reservoir	PO Box 443, Blenheim	07/12/2021
131	104B	I D Currie & A Wilson	U210944	Discharge Permit – to Land	Discharge secondary treated domestic wastewater to land from an existing wastewater system	28 Lawrence Road, Kenepuru Sound	07/12/2021
132	104B	A L & S E Twisleton	U210249	Land Use (Activity)	Vary condition 10 of consent notice in relation to application site to enable commercial use of the aeroplane handler.	86 Hawker Lane, Koromiko Airpark, Koromiko	07/12/2021
133	104B	Bryce Trustee Limited	U210980	Land Use (River Surface or Bed activity); Land Use (Land Disturbance)	Undertake bank & flood protection works in and adjacent to the Waihopai Riverbed, on and adjacent to Lot 2 DP 498180; undertake land disturbance within 8 metres of the Waihopai River on and adjacent to Lot 2 DP 498180; undertake bank & flood protection works.	Waihopai River	08/12/2021
134	104B	E D Townley Limited	U210835	Subdivision (Allotment Creation)	Subdivide Lot 1 DP7436 into two allotments.	2765 State Highway 63, Wairau Valley	08/12/2021
135	104A	R A & S Marshall	U210728	Subdivision (Allotment Creation)	Consent to subdivide Lot 1 DP 474831 to create two residential allotments.	109 Old Renwick Road, Blenheim	08/12/2021
136	104B	E R & L P Sturm	U210973	Discharge	Discharge treated domestic wastewater to land.	29 Manuka Drive, Ngakuta Bay	09/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
137	104B	Montford Corporation Limited	U160663	Water Permit (Take Water); Water Permit (Take Water)	Take Riverlands FMU water from well 10526 up to a maximum rate of 43,659 cubic metres per year; use water for the irrigation of up to 21 hectares of vineyard on Sec 55 Opawa DIST and Lot 1 DP 11420.	225 Alabama Road, Blenheim	09/12/2021
138	104B	J B Allan, L R & C C Scott; & S E Stocker	U210939	Land use (Land Disturbance)	Undertake earthworks within 8m of an unnamed stream on Sec 9 Blk VIII Linkwater SD and Lot 2 DP 5015 to facilitate installation of culvert and provide access to Lot 2 DP 5015	Long Beach Bay, Queen Charlotte Drive	09/12/2021
139	104B	A M Jones & B A Shipley	U210788	Coastal Permit	Coastal permit to establish a new swing mooring M3825 in Rimu Bay	Rimu Bay, Pelorus Sound/Te Hoiere	09/12/2021
140	104C	A K & R M Clifford	U210932	Land Use (Land Disturbance)	Undertake soil disturbance on a HAIL site that does not comply with Regulation	16 Goodman Street, Blenheim	09/12/2021
141	104B	Linkwater School	U190896	Water Take	Extend the lapse date of U190896.1	1357 Queen Charlotte Drive, Linkwater	10/12/2021
142	104B	Kemp Land Company Limited	U210755	Subdivision (Allotment Creation)	Consent to subdivide Part Deposited Plan 622 and Part Deposited Plan 633 into two allotments,	3938 State Highway 1, Blenheim	10/12/2021
143	104B	N A & J M O'Connell	U210952	Discharge Permit – to Land	Discharge secondary treated domestic wastewater to land within a Soil Sensitive Area	222 Wrekin Road, Fairhall	10/12/2021
144	104B	G E Holdaway	U211012	Land Use (Activity)	Construct a garage/workshop	28 Burden Street, Redwoodtown	13/12/2021
145	104B	S M & N J Smith	U210995	Coastal Permit (Mooring)	New coastal permit (replacing U120431) for an existing swing mooring, M3382 in Aratawa Bay.	Aratawa Bay, Bay of Many Coves, Queen Charlotte Sound/Totaranui	13/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
146	104B	Auntsfield Estate Limited	U210969	Land Use (River Surface or Bed Activity); Land use (Land Disturbance); Water Permit (Divert Water).	Undertake works in the Fairhall School Creek streambed to realign a section of the Creek including the construction of a new ford crossing.	270 Paynters Road, Fairhall	13/12/2021
