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Committee Environment Committee
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General Managers' report to the Environment Committee meeting 15 February 2017

1. Purpose

To inform the Environment Committee of Greater Wellington Regional Council (GWRC) activities relating to the Committee's areas of responsibilities.

2. Catchment Management

2.1 Biosecurity

2.1.1 Regional Pest Management Plan (RPMP) Review

The RPMP review consultation document was developed and consulted internally. External consultation on the proposed species, and programme changes is underway.

2.2 Pest Animals

2.2.1 Rooks

The Rook control programme was completed for 2016. There were only 11 active rookeries this season.

2.2.2 Rabbits and Hares

Annual rabbit density monitoring is being carried out on the Tauherenikau River and adjacent properties. Inspections completed to date are showing that rabbit numbers are again at low levels around this river system. Prior to the arrival of the rabbit haemorrhagic disease (RHD) virus in 1997, this area was historically a rabbit hotspot.

2.3 WCC Reserves and HALO programme

Monitoring of 19 randomly selected rodent tracking lines in WCC reserves programme (designed and serviced by GWRC) showed very low numbers of rats and mice, which is a credit to the work and effort of the GWRC Biosecurity team.

Project HALO continues to grow. Originally set up over a 63 ha area of land alongside the Zealandia Sanctuary for WCC, the intention of the project was to trial controlling initial populations of possums, rats and mustelids without using toxic baits and utilising new technology - using the Goodnature self-resetting, toxin-free A12 and A24 traps. The number of self-resetting traps is being extended in the HALO area south of the Zealandia boundary in the first half of 2017. On Te Ahumairangi (Tinakori Hill) A24 traps have been installed for rat control, and pre-feeding, lure types and trap distances continue to be tested to discover how rat numbers are affected, and to further the knowledge on non-toxic pest animal management.

2.4 Pest Plants

2.4.1 Surveillance and Total Control Programmes

Surveillance and Total Control inspections have been undertaken for a range of pest plant species across the region. The unfavourable weather conditions in the early summer slowed initial growth for some of the species which when combined with high levels of grass made locating seedling plants difficult.

Moth plant, woolly nightshade, climbing spindleberry and blue passion flower sites have been inspected across the region, and perennial nettle, eel grass, Bathurst burr and saffron thistle inspections are underway in the Wairarapa.

2.4.2 Containment Species

Boneseed work has been completed for the Wairarapa, with a large number of plants removed from coastal sites ranging from Ocean Beach in South Wairarapa, to Castlepoint in the north. Similar ground control is undertaken in a number of key native ecosystem (KNE) sites in the Western Zone of the region.

Aerial control using suspended workers was successfully completed at Ngawi in the Wairarapa. Aerial control is still to be undertaken on the Wellington south coast, with the contractor awaiting suitable weather to apply chemical at this exposed wind prone coastal site.

2.4.3 Biocontrol

Biocontrol agents are active, and monitoring, harvesting and releases are underway across the region. Agents which have reproduced well in the region are being harvested and sent elsewhere, such as the green thistle beetle.

Darwin's barberry weevils were released from their winter containment in the western suburbs of Wellington.

Buddleia leaf weevil was harvested from Moonshine Valley Rd site and released at the Korokoro KNE site. There were still only small numbers of

adult weevils present so staff will wait until later in the summer before more releases will be made.

A tradescantia stem and tip beetle release site in Otaki showed lots of damage, with tip beetles seen. No stem beetles were seen but this is not unexpected as they are much more elusive and quickly drop to the ground with disturbance.



Damage from tip beetles at tradescantia site on the Kapiti Coast

2.5 BioWorks

2.5.1 Regional Possum Predator Control Programme (RPPCP)

The 2016/17 RPPCP programme will cover approximately 74,800 hectares in 15 operational areas. Six operations covering 31,000 ha have been completed to date and monitoring of these will occur from February to March. Field activities in a further three projects have commenced, with approximately 15,000 ha completed within them to date.

Control within the initial Te Kopahou operation (2,931 ha) has commenced. This operation is west of Wellington city and extends between Owhiro Bay and Makara settlement. It is a challenging programme due to difficult access, thick scrub and gorse. Public notifications are currently underway.

2.6 TBfree New Zealand Programme

BioWorks has been contracted to deliver the Southern Rimutaka Aerial project on behalf of TBfree New Zealand (13,350 ha aerial and adjoining 4,200 ha of ground control).

Initially, aerial control was planned to commence before Christmas, but due to persistent spring winds using helicopters for the operation was deemed unsafe. Due to the delay, this operation will now be completed in two stages. Stage one includes East Harbour Regional Park and all farmland west of Coast Road, to be treated from late February onwards. Stage two includes the Rimutaka Forest Park and Orongorongo Station, to be treated late April – May, after the annual deer roar hunting season.

2.7 Land Management

2.7.1 Akura Conservation Centre

The Mangapakeha poplar and willow nursery was sold in October 2016 for \$191,000. The sale of this nursery was part of the business plan for expansion of the Akura nursery on the outskirts of Masterton and the development of new retail areas and improved pole handling facilities at the Akura site. All Council poplar and willow pole production is now centred on the Akura site. Proceeds from the sale of Mangapakeha will be used to retire debt associated with the expansion and development programme carried out over the last 3 years.

Irrigation began on the leased nursery land (owned by Papawai Kaikokirikiri Trust) on 25 November 2016, and at the Akura nursery on 14 December 2016. Except for the four statutory days over Xmas and New Year both irrigators have been operating every day. In excess of 25,000m³ has been applied over both nurseries up to the end of January. Despite this quantity of water, the soil moisture levels on the leased nursery land continue to fall.

The following table shows the decline in soil moisture since 30 September 2016.

	30/09/16	31/10/16	30/11/16	31/12/16	19/01/17
Soil Moisture %	28%	26%	24%	17%	10%

Field capacity for the soil types at Akura is estimated to be 26% soil moisture content. At this point there is no need for irrigation. The trigger to begin irrigation is deemed to be a soil moisture content of 24%, hence the start of irrigation in November 2016. Limitations imposed by consent conditions means that only one irrigator can operate at any one time, thereby limiting application rates. Consequently, without adequate rainfall, soil moisture levels continue to fall. Currently the soil moisture content on the leased nursery land is below the 13% deemed to be the minimum required for optimum plant growth.



