

I hereby give notice that an ordinary meeting of the Catchment Operations Committee will be held on:

Date: Wednesday, 11 August 2021
Time: 9.30am
Venue: Tararua Room
Horizons Regional Council
11-15 Victoria Avenue, Palmerston North

CATCHMENT OPERATIONS COMMITTEE

AGENDA

MEMBERSHIP

Chair	Cr DB Cotton
Deputy Chair	Cr AL Benbow
Councillors	Cr EM Clarke
	Cr SD Ferguson
	Cr EB Gordon
	Cr FJT Gordon
	Cr RJ Keedwell
	Cr WM Kirton
	Cr JM Naylor
	Cr NJ Patrick
	Cr WK Te Awe Awe
	Cr GJ Turkington

Michael McCartney
Chief Executive

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for further information regarding this agenda, please contact:
Julie Kennedy, 06 9522 800

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REGIONAL HOUSES	Palmerston North 11-15 Victoria Avenue	Whanganui 181 Guyton Street		
DEPOTS	Levin 120-122 Hokio Beach Rd	Taihape 243 Wairanu Rd		
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AGENDA

1 Welcome/Karakia

2 Apologies and Leave of Absence

At the close of the Agenda no apologies had been received.

3 **Public Forums:** Are designed to enable members of the public to bring matters, not on that meeting's agenda, to the attention of the local authority.

Deputations: Are designed to enable a person, group or organisation to speak to an item on the agenda of a particular meeting.

Requests for Public Forums / Deputations must be made to the meeting secretary by 12 noon on the working day before the meeting. The person applying for a Public Forum or a Deputation must provide a clear explanation for the request which is subsequently approved by the Chairperson.

Petitions: Can be presented to the local authority or any of its committees, so long as the subject matter falls within the terms of reference of the council or committee meeting being presented to.

Written notice to the Chief Executive is required at least 5 working days before the date of the meeting. Petitions must contain at least 20 signatures and consist of fewer than 150 words (not including signatories).

Further information is available by phoning 0508 800 800.

4 Supplementary Items

To consider, and if thought fit, to pass a resolution to permit the Committee/Council to consider any further items relating to items following below which do not appear on the Order Paper of this meeting and/or the meeting to be held with the public excluded.

Such resolution is required to be made pursuant to Section 46A(7) of the Local Government Official Information and Meetings Act 1987 (as amended), and the Chairperson must advise:

- (i) The reason why the item was not on the Order Paper, and
- (ii) The reason why the discussion of this item cannot be delayed until a subsequent meeting.

5 Members' Conflict of Interest

Members are reminded of their obligation to declare any conflicts of interest they might have in respect of the items on this Agenda.

Minutes of the sixth meeting of the eleventh triennium of the Catchment Operations Committee held at 9.30am on Wednesday 14 April 2021, in the Tararua Room, Horizons Regional Council, 11-15 Victoria Avenue, Palmerston North.

PRESENT Crs DB Cotton (Chair), AL Benbow, EM Clarke (till 10.23am), SD Ferguson, EB Gordon, RJ Keedwell, WM Kirton, and JM Naylor.

IN ATTENDANCE Chief Executive Mr M McCartney
Committee Secretary Mrs JA Kennedy

ALSO PRESENT At various times during the meeting:
Mr R Strong (Group Manager River Management), Mr C Grant (Acting Group Manager River Management), Dr J Roygard (Group Manager Natural Resources & Partnerships), Mr G Cooper (Manager Land & Partnerships), Ms K McDowell (Senior Communications Advisor), Mr J Foxall (Area Engineer), Mr D Morrison (Ministry of Primary Industries), Mr S Barber (public speaking), and a member of the press.

The Chair welcomed everyone to the meeting.

APOLOGIES

COP 21-40 *Moved* **Clarke/B Gordon**

That the Committee receives apologies from Crs F Gordon, N Patrick, and J Turkington.

CARRIED

PUBLIC FORUMS / DEPUTATIONS / PETITIONS

Mr Stuart Barber was granted public speaking rights at 10.00am to speak about the Foxton East Drainage System.

SUPPLEMENTARY ITEMS

There were no supplementary items to be considered.

MEMBERS' CONFLICTS OF INTEREST

There were no conflicts of interest declared.