147	104B	H MacKenzie (2021) Limited	U210882	Land Use (Activity) x 4	Installation and operation of three FrostBoss C59 fans and the installation and operation of one FrostBoss C49 fan.	3209 State Highway 63, Wairau Valley	13/12/2021
148	104B	Marlborough District Council	U210875	Discharge Permit (to Land); Land Use (Activity)	Discharge treated domestic wastewater to land from a new onsite wastewater system on Section 33C Block I Wakamarina SD; construct a building extension on Section 33B.	52 Opouri Road, Rai Valley	13/12/2021
149	104B	Blenheim Golf Club Incorporated	U210813	Water Permit (Take Water); Water Permit (use Water) x 2	Take Wairau Aquifer FMU water from well; use water for the irrigation of up greens and fairways.	Pollard Park, Blenheim	13/12/2021
150	104B	D W R Dew	U210996	Coastal Permit (Mooring)	Coastal permit to establish a new swing mooring (M3828) in Oyster Bay	Oyster Bay, Port Underwood/Te Whanganui	14/12/2021
151	104B	N K Elvy	U210988	Coastal Permit (Mooring)	New coastal permits (replacing U130308 and U120338) for the continuation of two existing swing moorings (M3469 and M3370) located in St Omer Bay.	Saint Omer Bay, Kenepuru Sound, Pelorus/Te Hoiere	14/12/2021
152	104B	E Buckminster, M J Were and J A Taylor	U210725	Discharge Permit (to Land)	Discharge treated domestic wastewater to land from a new wastewater system.	225 Tyntesfield Road, Waihopai Valley	14/12/2021
153	104A	M C Horne	U210614	Subdivision (Allotment Creation)	Subdivide to create two residential allotments.	158 and 160 Scott Street, Blenheim	14/12/2021
154	104B	Delegat Ltd	U211003	Land Use (Activity) x 54	Install and operate a FrostBoss C49 frost fan x 54	4675 and 4838 State Highway 63, Wairau Valley	15/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
155	104B	B R & S C Lock	U210962	Land Use (Activity)	Construct additions to an existing dwelling that breaches the recession plane on the western boundary and construct a carport that breaches the recession plane on the southern boundary and includes earthworks.	34 Waimarama Street, Waikawa	15/12/2021
156	104B	One Forty One New Zealand Limited	U210959	Land Use (Land Disturbance)	Undertake soil disturbance and removal on a HAIL site.	85 Mahers Road, Kaituna	15/12/2021
157	104B	Sun Hill Investments Limited	U210565	Water Permit (Take Water); Water Permit (Use Water)	Take A Class Wairau River FMU water from well; use water for irrigation of up to 9ha of pasture and a planned 9.33ha of vineyard.	2157 State Highway 63, Wairau Valley	15/12/2021
158	104B	Endeavour Homes (Marlborough) Limited	U210457	Land Use (Activity)	Continue operating a show home with professional office and associated signage.	52 Harvard Road, Burleigh, Blenheim	15/12/2021
159	104B	Findlater Trustees Limited	U210346	Land Use (Activity); Land Use (Land Disturbance)	Alter and extend an existing building; soil disturbance on a HAIL site that does not comply.	36 Timandra Place, Blenheim	15/12/2021
160	104B	J R & L L Barnett	U211037	Land Use (Activity)	Construct a 3-bay shed which will encroach the eastern and northern boundary setbacks.	172 Jacksons Road, Rapaura, Fairhall	16/12/2021
161	104B	Calmar Cherries Limited	U210814	Discharge Permit (to Land)	Discharge treated domestic wastewater to land via an upgraded wastewater system.	64 Alma Street, Renwick	16/12/2021
162	104B	Konrad Wines Limited	U210204	Water Permit (Take Water)	Change condition 10 of resource consent.	706 Waihopai Valley Road, Waihopai Valley	16/12/2021
163	104B	Grovetown School	U190898	Water Permit (Divert Water); Water Permit (Divert Water)	Vary condition 4 to change the installation date for the data logger; Extend the lapse date of U190898 to 1 December 2023.	Vickerman Street, Grovetown	16/12/2021
164	104B	Linkwater School	U190896	Water Permit (Take Water)	Change Conditions 2 and 4 to change the installation date for the meter and data logger.	1357 Queen Charlotte Drive, Linkwater	16/12/2021