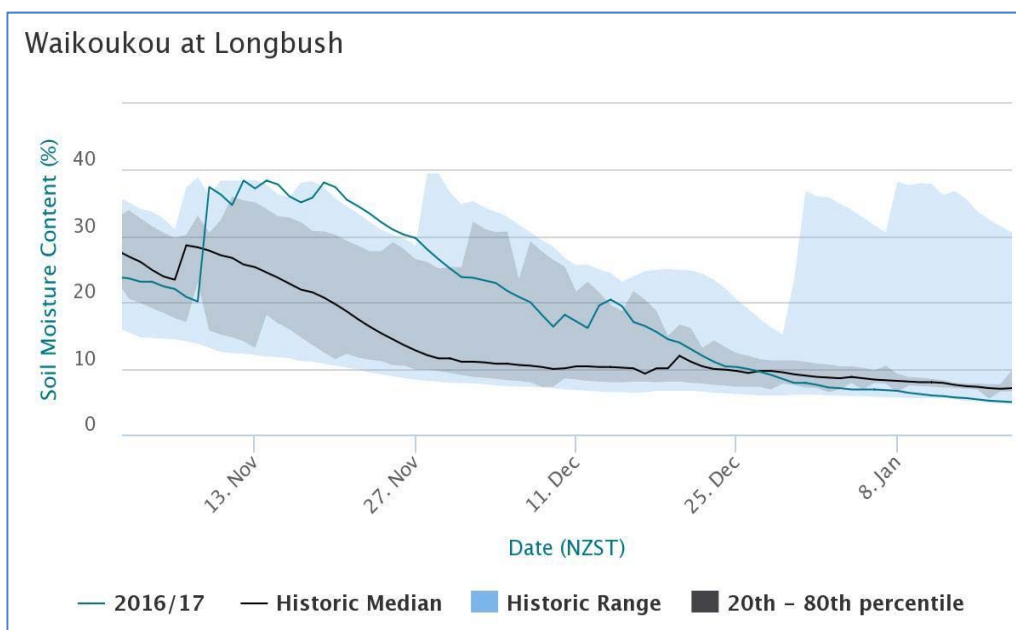
Akura irrigator in action

A bore on adjacent private land has recently been decommissioned and the water take has been transferred to the Papawai Kaikokirikiri Trust. Currently this water is unallocated. This allocation of 16 litres/sec, if partially used at the leased and Akura nurseries would go a long way to arrest the fall in soil moistures experienced over the summer months. Land Management staff are to have discussions with the Trust and GWRC Environment Regulation staff on options to utilise the surplus water.

2.7.2 Soil Moisture – Wairarapa Hill Country

Despite good rainfall through November and a small event in mid-December soil moisture levels at some telemetered sites are lower than the historic soil moisture average for that site. This is particularly so for the Longbush site near Gladstone. At this site October rainfall was 72% of average, and December rainfall was 61% of average. Compounding the soil moisture issue was a very dry July where rainfall was 34% of the 75 year average. Despite rainfall of 45mm during January c.f. a monthly average of 53mm, much of the month has also experienced very high wind runs and, therefore, high rates of evapotranspiration leading to an overall loss in soil moisture content for the period.

The following graph shows the actual soil moisture content (%) at the Longbush site from 1 November 2016, compared with historic medians and ranges for that period. Historic medians and ranges for soil moisture measurements relate to the last ten years.



2.7.3 Wellington Regional Erosion Control Initiative (WRECI)

In 2015 the Ministry of Primary Industries (MPI) approved a second tranche of funding for the WRECI programme. 2016/17 is the second year of the new programme and the six month report up to 31 December has been submitted to MPI.

The winter planting programme has been severely affected by very low soil moisture levels through July and August. This is evidenced in the following table where erosion prone land under management for the first six months of the year is 54% completed. Normally this figure is in the range 75 – 80%.

Year	Actuals 2015/16	Targets 2016/17	YTD 2016/17	YTD - % Achieved 2016/17	Proposed Targets 2016/17
Erosion prone land under management (ha)	398.2	410	223	54%	429
Poles planted (#)	24,411	28,000	11,940	43%	17,000
Poles planted (ha.)	344	350	177	51%	245
Land retired via Afforestation (ha)	41.1	40	20	50%	28
Land retired via Reversion (ha)	13.1	20	26	130%	156

The main reason for the reduced number of poles planted this year has been the very low soil moisture levels experienced in the Wairarapa through the early part of the winter. This affected farmer confidence in successfully establishing poles and a number of programmes were reduced or cancelled. Depending on soil moisture levels in June 2017 the best that can be expected is 17,000 poles planted (61% of target numbers).

Recent discussions with MPI support the idea of doing more afforestation and reversion projects to offset the reduced area of pole planting. Early indications are that there will be sufficient projects to meet the ‘erosion prone land under management’ targets. Financial targets will however remain underspent as there is a relatively low cost structure associated with reversion projects.

2.7.4 Riparian programme – managing stock access to waterways

The Riparian Programme supports landowners to achieve water quality and biodiversity outcomes through the management of stock access to waterways. Part of this programme is to work with landowners to identify waterways and sites that meet the definitions for Category 1 (sites of significance) under the proposed Natural Resources Plan (pNRP).

Landowners with Category 1 waterways or sites have recently received a letter setting out the requirements to manage stock access and offering assistance and advice to achieve compliance with the pNRP provisions by July 2018.