CONFIRMATION OF MINUTES

COP 21-41 *Moved* **Ferguson/Benbow**

That the Committee:

***confirms** the minutes of the Catchment Operations Committee meeting held on 9 December 2020 as a correct record, and notes that the recommendations were adopted by the Council on 16 December 2020.*

CARRIED

Report No.	21-85
Decision Required	

RIVER AND DRAINAGE ENGINEERING REPORT

1. PURPOSE

- 1.1. The purpose of this item is to report on progress with river and drainage activities for the period April 2021 - June 2021.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 21-85.

3. FINANCIAL IMPACT

- 3.1. Funding provision for all activities reported on in this item is either included in the River and Drainage General or River and Drainage Schemes Activity sections of the 2018-28 or 2021-31 **Long-term Plans (LTP)**; is covered by an approved carry-forward of unexpended budget from the 2019-20 financial year; or additional approval will be specifically sought by way of recommendation in the item.

4. SIGNIFICANT BUSINESS RISK IMPACT

- 4.1. There are no significant risks relating to the adoption of the recommendations contained in this report.

5. CLIMATE CHANGE IMPACTS

- 5.1. While this item doesn't specifically consider climate change impacts clearly climate change is a significant influence for the activity as a whole, reflected in the fact that the current 30 Year Infrastructure Strategy highlights climate change as a significant issue.

6. DISCUSSION

- 6.1. This period has been a busy one for river management with the annual condition assessment of assets being undertaken as well as work on the Climate Resilience projects and Te Pūwaha.
- 6.2. Progress in delivering the Climate Resilience Projects is summarised in a separate report to this Committee report. Without duplicating the content of that report, following the departure of Ramon Strong the Project Team has taken the time to update the project plans to ensure that they have a robust programme for delivery of these key infrastructure projects. The development of these Plans was aided by a productive meeting, on 31 May, with representatives of Kānoa - Regional Economic Development and Investment Unit and the River Managers Special Interest Group, where the key deliverables and reporting requirements were discussed in some detail.

- 6.3. At the start of July a workshop was held in Wellington for the leads of Climate Resilience projects across the Country. This was a well-attended workshop which also involved representatives of Kānoa and a number of consultants who are supporting the River Managers in the delivery of these projects nationally. At the workshop we received a clear message from Kānoa that many of the key outcomes from these projects that government is seeking are associated with job creation and social procurement. To that end staff are currently working with consultants Beca, and drawing on experience from other regional councils and territorial local authorities, to fully embed these outcomes into the delivery of our Climate Resilience Projects.
- 6.4. Completion of the **Rural Upgrade Project (RUP)** also remains a priority, with the last outstanding stopbank work being that at Te Arakura Road on the left bank of the Oroua River between Feilding and Awahuri. To progress this project staff will be meeting with Iwi, landowners and other interested parties to work together and develop a plan that will enable the completion of the work.
- 6.5. Staff have awarded the contract to Palmerston North based company Third Bearing Limited to undertake the **Local Government Act (LGA)** Section 17a review of river management activity. But due to current workloads and pressures, it has been decided to put this project on hold for 6 months.
- 6.6. Feilding Special Project – Reid Line Floodway has been progressing slowly with 6 properties already purchased, although we are aiming to purchase the remaining properties this financial year. Design is currently under way and working towards having a draft plan available for landowners to view in the next few months.
- 6.7. From a resourcing perspective there is a struggle to recruit skilled, experienced river engineers. In the river management operations group we have 9 engineers with varying degrees of skill and experience, 3 cadets and a high possibility of another 3 cadets due to the lack of applicants.

7. INVESTIGATIONS AND DESIGN

- 7.1. Over this reporting period there has been high demand to provide comment on a number of Plan Changes around the Region, particularly the Tara-Ika area in Levin as well as the Ashhurst growth areas.
- 7.2. The team have also played a critical role in providing designs and support to the team delivering the Climate Resilience and Te Pūwaha Projects as well as individual Schemes.

SCHEME REVIEWS

- 7.3. Council has committed to consider the current structure and management of River and Drainage Schemes. With this in mind a number of strategic workshops have been programmed, one of which will include the future arrangement and form of Schemes. It is therefore considered prudent to pause the programme of Scheme Reviews until a strategic direction is known. Notwithstanding this view there are some technical elements of the reviews that will need to continue to ensure that we continue to manage our assets in a sustainable and prudent manner.