165	104B	R J & L C Roughan	U210949	Land Use (Land Disturbance)	Undertake land disturbance within 8 metres of the Okaramio River to construct a culvert crossing.	2628 State Highway 6 Okaramio	16/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
166	104A	Steven Bruce Hallows and Juliana De Oliveira Docha	U210923	Subdivision (Allotment Creation)	Subdivide into two residential lots.	13 Elzy Street, Blenheim	16/12/2021
167	104B	Mike Edridge Contracting Limited	U210732	Land Use (Land Disturbance)	Establish, operate and maintain a cleanfill site.	84 Northbank Road, Kaituna	16/12/2021
168	104B	Pat on Colemans 2021 Limited	U210478	Subdivision (Allotment Creation); Land Use (Activity); Land Use (River Surface or Bed Activity); Land Use (Land Disturbance)	Subdivide Lot 1 DP 11724 and Lot 45 DP 318829 into 14 residential lots and a road vest; construct two stormwater outfalls in Fultons Creek; undertake earthworks associated with the construction of subdivision, including construction of roading and accesses (rights of way and driveway for proposed Lot 1) installation of services, excavation within 8 metres of a waterway and in a Groundwater Protection Area and soil disturbance, sampling and remediation works associated with contaminated soils on Lot 1.		16/12/2021
169	104B	Mac Holdings 2015 Limited	U200242	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Use Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water)	Abstract Wairau Aquifer water up to a maximum of 744,221 cubic metre per year from well; use for the irrigation of 84.05 hectares of vineyard; use water for the irrigation of 70.55ha of pasture and crops; use water for ancillary uses; abstract A Class Wairau River FMU water; use water for the irrigation of 6.9ha of pasture and crops.	Wairau Bar Road, Lower Wairau	16/12/2021
170	104B	D L Tait-Jamieson	U061312	Coastal Permit (Structure)	Change Condition 13 of resource consent to extend the existing jetty.	Hitaua Bay, Tory Channel	17/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
171	104B	I Charles-Jones	U210595	Subdivision (Allotment Creation); Land Use (Activity); Land Use (Activity)	Subdivide to create two residential allotments; authorise existing dwelling on Lot 1; authorise the use of an access way serving Lot 2.	113A Maxwell Road, Blenheim	17/12/2021
172	104B	Marlborough Kaikoura Trail Trust	U210266	Land Use (river Surface or Bed activity); Land Use (river Surface or Bed activity); Water Permit (Divert Water); Land Use (Land Disturbance); Land Use (Activity).	Vary condition 1 of consents to allow for a change in the bridge construction methodology.	State Highway 1, Wairau Bridge, Tuamarina	17/12/2021
173	104B	VJDJ Limited	U210964	Land Use (Activity)	Continue to operate a preschool within an existing building; catering for a maximum of 30 children.	49 Taylor Pass Road, Blenheim	17/12/2021
174	104B	Rachel Olivia Broadbridge, Kyle Richard Marfell and Adrian Christopher Byrne	U210803	Subdivision (Boundary Adjustment)	Subdivide Lots 1 and 2 DP 9478 into two lots as a boundary adjustment	7 and 9 Pak Lims Road, Renwick	17/12/2021
175	104B	R B & E K Hall	U210564	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land via an existing onsite wastewater management system.	1710 Queen Charlotte Drive, Grove Arm	17/12/2021
176	104B	D S Thynne	U210898	Subdivision (Allotment Creation); Land Use (Activity); Land Use (Activity)	Subdivide into two residential allotments; authorise erection of a dwelling on Lot 1.	40 Dillon Street, Blenheim	20/12/2021
177	104B	P G Adams	U210757	Subdivision (Allotment Creation)	Subdivide Lots 1 & 2 DP 10419, Sections 10 & 11 and Part Section 9 SO 1682 into eight allotments.	North West Bay, Pelorus Sound	20/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