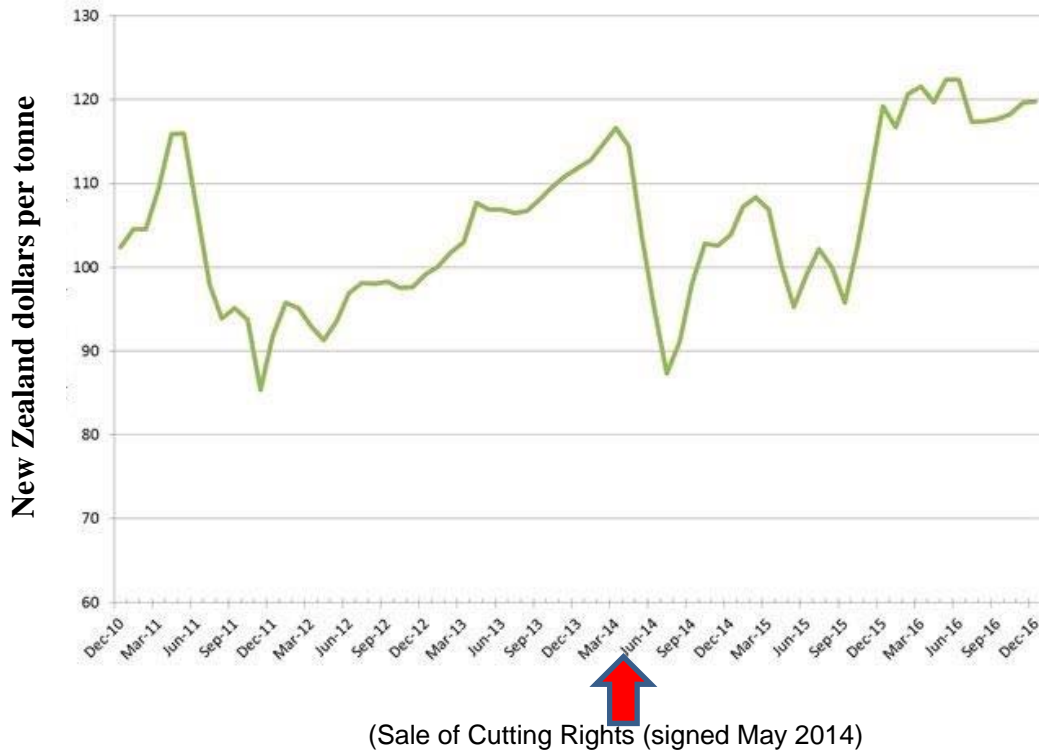
Staff are currently contacting landowners who received the letter and arranging site inspections. A riparian planner, developed in conjunction with DairyNZ and Landcare Research, is being used to assist the preparation of individual riparian management plans. It is anticipated that all site inspections will be completed by May 2017.

The first application for funding has been received (site photo below). Funding is available for fencing initially, and if the landowner wants to establish planting within the riparian margin, further assistance is also available. The fund is being managed on a ‘first come, first serve, basis.



2.7.5 Wairarapa and Metro Forests

Harvesting within the Metro and Wairarapa forests has progressed very well over the last three months, despite the interruptions to shipping caused by damage to the port log loading area in the November 14 earthquake. Log prices have remained very steady over the last 12 months, generally sitting at \$120NZ for the marker grade.



During 2017 the Cutting Rights holder is anticipating a harvest of 148 hectares in the Metro Forests and 100 hectares in the Wairarapa Forests. In the Metro Forests the majority of the harvesting will be undertaken in Puketiro and Mangaroa forests (122 hectares), and in the Wairarapa Forests all the harvesting will be from the Hiwinui forest.

At the end of 2017 harvesting will be completed at Hiwinui forest for the time being. At this point, harvesting will shift to the Stoney Creek forest, located east of Martinborough. This is a significant change and signals the start of a 10 year programme of harvest at Stoney Creek. Stoney Creek was purchased by the Regional Council in 1990 for soil conservation purposes, and the block was planted through to 1996. The Cutting Rights require the holder to harvest the forest over a 10 year period to help preserve the soil conservation values.

2.7.6 Farm Environment Plans (FEPs)

This has been the first year where a contestable fund has been operating as part of the Farm Environment Plan programme and is working well. To date in 2016/17 nine new FEPs have been completed, predominantly in the Wairarapa Moana catchment, bringing the total of FEPs in the region to fifty seven.

\$93K of a \$340K budget has been spent so far through the contestable fund. However, a further \$270K of projects have been approved for completion this

financial year and for 2017/2018. Furthermore, close to \$260K of projects from non-priority catchments have applied for funding from the contestable fund. The funding has been split across a variety of land uses with projects being predominantly focused on riparian or effluent management issues.

2.8 Flood Protection

2.8.1 Floodplain Management Plan Implementation

(a) RiverLink – (Hutt River City Centre Upgrade Project)

The project has been renamed to RiverLink.

The design process reached its 60% design milestone in December 2016 following a series of community workshops in September and October. This 60% milestone recommended a river channel and stopbank toe. Stopbank design has progressed and a draft 3D model is currently being prepared, this will be workshopped with the Hutt Valley Flood Management Subcommittee in February 2017.

A project gateway website was launched in September 2016. This provides an overview of the project and links out to each of GWRC, HCC's and NZTA's website for more detailed information on the individual components of the project. The website includes a video overview of the project to provide introductory information about the project, this video is available in both English and Te Reo Māori.

Property purchase continues steadily with 7 of 117 properties purchased, and 31 other properties at various stages in the purchase/sale process. Property acquisition is being managed by The Property Group.

NZTA are progressing their indicative business case for the Melling Intersection Improvements.

HCC and GWRC are collaborating to host a pop up beach within the city centre reach over the remainder of the summer. This is being done to provide information about RiverLink and encourage people to think about the potential recreational opportunities along the river. This will link with HCC's arts programmes including Jazz by the River and Common Ground. It will feature both a beach, shipping container and coffee cart. The container, coffee cart and entertainment will be in place between 3 February and 13 February, and again between 3 March and 13 March, with a focus on higher usage for weekends.

(b) Hutt River Environmental Strategy (HRES) Review

Phase 2 of the HRES is progressing. In this Phase, we are using the community and stakeholder feedback gathered in Phase 1 to develop a document which sets the vision, objectives, actions and performance measures for the future environmental enhancement of the Hutt River/ Te Awa Kairangi corridor.

Revisions to the existing governance structure are being explored as part of this work. The new HRES will recommend a management structure that can effectively and collaboratively drive the day to day management of the Hutt River/ Te Awa Kairangi toward to the vision.

Once the Strategy is in draft (March 2017), workshops will be held with our key partners including iwi, HCC and UHCC. A final draft will then be provided to the community for comment (May 2017). The HRES is anticipated to be finalised in June 2017.