HAZARD MAPPING – EAST OF LEVIN AND UPPER MANGAONE

- 7.4. As part of the Hazard Mapping Project consultants, Jacobs, have been engaged to build indicative flood models of the area to the east of Levin and the Upper Mangaone Catchment.
- 7.5. These models are in the final stages of completion with staff reviewing the outputs before the completed models are delivered. These models will provide valuable information about flood risk and can help to support important planning considerations such as the Tara-Ika development in Levin, as well as the O2NL roading project and the Kiwirail freight hub.

FLUVIAL PROGRAMME

- 7.6. In partnership with the Science and Environmental Data Teams Staff have been looking at the fluvial programme for the coming year. The programme looks at the gravel resource in our Rivers and helps to support our River Management operations as well as producing quality information to aid decision making in a regulatory context.

LOWER MANAWATU GRAVEL EXTRACTION

- 7.7. Staff have been considering the management of gravel in the Lower Manawatu River, particularly the reach between Ashhurst and Longburn. Over recent years a number of gravel beaches have grown and are starting to create problems. Work has begun, in partnership with Iwi and the Central Area Operations Team, to look at options and to develop a strategy for the management of this gravel.

FLOOD PROTECTION ASSETS PERFORMANCE ASSESSMENT

- 7.8. Work has begun to appoint a consultant to carry out an assessment of the flood protection assets, in the Lower Manawatu Scheme, in accordance with the Code of Practice that has been developed by River Managers nationally.
- 7.9. This risk based assessment will help to inform the long term management of our assets as well as the prioritisation of maintenance, renewal and replacement programmes for our assets.
- 7.10. Additionally, the outputs of this assessment work will provide valuable information to show how the Climate Resilience Projects in the Lower Manawatu will increase the resilience of the scheme.

ASSET MANAGEMENT

- 7.11. During this reporting period Asset Management Plans for each of the River Management Schemes have been produced. These form a linkage between the 30 Year Infrastructure Strategy in the Long Term Plan, and the operation of the River Management Schemes.
- 7.12. With the year-end inspection and condition assessment of our assets being undertaken staff have begun work on the revaluation and capitalisation of these assets. Whilst these processes are carried out annually, additional work is going in this year to develop these processes within the new **Asset Management Information System (AMIS)**. This additional work will help to ensure the powerful use of the AMIS in future years.
- 7.13. As well as informing the annual report the condition assessment and revaluation of assets is also critical for the re-insurance of these assets to ensure that we are carrying an appropriate level of insurance and demonstrating to insurers that we understand and manage assets well.

REGULATORY ADVICE

- 7.14. During this reporting period, advice was provided on a number of substantive matters. This regulatory work has included specialist advice on flood risk and the production of technical reports for consent applications, rezoning and subdivisions.

8. CENTRAL AREA

- 8.1. This reporting period had two distinct weather patterns. Prior to Easter the weather was settled with a long dry period, and only a few short periods of rain. The rain that we did have was not particularly heavy or long lasting.
- 8.2. Post-Easter we have had regular rainfall and two weekends when rain events put River Management Staff on alert, with the potential for rain to cause problems in the channels across the Manawatu.