178	104B	Waerenga Southland Limited	U210659	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water)	Take water up to a maximum rate of 4,320 cubic metres per day from well P27w/0496; use water for the irrigation of up to 98.2 hectares of pasture; take water up to a maximum of 4,320 cubic metres per day and 9,820 cubic metres per year from well P27w/0496; use water for ancillary purposes.	1458 Queen Charlotte Drive, Linkwater	20/12/2021
179	104B	O L Blockley, R M Purdue, and J A and R G George	U150052	Coastal Permit	Change conditions 6 & 7 of resource consent to allow for an increase in vessel size.	Honeymoon Bay, Bay of Many Coves	21/12/2021
180	104B	Lauderdale Limited, A Blom & H A M Van Echtelt, B J E Vile, Summerhill Ridge Limited, J Hamm & S R Van der Pol and S & S Morgan	U210584	Water Permit (Take Water); Water Permit (Use Water)	Take Riverlands FMU water from existing intake on Utawai Creek up to a maximum rate of 35 cubic metres per day; use water for supplying stock	Redwood Pass Road, Vernon Lagoons	21/12/2021
181	104B	C H & R Jenkins, Wisheart Macnab & Partners Trustee Company Limited.	U200724	Water Permit (Take Water) x 2	Take Riverlands FMU water from well 11033 located on Lot 2 up to a maximum of 12,750 cubic metres per year; use water for the irrigation of up to 6ha of pasture and shelter trees.	76 Hardings Road, Riverlands.	21/12/2021
182	104B	H I & S J Mackenzie	U210955	Water Permit (Take Water) x 2	Take A Class Wairau River RMU water up to a maximum rate of 1186 cubic metres per day from well O28w/0185.	3209 State Highway 63, Wairau Valley	22/12/2021
183	104B	H I Mackenzie	U210953	Water Permit (Take Water) x 2	Take A Class Wairau River FMU water up to a maximum rate of 440 cubic metres per day from well O28w/4476.	State Highway 63, Wairau Valley	22/12/2021
184	104B	B H & I R L Loizou	U210419	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land.	59 Onahau Road, Onahau Bay	22/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
185	104B	S A Rowell, T G Baldwin, D G Dewar & G S Bullock	U210943	Land Use (Activity)	Site a semi enclosed carport.	254 Elaine Bay Road, Elaine Bay	22/12/2021
186	104B	Delegat Limited	U210748	Land Use (River Surface or Bed Activity) x 2: Land Use (Gravel Removal); Water Permit (Divert Water)	Excavate riverbed gravels within Boundary Creek to construct and deconstruct temporary diversion bunds; construct and maintain bank protection works in the bed and banks of Boundary Creek; Extract loose aggregate from Boundary Creek; Temporarily divert Boundary Creek during the maintenance and construction of flood protection works in the bed and banks of Boundary Creek.	3370 State Highway 63, Wairau Valley	22/12/2022
187	104B	N H Gerritsen	U180550	Discharge Permit (To Land); Land Use (Building); Land Use (Land Disturbance); Land Use (River Surface or Bed Activity)	Discharge treated domestic wastewater to land; build within 8 metres of a Waitaria Stream to build within the boundary setbacks and to build with the recession planes; undertake excavations within 8 metres of Waitaria Stream; construct a pipe crossing over Waitaria Stream.	Corner of Kenepuru Road and Manaroa Road, Waitaria Bay	23/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
188	104B	G J Checkley	U211007	Water Permit (Take Water) x 4	Take B Class Awatere River FMU water up to a maximum of 2,160 cubic metres a day from an existing intake; use water for the irrigation of up to 60 hectares of pasture and crops; use water for the irrigation of up to 60 hectares of pasture and crops; take B Class Awatere River FMU water up to a maximum of 2,160 cubic metres a day and 6000 cubic metres a year from an existing intake located; use water for ancillary uses on Lots 1 -3 DP 545334, outside of irrigation season.	35 Welds Hill Road, Awatere Valley	23/12/2021