2.8.2 Otaki FMP Implementation

Otaki river walkway and cycleway signage was installed at the end of 2016 and continues to be popular. We have received positive feedback about both the signs and information booth.

2.8.3 Waikanae FMP Implementation

Jim Cook Park stopbank upgrade project commenced in January and is on track to be completed on programme. Further details are included in a separate report.

2.8.4 Waiwhetu Stream

Damage from recent storm events has affected a number of locations along the Waiwhetu stream, generating public enquiries. Two locations are being further investigated, Waiwhetu Stream Weir adjacent to the Open Polytech and right bank between Hutt Park Bridge and Seaview Road Bridge. HCC have indicated that they would assist with any remedial works required in these locations.

2.9 Operations, Delivery and Planning

The unsettled weather during the last quarter has caused numerous flooding events in many of the western river schemes. The most significant event occurred on 15 November 2016 ranging from 5 – 8 year return period in western rivers. Flood damage estimates of some \$400,000 resulted. This is proposed to be funded from savings in other Flood Protection projects and revenue. We will confirm in the third quarter whether it will be necessary to draw funds from flood contingency fund.

Staff coped extremely well to respond to this event given the difficulties that result from the significant Wellington earthquake the previous day. Damage repairs are underway and will take some time to complete. The wet and blustery weather conditions have also resulted in a lot of trees falling into smaller watercourses and staff have been busy clearing these up.

A successful walkover of the Waikanae River was held on 9 December with the members of the public and the Friends of the Waikanae River. Approximately 60 people participated in the walkover. Otaki Operations staff also had an informal walkover on the Otaki River with representatives of the Nga Hapu o Otaki to obtain feedback on our river works programme and support the relationship.



Waikanae River Walkover 9 December 2016

Channel maintenance work has been completed in the Waingawa and Mt Bruce river schemes. A river realignment project was completed at Hidden Lakes to relieve erosion potential on the slip face where the Land Management Department had planted poles this season. The landowner at this site agreed to allow a further 20 metres of channel widening and vegetation removal in order to restore the channel to design width. The Waingawa river survey cross-sections lines have also be cleared in preparation for survey work this summer.

In the Lower Wairarapa Valley Development Scheme area significant willow cabling has been undertaken at Tuckers (xs163) to complete the final year of the three year work programme.

Gravel extraction activities continue across the Wairarapa area. A significant land based gravel site has been developed in the upper Mt Bruce reach at the Wyeth property.

Staff inspected the Barrage Gates and all pump drainage sheds on 14 November following the earthquake and observed no damage. Annual meetings of the four pump drainage schemes were held in December 2016.

There has been continued focus on developing the condition assessment rating methodology and updating supporting documents for the notification of the western resource consents. These were submitted to GWRC Environmental Regulation prior to Christmas. It is proposed to notify the Western Consents in early February 2017.

Progress has been made in a number of asset management areas, including engaging consultants to complete the comprehensive safety review (CSR) for the Barrage Gates. The process to revalue our infrastructural assets has also commenced.

2.10 Investigations, Strategy and Planning

2.10.1 FMP Development

The hearing for the draft Waiohine FMP planned on 22 and 23 August was deferred due to hearing committee members being unavailable. We will work with CDC, SWDC and this Council on the best way to proceed in a collaborative process. An independent audit of the hydrology, flood modelling and mapping has commenced. Delays to this project are having an impact on other projects in our FMP Development programme.

Rural option development continues for the Te Kāuru Upper Ruamahanga FMP. A discussion document setting out the rural options was presented to the subcommittee in December and we will receive feedback on this in February. We are also discussing the concepts in this draft with stakeholders and iwi. A working group including MDC representation will commence work soon on developing options for the Masterton urban reach of the Waipoua River.

2.10.2 Investigations and Strategy

Gravel analysis reports have been completed for the Otaki River and the Waitohu Stream and the recommendations from this analysis workshopped with staff. Reports are nearly complete for the Hutt/ Te Awa Kairangi and Waikanae Rivers

The review of the Flood Warning System (in conjunction with Environmental Science, WREMO and Community Engagement) has been completed and a report received from an independent consultant (GNS Science). An implementation plan is now being developed to determine how to best achieve the recommendations of the report and to feed into the LTP process.

Hydrology is nearly complete to feed into an update of the Porirua Stream flood maps in the first half of 2017. PCC officers plan to include this in a District Plan change later in 2017. A cross section survey will be carried out in early 2017 on the Mangaone Stream to allow us to update the flood mapping for this area.

We are leading the roll-out of Aqua Republica, a serious game of river basin management (integrated catchment management). We will test its usefulness as an education and team building tool with different staff from across the organisation who could consider using it on their projects and programmes. It shows promise as an activity to carry out with stakeholders, decision makers or as part of community consultation. We have free use of the game due to our support for its implementation in the Eco Challenge, a game for school students that was held across the country last year.

3. Biodiversity

3.1 General

Department staff are continuing to take a lead role in managing the cross-department Mahi Waiora project. This project aims to bring rural landowners up to speed with new provisions in the proposed Natural Resources Plan. It aims to inform them of the new requirements, particularly those related to land management activities that can affect fresh water, and also the support that is

available from GWRC to sustainably manage their land. Staff from across the Environment and Catchment Management groups are also receiving training in how to represent GWRC's different functions with 'one voice' when engaging with landowners. The external engagement component of the project is being developed with the Marketing and Communications department and will be delivered during 2017.

3.2 Biodiversity Management

3.2.1 Key Native Ecosystems

The Biodiversity and Environmental Science departments have finalised the 'founding document' of the KNE programme. This report details the systematic conservation planning approach that has been used to identify, prioritise and manage sites, and helps to set the future direction of the programme.

Public concerns have postponed weed control work at the Rocky Bay KNE site. These concerns have been addressed in a joint letter to the Titahi Bay Residents Association from GWRC and PCC which explained the rationale behind using weed control to ensure biodiversity values are maintained and enhanced, and the importance of using weed control at this site to protect vulnerable local species.