- 8.3. Between the 26 and 28 June significant rainfall fell in the Tararua Ranges. This event had standby staff at Moutoa gates for a potential gate opening, with a peak flow of 1255.3 m³/s and stage height of 8.57m. Due to low peak flows, particularly in the Oroua and Pohangina Rivers, the gates were not opened.
- 8.4. While the major channels on the Western side of the Gorge (apart from the Manawatu) had insignificant flows, the majority of the minor rivers and streams along the Western side of the Tararua's from Turitea to Ohau had significant flows in them, and many breached their channel banks.
- 8.5. The Tokomaru River overflowed the stopbank, over a 200-metre stretch upstream of the Linton Main Drain confluence. The event was the largest recorded at the present site.
- 8.6. Both the Kara and Mangapukatea Streams jumped out of their respective channels in several places upstream of the stopbanks, and flooded farmland on Kara and Kingston Roads.
- 8.7. Significant ponding of land was experienced next to Shannon Wastewater ponds and **Horowhenua District Council (HDC)** were trucking waste to the ponds along Johnston Street.
- 8.8. The Lower Manawatu Scheme Catchment Community Meeting was held on 7 April 2021, chaired by Councillor David Cotton and attended by a small turnout of ratepayers.
- 8.9. Staff have continued to be involved working on the **Lower Manawatu Scheme Operation, Maintenance and Surveillance Manual (O, M&S Manual)**, with a Consultant. The work with the Consultant has now finished, and the Area Engineer and Operations Manager will finish off the final draft, with input from senior staff before the end of 2021. At present there are 4 major sections with approximately 260 pages, covering LMS overview, flood procedures, operation and maintenance procedures, and other related activities to the LMS.
- 8.10. Staff have continued to work closely with Horizons Biodiversity Team in response to the recent discovery of alligator weed in the city stormwater network. Inspections and removal in the Mangaone are ongoing.
- 8.11. Staff are assisting the Project Team with the RUP; the Makino Diversion Upgrade; and the Climate Resilience (Shovel Ready) contract works programmes. Works on the Stopbank Upgrade is essentially complete on the Kara, with only minor works to be finished off during next summer. The completed works were celebrated with Ngāti Whakātere.
- 8.12. Staff have had a number of meetings with Iwi around works programmes, issues of interest to both parties, and gravel.
- 8.13. Annual Inspections of all Scheme Assets have been undertaken, although somewhat delayed due to staff shortages, and recent weather events requiring a further round of inspections on impacted channels.

LOWER MANAWATŪ SCHEME

- 8.14. Works undertaken on the various rivers within the Scheme this period include the following:

MANAWATŪ RIVER

- 8.15. Rock has been stockpiled at Ruakawa Road for works planned in the 2021-22 Financial Year, to build some small groynes and help realign an active erosion site; with 300kg and 750kg grade rock stockpiled, along with some demolition concrete.
- 8.16. Progress is being made on the project to address the impacts of gravel build-up / beach development on the alignment of the Manawatu River between Palmerston North and Ashhurst. Several beaches required excavation of "high flow" channel to help in times of floods. It is intended to provide governance with an outline of the plan once developed, as

this will be a key milestone in the management of this reach. Discussions with Rangitaane over the management of this area of the channel has also been part of the process.

- 8.17. The debris from clearing the Fitzroy Groynes earlier in the year was burned, with remnants buried. Fresh piles of debris have also been removed from the groynes, and these are to be burned at later date. A couple of the concrete filled steel groynes have been damaged, and rock has been lost from the main groynes. A survey is needed to understand the full situation of the groyne damage, and this is planned for summer.
- 8.18. Work was completed on Massey Farms relating to the wetland adjacent to the Manawatū River; repairs to a drain at the toe of the stopbank, and fixing of stormwater outlets with new socks to remove the erosion risk to the stopbank.
- 8.19. Staff have monitored, met and worked with **Palmerston North City Council (PNCC)** across various projects this reporting period. These included progressing fruit trees being placed beside the river, and other structures beside the river walkway.
- 8.20. Scheme Staff have continued maintenance tasks along the Moutoa floodway, and around the Moutoa Sluice Gates and Tower, including the scheduled general running checks and inspections. The Electrical WOF and mechanical check were also completed. Painting of the Tower interior was completed by contractors.
- 8.21. Moutoa Floodway Gates were inspected regularly; with repairs and replacement to a number of gates undertaken, along with the dry gates. Tailings were smoothed out, the road was repaired to the bottom of the floodway, and fencing was also repaired.
- 8.22. General inspections and maintenance tasks were carried out: including stopbank mowing; spraying of vegetation growth on stopbanks and drains; repairs to rabbit and bull holes; fence repairs; floodgate and stopbank inspections; removal of vegetation on gravel beaches; repairs to rock lining at Foxton Beach; and repairs and maintenance of several floodgates.
- 8.23. All assets on the Manawatu have had an annual inspection, and this has been an extended exercise due to the fresh over the 26 to 28 June. A river survey will be carried out when conditions are suitable.