189	104B	Giesen Group Limited	U040382	Water Permit (Take Underground Water)	Transfer the abstraction point from well P28w/2244 to well 11041.	Alma Street, Renwick	23/12/2021
190	104B	G E & R M van Asch as Trustees of the Little Oasis Trust	U210750	Water permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water)	Abstract Awatere River A Class FMU water; use water for irrigation of up to 2.3 hectares of vineyard and up to 0.7ha of lawns, gardens and amenity plantings; Abstract Awatere River A Class FMU water; use water for ancillary purposes.	1723 Redwood Pass Road, Lower Dashwood, Seddon	23/12/2021
191	104B	Batty Concepts Limited	U210261	Subdivision (Allotment Creation); Land Use (Activity); Land Use (Activity); Land Use (Riverbed Activity)	Subdivide Lot 1 and 2 to create 14 residential allotments, road to vest and a central 'private reserve' area; authorise up to 45% site coverage on Lots 1-14 of the subdivision; Undertake excavation and filling associated with the construction of the subdivision; construct two stormwater outfalls in Camerons Creek.	89 Battys Road, Blenheim	23/12/2021

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
192	104B	Marlborough District Council	U191103	Land Use (Land Disturbance)	Establish, operate and maintain a cleanfill site on Lot 4 DP 484760	1503 Kenepuru Road, Mahau Sound	24/12/2021
193	104B	D J Griffiths	U210970	Land Use (Land Disturbance); Land Use (Activity)	Undertake earthworks in excess of 50 cubic metres to facilitate the construction of a dwelling home and to remediate contaminated soil over the whole property; undertake soil disturbance on a HAIL site that does not comply	37A Parker Street, Blenheim	06/01/2022
194	104B	New Zealand Defence Force	U210967	Land Use (Land Disturbance); Land Use (Activity)	Undertake earthworks in excess of 50 cubic metres to facilitate the construction of a storage shed and curtilage; undertake soil disturbance on a HAIL site that does not comply.	Bennett Street, Base Woodbourne, Woodbourne	06/01/2022
195	104B	G J Miller	U210576	Subdivision (Boundary Adjustment)	Subdivide into 3 allotments as a boundary adjustment.	584 Brookby Road, Hawkesbury Renwick	07/01/2022
196	104B	Marlborough District Council	U210844	Land Use (Activity)	Remove a Category II heritage building (upper floor of old "Perano House") from Section 1 SO 404256.	8-10 Wairau Road, Picton	10/01/2022
197	104B	Eradus Vineyard Holdings Limited	U210612	Water Permit (Take Water); Water Permit (Use Water)	Take B Class Awatere FMU water from an existing intake; use water for the irrigation of up to 12 hectares of vineyard on Lots 3 & 4 DP 7493.	1925 Redwood Pass Road, Redwood Pass	10/01/2022
198	104B	A D Clarke Construction Ltd	U210429	Subdivision – Allotment Creation	Subdivision to create four residential sites and to erect four houses.	38 Budge Street, Riversdale, Blenheim	10/01/2022
199	104B	Giesen Group Limited	U020659	Water Permit (Take Underground Water)	Transfer the abstraction site of water permit to well 11040 located at/about 1673315E 5405809N on Lot 2 DP 490523.	172 Jacksons Road, Blenheim	11/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
200	104B	B R P Robertson and H Morrison	U210984	Land Use (Land Disturbance)	Undertake earthworks (excavation and filling) to create a level building platform, driveway, manoeuvring area and landscaping on land with a slope greater than 7.5 degrees within a Soil Sensitive Area.	34 Golf View Close, Marlborough Ridge, Fairhall	12/01/2022