Wellington Water has approved the use of loose pellet bait in bait stations and bait bags in the Wainuiomata Mainland Island, which is part of the Wainuiomata/Orongorongo KNE site and within the Wainuiomata/Orongorongo Water Collection Area. Using loose pellet bait is expected to greatly improve rat control at this important site.

Intensive mouse control has been carried out in some locations within the Baring Head/Ōrua-pouanui KNE site due to the increased threat of mice preying on native lizards. The removal of sheep and cattle grazing from the site has led to an increase in mouse-friendly habitat. Lizards are regularly spotted during bait station servicing at both Baring Head and Whitireia Park where mouse control is in place, after never previously being seen by staff. The Friends of Baring Head Trust community group received extra funds to carry out the project. Annual monitoring will gauge the effects on both mice and lizards populations.



Figure 1.
One of five
young forest
geckos
discovered
at Baring

3.2.2 QEII Covenant Support

GWRC is supporting the QEII Trust to actively manage the Stiven covenant near Masterton, to protect the region's best known population of Gardner's tree daisy (a Threatened-Nationally Critical species). The site is important for the survival of this species in the region and will be used for seed collection and propagation by QEII Trust and local botanical societies.

3.2.3 Wetlands

A new position has been created in the Biodiversity Management Team to meet the expected increase in demand from landowners for support with wetland restoration. A letter has been sent to landowners with significant wetlands on their properties, as part of the Mahi Waiora project. The letter describes changes to landowner responsibilities under the PNRP and the support and incentives that are offered to landowners through the Wetland Programme.

Three new landowners with significant wetlands have signed up to the Wetland Programme; Le Grove wetland in eastern Wairarapa, the Unknown wetland 40, north of Waikanae on the Kapiti coast, and Gretel Dick wetland located near Masterton. Two of these wetlands are mānuka-dominated fens and the third is a swamp containing mānuka-*Olearia virgata* shrubland, all of which are relatively intact and rare within the surrounding landscape.

3.2.4 Fish Passage Restoration

Biodiversity staff visited Queen Elizabeth Park accompanied by staff from the Parks department to conduct rapid fish passage assessments of known structures. The information obtained from this visit will be used to assist with the development of a Fish Passage Restoration Strategy for the park.

3.3 Biodiversity Advice and Advocacy

3.3.1 Biodiversity Advice

The Biodiversity department is collating a GWRC submission on the Department of Conservation (DOC) draft Wellington Conservation Management Strategy (CMS). The CMS is a strategic document that sets the direction for how DOC will manage land and focus their work over the next decade. Comments from several departments will be collated into a submission to be included in the mid-March Council bulletin.

Biodiversity staff coordinated a GWRC submission on the draft National Strategy for Environmental Education for Sustainability (EEfS). The submission concluded that there is a clear alignment between GWRC's purpose and activities and the intent of the draft Strategy.

Staff managed the Request For Proposal process for an inter-regional council project developed by the Biodiversity Working Group and sponsored by the BioManagers Group. The project is to develop a guidance document 'Biodiversity Offsetting in New Zealand' to support good practice in biodiversity offsetting within the RMA context. The project team have secured the services of a very experienced contract team, which includes some of New Zealand's foremost biodiversity offsetting professionals. A first draft of the guidance is due at the end of March 2017.

Biodiversity staff responded to a request for advice on the draft ‘Aorangi Restoration Trust Ecological Restoration Strategy 2016-2025’. Our advice provided a range of suggestions for the Trust to consider. These included the need to secure ongoing funding as a top priority, the need for adequate baseline surveys to guide management actions, and suggestions on how to strategically manage pest animals and weeds in the project area.

A project is underway to assess options for land use of some areas of Kaitoke and Queen Elizabeth Park regional parks. These areas have been under grazing leases, and the Parks department has asked Biodiversity to recommend how they could be used or restored in future. A report is expected to be completed in April and may inform amendments to the Parks Network Plan, as part of the review scheduled for this year.

3.4 Collaborative Restoration: Wairarapa Moana Wetlands Project

A visitors’ guide entitled ‘*Wairarapa Moana Wetlands, Sea of Glistening Waters*’ has been published and is now available in I-Site centres throughout Wairarapa as well as on the Wairarapa Moana Wetland Project website, www.waiwetlands.org.nz. The guide provides maps, local information and descriptions of the facilities accessible at key visitor sites, and describes the wildlife that visitors are likely to see at each site. It was produced by GWRC staff working alongside project partners.

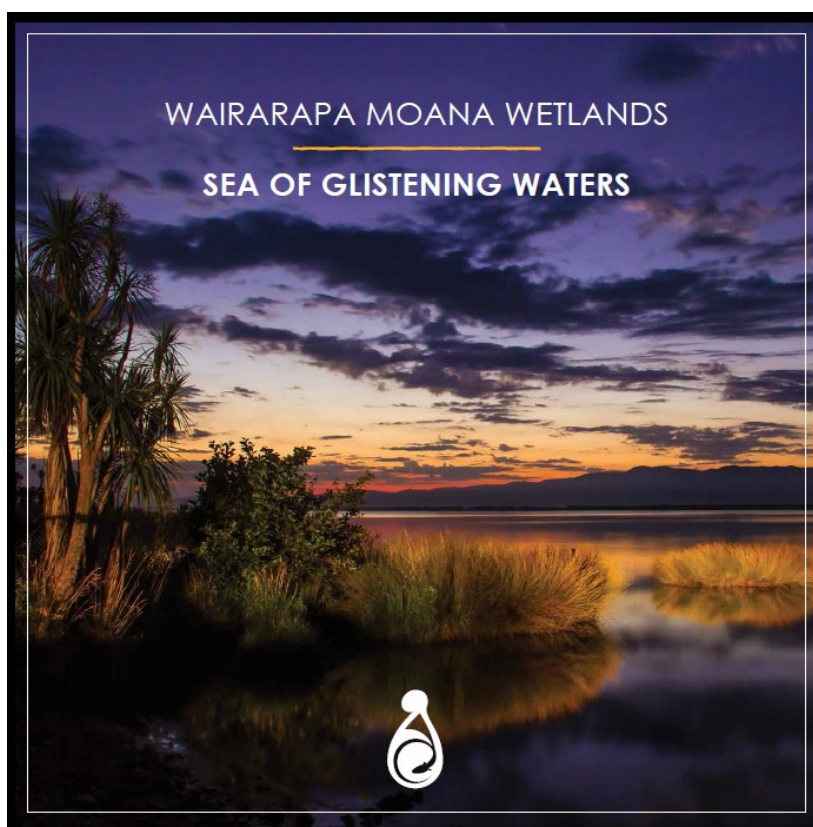


Figure 2.
Cover of the
new
'Wairarapa
Moana
Wetlands,
Sea of
Glistening
Waters'
visitor guide

An ecological restoration plan has been developed that focuses on opportunities for community involvement in restoration at Lake Domain, near Featherston. To progress this in 2017, a planting plan has been prepared for an area adjacent to the Barton's Lagoon outlet stream at the lake edge, and this will be planted this coming season by the Featherston Youth Programme.