201	104B	Bracon Holdings Limited	U200565	Land Use (Activity) x 2	Operate a commercial activity within an Urban Residential 1 Zone on Lot 2 DP 507; encroach the recession plane on the west and east boundary with a new building on Lot 2 DP 507.	57 Main Street, Blenheim	12/01/2022
202	104B	Marlborough District Council	U210856	Land Use (Activity)	Continue operating a responsible camping site at Lake Elterwater Road Reserve, State Highway 1, Ward.	Lake Elterwater Road Reserve, State Highway 1, Ward	12/01/2022
203	104B	M J Mitchell & T E M Owen	U210840	Land Use (Activity)	Creation of a right of way over a portion of Lot 3 DP355108 in favour of Lot 2 DP 355108 and over a portion of Lot 2 DP 355108 in favour of Lot 3 DP 355108.	26 Gravesend Place, Picton	12/01/2022
204	104B	Marlborough District Council	U210630	Land Use (Activity)	Continue operating a responsible camping site on a portion of Section 44 Block III Taylor Pass SD known as Taylor Dam Reserve – Upper Level.	Taylor Dam Reserve, Taylor Pass Road, Blenheim	12/01/2022
205	104B	Rimapere Vineyards Limited	U210292.136.02	Water Permit (Take Water)	Transfer the abstraction point from well P28w/0360 to well P28w/4036 located on Sec 24 Blk	256 Rapaura Road, Rapaura, Blenheim	13/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
206	104B	Marlborough District Council	U210821	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water); Water Permit (Use Water)	Take Riverlands FMU water from wells; supply municipal water to Riverlands Industrial Estate, Cloudy Bay Business Park, Mount Riley Winery and properties adjacent to Malthouse Road, Cobb Cottage Road and State Highway 1; take Riverlands FMU water from wells; Use water at the Blenheim Sewage Treatment Plant; take Riverlands FMU water from wells; Use water for the irrigation of up to 75ha of vineyard; use water for ancillary uses outside of the irrigation season.	State Highway 1, Riverlands	13/01/2022
207	104B	D L Gilmore	U210694	Water Permit (Take Water); Water Permit (Use Water); Water Permit (Take Water); Water Permit (Use Water)	Take B Class Flaxbourne (Lower) FMU water from well; use water for the irrigation of up to 2.5 hectares of olive trees and other trees; take B Class Flaxbourne (Lower) FMU water from well; use water for ancillary uses on Sec 15 Blk VI Cape Campbell SD outside of irrigation season.	38 Ward Beach Road, Ward	13/01/2022
208	104B	Two Degrees Network Limited	U211001	Land Use (Activity)	Installation, operation and maintenance of telecommunications facility involving a pole with three antennas and ancillary equipment, in the road reserve fronting Section 1 SO 6563.	Road Reserve Opposite 43 Beach Road, Waikawa	14/01/2022
209	104B	J V Meachen and C Farley	U210935	Discharge Permit (To Land)	Discharge treated domestic wastewater to land.	290 Te Towaka – Port Ligar Road, Admiralty Bay	14/01/2022
210	104B	E W & D L Nicholas Nicholas	U210864	Subdivision (Allotment Creation)	Subdivide Lot 1 DP 362433 and Lot 1 DP 6033 to create two allotments.	34-36 Vickerman Street, Grovetown	14/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
211	104B	Blenheim Gospel Hall Trust	U210910	Subdivision (Allotment Creation)	Subdivide Lot 1 DP 2714 into two lots.	162 Redwood Street, Blenheim	17/01/2022
212	104B	Waka Kotahi NZ Transport Agency	U210938	Land Use (Land Disturbance); Land Use (River Surface or Bed Activity); Water Permit (to Divert)	Clear vegetation and undertake excavation within 8 metres of Brown River to install and maintain bridge protection works on Section 3 Block I Heringa SD; undertake works within Brown River to install and maintain bridge protection works on Section 3 Block I Heringa SD; To divert Brown River during installation and maintenance of bridge protection works.	Brown River Bridge, State Highway 6, Rai Valley	18/01/2022
213	104B	M W & H A Beach	U210936	Subdivision (Boundary Adjustment)	Subdivide Section 29 Block XII Wakamarina Survey District, Section 49 district of Havelock Suburban and Section 106-107 District of Havelock.	135 Douslins Gully Road, Havelock	19/01/2022
214	104B	Craig Campbell Thomson and Harriet Donaldson Sands	U210838	Subdivision (Allotment Creation)	Subdivide Lot 5 DP 2406 and Part Lot 6 DP 2406 (MB1A/65) to create two residential allotments.	108 Budge Street, Blenheim	19/01/2022
215	104B	Constellation Brands New Zealand Limited	U211058	Water Permit (Divert Water); Discharge Permit (to Water); Water Permit (Divert Water); Discharge Permit (To Water)	Divert water into the Riverlands Co-Op Drain; discharge water into the Riverlands Co-Op Drain; divert water into Mapps Waterway; discharge water into Mapps Waterway.	340 Alabama Road, Riverlands	20/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
216	104B	Marisco Properties Limited	U211005	Land Use (Gravel Removal); Land Use (Land Disturbance)	Extract up to 59,250 cubic metres of gravel from the bed of the Waihopai River, located adjacent to Lots 2 and 3 DP 7252; undertake land disturbance within 8 metres of the Waihopai River to reinstate land lost in the July 2021 flood event on and adjacent to Lots 2 and 3 DP 7252 and within a Level 3 Flood Hazard Area.	1242 Waihopai Valley Road, Waihopai	20/01/2022
217	104B	Arboleda Investments Limited	U210990	Subdivision (Allotment Creation)	Subdivide Lot 25 DP 341 to create two residential allotments.	3A Lee Street and 147 Charles Street, Blenheim	20/01/2022
218	104B	Daniel Wilkie Gilsean and Catherine Amy Laugesen	U210845	Subdivision (Allotment Creation)	Subdivide Lot 6 DP 3312 to create two allotments.	36 Brook Street, Renwick	20/01/2022
219	104B	Kinzett Family Trustees Limited	U201015	Subdivision (Allotment Creation)	Subdivide Lot 3 DP 4427 to create two residential allotments. Authorise a vehicle crossing and access for proposed Lots 1 and 2 to be located partly within Tree Protection Zone for Notable Tree 124.	2 Poynter Street, Blenheim	20/01/2022U
220	104B	J D Anderson	U211000	Subdivision (Allotment Creation); Land Use (Activity)	Subdivide Lot 14 DP 2889 to create two residential allotments; authorise the existing dwelling on Lot 1 (created through resource consent U211000.01) to encroach into the recession plane and 1 metre setback on the new boundary with Lot 2 (created through resource consent U211000.01)	11 Mitchell Street, Blenheim	21/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
221	104B	K B & L H Price (as trustees for the Kelvin Price No 1 Trust and Kelvin and Linda Price No 2 Trust)	U160566	Coastal Permit (Mooring)	Change conditions 3, 4, and 5 and cancel condition 9 of resource consent U160566, for mooring M1254.	Whatamango Bay, Queen Charlotte Sound/Tōtaranui	24/01/2022
222	104B	R J Carter	U160169	Coastal Permit (Mooring)	Change Condition 11 of resource consent U060169, for mooring M2882.	Whatamango Bay, Queen Charlotte Sound/Tōtaranui	24/01/2022
223	104B	K A Davis	U220016	Coastal Permit (Mooring)	Consent for new mooring.	Fish Bay, Kenepuru Sound	25/01/2022
224	104B	Maxwell Limited	U211036	Discharge Permit (to Land)	Discharge treated domestic wastewater to land.	2467 Queen Charlotte Drive, Grove Arm	25/01/2022
225	104B	Layla Investments Limited	U210886	Subdivision (Allotment Creation); Land Use (Activity x 2	Subdivide Lot 2 DP 2161 into two allotments; authorise the walls of the existing house on Lot 1 (of the subdivision U210886.01) to be closer than one metre from the proposed right of way boundary, and for the existing house to intrude into the recession plane of the right of way boundary; allow for the construction of a dwelling on Lot 2, and the siting of the existing dwelling on Lot 1 (of the subdivision U210886.01).	22 Burleigh Road, Blenheim	25/01/2022