In order to protect nesting bird species in Wairarapa Moana, including the endangered bittern and spotless crane, predator control operations have been increased throughout the breeding season.

3.5 Collaborative Restoration: Porirua Harbour and Catchment Project

The Biodiversity department has confirmed funding for two community initiatives, through the contestable fund available to volunteer restoration groups in Te Awarua-o-Porirua Harbour catchment. The projects both involve multiple groups working at a range of different sites around the catchment.

Additional traps are being installed around Te Awarua-o-Porirua Harbour in response to a review of the pest animal control network. These traps will target mustelids, rats and hedgehogs to better protect breeding birds, including the recently confirmed threatened spotless crane breeding at the Pauatahanui Wildlife Reserve. Installation is now complete in Camborne/Mana, Whitireia Park to Porirua Stream mouth, Papakowhai/Whitby, Paekakariki Hill Road and Grays Farm.

The Pauatahanui Inlet Cockle Count, run by the Guardians of Pauatahanui Inlet and supported by Biodiversity staff, took place on Sunday, 3 December. The Cockle Count is the longest running “citizen science” ecological monitoring project in New Zealand, and has been carried out every 3 years since 1992. The participation of staff from across GWRC, volunteering their free time, was crucial to the successful delivery of the event, which will provide important information on the health of Te Awarua-o-Porirua Harbour.

3.6 Biodiversity Advocacy

A 'Spread the Word' workshop was delivered as part of Restoration Workshops, a joint initiative between GWRC and a range of partner organisations. The workshop was for community volunteers involved in environmental restoration projects, and focused on how to successfully promote their activities and key messages.

Biodiversity and Environmental Science staff represented GWRC at two Tuhono i te Ao careers events in Porirua and Lower Hutt. These events were attended by 1,620 students from 32 schools and consisted of a range of interactive science exhibits to inspire Māori and Pasifika students into science.

4. Environment Management

4.1 Harbours

The waverider buoy off Baring Head which measures wave height and swell information (provided by NIWA under contract to GWRC) was removed ashore for regular servicing and overhaul between 4 and 10 October 2016.

The annual *Skyshow* harbour fireworks display successfully took place on 5 November, with good weather experienced. Harbours staff provided support for the event by with a presence on the water on the evening of the event to monitor and provide advice where required to recreational vessels out to watch the firework.

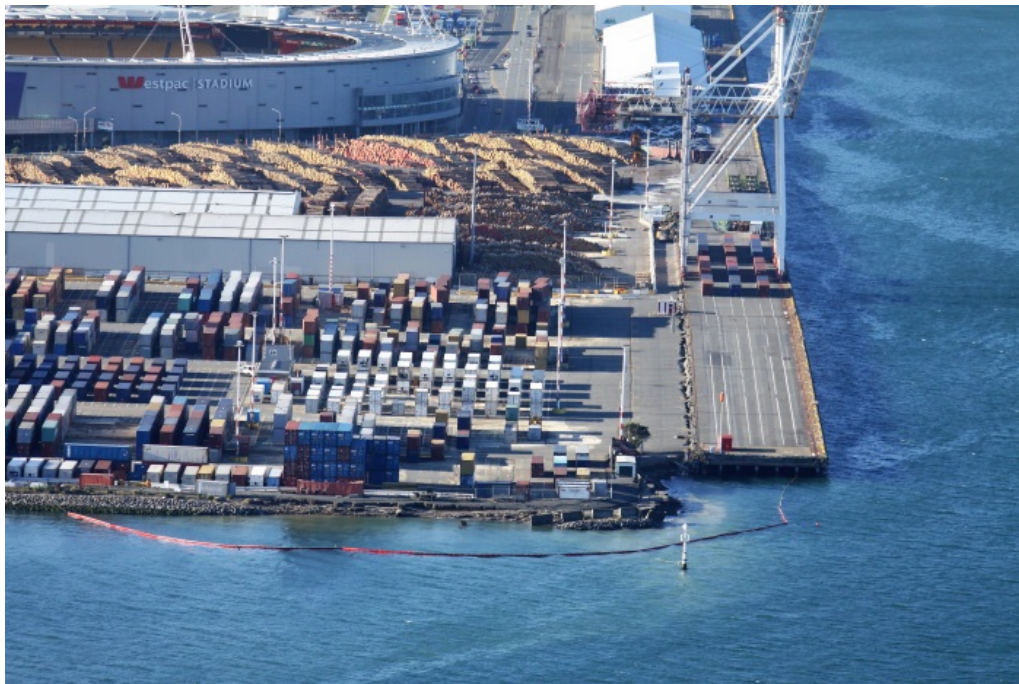
The Beacon Hill Communications Station was undamaged and operated throughout events during and post the Kaikoura earthquake of 14 November. All navigation aids remained operational. The duty Beacon Hill Communications Officer was shaken by the earthquake, and had a busy time communicating thereafter. Standard procedures for earthquake and tsunami notifications were followed. Harbours offices in Meridian Building suffered no significant damage and were usable throughout.



Four ferries anchored in Wellington Harbour at daylight after the earthquake

A much-planned Marine Oil Spill exercise scheduled for 16 November was cancelled, with the agreement of Maritime New Zealand, due to earthquake-recovery work taking place.

Due to the significant damage to some of the southern wharves, a 'Harbourmaster's Directive' promulgated a restricted area for recreational craft seaward of that area from 18 November until further notice. On the same day, sections of red floating harbour boom were deployed along the south end of Thorndon Container Terminal to prevent debris from the slumped land area from potentially floating away. On 1 December two large temporary marker buoys were also deployed to designate the outer limit of this area to provide guidance for recreational boaties.



View of CentrePort's Thorndon Container Terminal area, damaged by the earthquake

On 20 November and at short notice, five Navy ships returning north from their relief work off Kaikoura called into Wellington on their way north to Auckland, where they had been planned to be earlier for RNZN 75th Anniversary commemorations. Five vessels were in Wellington, and assistance was provided to Wellington Police Maritime Unit (staff and vessels) to provide adequate on-water security patrols and supporting safety management. Another 'Harbourmaster's Directive' promulgated a moving restricted area around the Navy ships whilst under way and at anchor, which was widely promulgated by VHF radio from Beacon Hill Communications Station.



Navy ships enter Wellington Harbour on 20 November 2016

Five

2 December saw the maiden arrival of the new coastal cement carrier *Aotearoa Chief*, operated by Swire Shipping and working for Golden Bay cement. The new ship is anticipated to make hundreds of future visits to Wellington bringing thousands of tonnes of cement for use in local buildings and infrastructure.



New coastal cement carrier *Aotearoa Chief*

On 23 December the 348-metre length cruise ship *Ovation of the Seas*, of 168,666 gross tonnage, berthed at Aotea Quay, and became the largest ship to ever enter Wellington Harbour. The ship subsequently called at the port on 4th and 16 January 2017



Ovation of the Seas sails past Cook Strait ferry *Kaitaki*

5. Parks

While there was negligible damage to parks from the 14 November earthquake, the floods on 16 November caused closures in several areas. There were washouts and damaged structures in the Korokoro Valley, and at Dry Creek (Belmont Regional Park) the creek bed shifted onto the road alignment. There was also significant new landslip activity on hillsides at Whitiriria Park. All repairs were completed within three weeks, which was a testament to the preventative maintenance programme and the quality of previous works.

The recently up-rated PIC (Potential Impact Classification) rating for Birchville Dam (Akatarawa Forest) generated a stream of dam safety tasks prior to November 14, which was substantially further accelerated by the earthquake. Geotechnical engineers immediately assessed the abutment rock to ensure there is adequate holding strength. New pipe work and valves have now also been installed on the main intake, and the historic intake system has been reactivated to reduce the reservoir level height. Further work to activate the scour pipe system (a backup water management tool) is also planned. We liaised closely with a range of stakeholders and the local community to ensure everyone was kept well informed, which was well received.





Anti-clockwise from top: clearing sediment from the intake tower; original intake valve and pipe; the replacement unit

Over recent months we have been in discussions with several commercial beekeepers as this industry continues to rapidly grow and the operators seek land to ‘winter over’ their hives after they come off the prime Manuka flowering period. Parks has a range of beekeepers with varying hive numbers over our network. We expect to sign up a new 1-year licence shortly for an operator to place several hundred hives in the Valley View (Akatarawa) Forest, where the skid sites (tree laydown areas) and minor roads provide good access to regenerating native forest. Over the next year we want to review and re-set the way in which we manage beekeeping on our parks network, to integrate well with other parks activities, support biodiversity and enhance this source of external revenue.

Electronic locks were installed on selected gates to the Akatarawa Forest as part of a planned trial around a keyless locking system. This sort of system allows more controlled access to the forests, and also allows us to track who has been in and out of the forests. To date this has proceeded well and the system monitoring and reports are proving very useful. We are planning to install these locks all forest entrances by the end of the financial year, and roll out to a number of other parks which will greatly improve overall security and ease of use.

Construction of the new Western Depot office near the Queen Elizabeth Park (QEP) nursery is complete, see below. A high-speed data connection has been installed to provide a stable communications platform, and cabling will support later installation of Electric Vehicle (EV) chargers. The Principal Ranger (Western) has relocated his office to QEP and the Park Rangers are also working out of the new office, pending completion of the new Visitor Hub buildings at Mackays Crossing in August 2017.



A further 1km of stream retirement fencing was completed in QEP, marking further progress towards complete stock exclusion from streams in the park. Further north east, the first kilometre of the NZTA funded stream sediment removal works took place with the balance of the works to be undertaken in early 2017. We are finalising an agreement with the Mackays to Peka Peka (M2PP) Alliance to install a new bridge over the ford near the nursery, given that they wish to close off the direct stock truck access to State Highway 1 to improve road safety.

At East Harbour Regional Park, the Friends of Baring Head obtained \$50,000 towards the Baring Head Lighthouse Complex Restoration project from the Stout Trust. GWRC is working with the Friends on this project and supporting their communication and fundraising efforts, with the clear expectation that restoration works is to be funded from external sources.

A major film project, 'Palisades', took place for a number of weeks at Kaitoke Regional Park. It included a large fort set built on the Top Terrace area. The filming activity has had a significant impact on park lands during the wettest spring in 90 years. The film company has complied with their contract conditions, completing reinstatement works during December. Some further remediation will be carried out in autumn.

The 'Toyota Kiwi Guardians' programme is a DOC-Toyota initiative to get more Kiwi kids out into nature. Through Nature Connections both Battle Hill Farm Forest Park and Kaitoke Regional Park are now official partner sites in this national programme, which will help to further raise the profile of our parks.

Following months of preparation the Wellington branch of the Riding for the Disabled Association (RDA) moved into Battle Hill Farm Forest Park and riding operations began in October. This has been a seamless transition and RDA has quickly become an integral part of the park. Construction of their temporary arena in the Homestead paddock is now finished and planning continues for the proposed permanent covered arena in Abbotts Field. RDA are in the final stages of preparing this proposal which will involve a two month public notification period.



Four new powered camping sites have been developed at Kaitoke Regional Park near the rangers office, and were ready to use prior to the usually peak Christmas period. However, while families have been testing the forecasts, the wet and changeable conditions have seen early departures and much less camping overall during the school holidays at both Kaitoke and Battle Hill.