226	104B	A M & M D Elkington	U210781	Discharge Permit (to Land)	Discharge secondary treated domestic wastewater to land via a new onsite wastewater system.	525 Kenepuru Road, Pelorus Sound	25/01/2022
227	104B	McGuinness PA Limited	U210780	Discharge Permit (to Land)	Discharge tertiary treated domestic wastewater to land via a new onsite wastewater system.	Umuwheke Bay, Arapaoa	25/01/2022
228	104B	T S & P J Wearing	U210859	Land Use (Activity)	Construct accessory buildings within 100m of commercial forestry on Lot 4 DP 346708.	3703 Waihopai Valley Road, Waihopai Valley	25/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
229	104B	L M & T D Julian	U211044	Land Use (Activity)	Establish new dwelling and accessory building which intrudes into the recession plane, exceeds the height standard and has a reduced outdoor amenity area	84 Waikawa Road, Picton	26/01/2022
230	104B	SLAP (Marlborough) Limited	U200091	Subdivision (Allotment Creation)	Subdivide Lot 1 and 2 in two stages to create 15 residential allotments; discharge stormwater runoff into an open drain on the south side of the Main Railway Line; excavate approximately 300 cubic metres of material to establish a new road; install a stormwater outlet structure in the drain on the south side of the Main Railway Line.	50A-52 South Street, Blenheim	26/01/2022
231	104B	A P & F A Summerfield & BK Trustees Limited as trustees of the Whitecroft Trust	U210989	Land Use (Activity)	Build a new dwelling that does not comply with recession plane, maximum height, boundary setback, outdoor amenity area and excavation standards on Lot 3 DP 8340	289D Waikawa Road, Waikawa	27/01/2022
232	104B	Taylor Pass Honey Co Holdings Limited	U220019	Land Use (River Surface or Bed Activity): Water Permit (Divert Water)	Undertake works in the streambed to temporarily divert the Taylor River and undertake maintenance works on an existing infiltration gallery located adjacent to Lot 4 DP 355742 at/about grid coordinates 1678361E 5394518N; temporarily divert water in the Taylor River to undertake maintenance works on an existing infiltration gallery	829 Taylor Pass Road, Taylor Pass	27/01/2022
233	104B	Richmond Brown Farmlands Limited	U211052	Water Permit (Take Water); Water Permit (Use Water)	Take A Class Pelorus River FMU water up to a maximum rate of 4,800 cubic metres per day from two suction hose intakes.	5613 State Highway 6, Pelorus Valley	27/01/2022

	Delegation	Consent Holder	Consent No.	Consent(s) Issued	Proposal	Site Location	Date Issued
234	104B	A C Bailey	U210954	Water Permit (Take Water) Water Permit (Use Water) x 2	Take A Class Wairau River FMU water up to a maximum rate of 848 cubic metres a day from well W20007; use water to irrigate 18.63 hectares of vineyard on proposed lot 1 being consented under U210835 (parent lot: Part Lot 1 DP 7436); use water to irrigate 7.5ha of pasture on Lot 1 DP 9356.	2765 & 2763 State Highway 63, Wairau Valley	27/01/2022
235	104B	K J & L S Sadd	U211039	Land Use (Activity)	Excavate and fill in excess of 50 cubic metres to soil to prepare the site for the construction of a dwelling house.	4B Nicholson Street, Havelock	28/01/2022
236	104B	Mobil Oil New Zealand Limited	U210802	Land Use (Activity) x 2	Replace two free-standing pylon signs within the setback and that exceed the sign area on Part Lot 2 DP 11712.	31 Grove Road, Blenheim	28/01/2022
237		KiwiRail Holdings Limited	U210978	Land Use (Activity) x 2	Outline Plan for redevelopment of the Picton railway marshalling yard and railway corridor north of Spring Creek.	Railway marshalling yards at Picton and Spring Creek	28/01/2022

Record No: 2224121