At Dry Creek however, with its mainly budget tourist camping clientele and proximity to Wellington, it has been common to have 30 to 40 people staying each night. Following works to improve access, these campers can park in a quiet space near the toilets through the summer. Information on the popular 'Camping mate' App was updated to identify this change. Planning for a second toilet block is underway, to provide for budget campers all year around in the Dry Creek area.



The Greater Wellington Great Outdoors summer events programme has been underway since early January across the parks network. The Parks team is seeing evidence of a successful promotional campaign with many more first-time park visitors to events and a much more diverse range of attendees. While the weather has caused several cancellations, people are turning up enthusiastically on fine days. The Nature Discovery Treasure Hunt (KRP – 450 people) and the Battle Hill Farm Day (1200 people) have been particular highlights.

Led by GWRC, the Rimutaka Cycle Trail partners obtained \$221,000 for trail improvements from MBIE’s Maintaining the Quality of Great Rides Fund. This grant matches the contributions from each of the relevant partners.

Following extensive liaison with Wellington City Council and other Territorial Authorities, DOC and WREDA, all parties have agreed to fund development of a Regional Trails Framework. This will develop a collective view of land managers and stakeholders in the off-road multi-use trail network and inform future governance and funding decisions. TRC Tourism have been commissioned to undertake development of the Regional Trails Framework, reporting to a steering group of park agency managers.

The website version of the Parks Network Plan has been updated to encompass the three amendments previously approved by Council (Parangarahu Lakes, Baring Head, Akatararawa motorised recreation activities map and camping policy) in preparation for its overall review. A briefing about the overall plan review will be presented at a later date.

The ongoing regional parks and forests community research programme encompasses regular surveys of park visitors to determine parks visited and levels of satisfaction with park visits. The last survey was undertaken in 2014. Visitor intercept and telephone surveys will be taking place again in 2017 with additional questions to explore issues relating to new and emerging recreation activities such as flying UAVs (drones) and use of e-bikes, and identifying possible barriers to participation. This research will also inform the Parks Network Plan review.

6. Climate Change

6.1 Electric Vehicles

GWRC recently adopted an ‘electric vehicle first’ policy which prioritises the purchase of electric vehicles (EV) as vehicles come up for replacement.

GWRC now owns 3 EVs, one fully electric Hatchback and two Plug in Hybrid SUVs.

A charger was installed at Shed 39 in late 2016 with budget provision for a switchboard to be installed as the fleet increases. The Masterton office is currently in the process of having a charger installed and an Outlander added into the fleet, and a charger has been approved for installation at the Upper Hutt office. Cabling has been installed at the new Western Depot (Parks), and chargers for fleet vehicles will eventually be installed at that site. Cabling will also be installed at the new Visitor Hub QE Park, to enable chargers to be installed there as the need arises.

A report to the Sustainable Transport Committee meeting of 14 February provides an overview of progress with electric vehicles nationally and in the Wellington region, along with more detail on GWRCs activity. This includes GWRCs role as convenor of the Wellington Region Electric Vehicle Working Group (REV-WG) which operates as a coordinating mechanism for the promotion of electric vehicles (EV) generally, and in relation to the development of charging infrastructure. REV-WG is comprised of officers from all councils across the region and meets quarterly. REV-WG meetings include a public forum which is open to sector stakeholders and interested parties from throughout New Zealand.

6.2 Climate Change Assessment Report: Regional downscaling

High resolution climate change projections have been commissioned from NIWA and are expected to be delivered in May. This project will deliver high resolution risk maps (GIS layers), and a Climate Change Assessment Report concentrating on mid- and end-of-century projected climate changes and impacts associated with a moderate and a high greenhouse gas emissions scenario.¹

While the 2016 Ministry for the Environment report *Climate Change Projections for New Zealand* provides the latest national-scale projections² and includes commentary on what this might mean for regional climates, regional-scale guidance with detailed high resolution regional mapping will ensure the climate change risk assessments applied to GWRC initiatives utilise the best available data.

The projections will be applicable across all GWRC departments and will provide an internally consistent resource that will inform climate change risk assessments for planning and decision making. The work progresses a number of information related actions set out in the Climate Change Strategy Implementation Plan.

The resource will also be used for community and stakeholder engagement, for example, for the three Whaitua that are to be established, as it will show which

¹ The moderate emission scenario will be based on an IPCC Representative Concentration Pathway (RCP) of 4.5, and the high scenario on an RCP of 8.5.

² To mid- and end-of-century based on different global emission scenarios.

areas of these catchments and resources are under the greatest risk from climate change.

6.3 Consideration of climate change

The GWRC Climate Change Strategy sets out the Council's commitment to taking a proactive approach to managing the risks associated with a changing climate, to reducing the emissions associated with its activities, and to contributing to the enhanced resilience of the region by considering climate change in its decision making processes.

To this end, a requirement to consider climate change in the development of all new initiatives, and to include a summary of the assessment in council and committee reports is planned for implementation in May.³

The requirement is designed to ensure that the consideration of climate change becomes an integral part of all of GWRCs work. A 'climate change consideration guide' that will assist staff with preparing assessments and writing report entries has been drafted. Workshops for staff are scheduled for February and March and as these are completed the guide will be finalised. Climate change will also be considered as part of the development of the 2018 Long Term Plan.

The consideration of climate change requirement applies to both:

- How a changing climate could impact Council's functions and services in the future (E.g. through sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts (commonly referred to as Climate Change Adaptation)
- And the effect Council's activities have on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a result of a Council project) and the actions taken to address those emissions (commonly referred to as Climate Change Mitigation)

7. The decision-making process and significance

No decision is being sought in this report.

7.1 Engagement

Engagement on this matter is not necessary.

³ This action is consistent with Policy 2.1 in the GWRC Climate Change Strategy "Consider the effects of climate change as an integral part of planning and decision-making"

8. Recommendations

That the Committee:

- 1. Receives the report.*
- 2. Notes the content of the report.*

Report approved by:

Report approved by:

Report approved by:

Nigel Corry
General Manager,
Environment Management

Wayne O'Donnell
General Manager,
Catchment Management

Luke Troy
General Manager,
Strategy