9. NORTHERN AREA

RANGITĪKEI RIVER CONTROL SCHEME

- 9.1. The settled weather conditions during the autumn and early winter months has enabled staff to complete planned operational work and prepare the scheme for the winter period. An area of poplar trees downstream of the Kakariki Bridge was cleared and is now being prepared for native planting. This will greatly enhance a very popular reach of the river that is enjoyed by many recreational users.

RANGITĪKEI STOPBANK UPGRADE & CONSTRUCTION OF CONCRETE FLOODWALL

- 9.2. The construction works to complete the final upgrade of 1,800m of Rangitīkei River right bank stopbank, from Walmac Farm through to Scotts Ferry on Parewanui Road was suspended in May, when ground conditions became unfavourable for work to continue. The decision to suspend work was a disappointment for those involved with the project as there was a high hope that the end of the sixteen year-long work stream would happen before winter. However, it is better to ensure the finished stopbank quality meets our design requirements rather than hurry work along in poor conditions. Residents at Scotts Ferry were notified of the project delay and advised that work would now be completed before Christmas 2021.

MAKIRIKIRI FLOOD CONTROL SCHEME

- 9.3. At the beginning of May a number of repairs were completed on the Mangatikutoko Dam to bring the structure up to an acceptable standard. Funding for this work was shared between three property owners and Horizons. With this work now completed the dam safety compliance monitoring will become a scheme responsibility and managed by the scheme engineer.

ANZAC PARADE FLOOD RESILIENCE STUDY

- 9.4. This project is running behind schedule primarily because of the amount of time it has taken with some key external agencies. This has taken much longer than anticipated.
- 9.5. The next stage of this project is engagement with all the other stakeholders. There will be three rounds of engagement as follows;
- Project Orientation.
 - Option identification, and
 - Option evaluation and selection.
- 9.6. A letter was sent to residents, homeowners and other stakeholders on 13 July informing them of the way forward, this letter had the support of both Iwi and **Whanganui District Council (WDC)**. Round one, with residents and homeowners will commence first where orientation to the project will occur. Two public engagement meetings will follow and finally there will be direct interaction with the other stakeholders like Government and CDEM.
- 9.7. This engagement process will occur between now and the end of this calendar year. The three rounds of engagement will then feed into the strategy. All things going to plan, I expect to see the Draft Strategy by mid- February.
- 9.8. Bruce Glavovic and Martīn Garcīa Cartagena from Massey University will be presenting an update to the Catchment Operations Committee.

10. EASTERN AREA

GENERAL

- 10.1. River levels throughout the Tararua District have remained very low though autumn and into June. This has allowed works plans to progress through to the end of the financial year in some rivers and streams. Trout spawning restrictions started on 1 April and these have prevented access to a significant number of waterways in the Eastern area from the 1 May.
- 10.2. The 22 of June saw a large rainfall event centred in the north eastern parts of the district which resulted in peak river flows in the Akitio, Ōwahanga and Upper Manawatū Rivers. This was followed by a large rainfall event on 27 June which was centred on the Tararua ranges and resulted in peak flows in the Mangahao and Mangatainoka rivers.
- 10.3. As a result of the June 27 event, incidents of flood damage have occurred on both the Mangatainoka and Mangahao rivers. Staff are currently liaising with landowners to quantify the damage and to develop repair programmes.
- 10.4. Gravel extraction remains extremely popular at the moment. The eastern team received applications for gravel extraction for the new financial year that were 300% in excess of the amounts that are allocable on the rivers and streams within the district. This is in stark contrast to the 2017-18 financial year, when only 19% of the allocation was applied for.
- 10.5. In April, Staff and Cr Benbow met with the Akitio Scheme Committee to discuss the future of the scheme. In 2018 it was agreed with the Scheme Committee that the Akitio Scheme would be put 'on hold' while the Tararua River Management Scheme initiated. It was further agreed that all parties would meet in 2021 to review the performance of the Tararua

River Management Scheme and to confirm whether the Akitio Scheme would be disbanded.

- 10.6. The outcome of the meeting in April concluded that the Akitio Scheme Committee were satisfied with the performance of the Tararua River Management Scheme and as such are happy to disband the Akitio Scheme. There is still a decision to be made by the Scheme Committee as to what they would like done with the residual scheme funds, which total \$18,594.73

MANGATAINOKA SCHEME

- 10.7. A significant programme of flood damage repair works, primarily occurring through the middle reaches, have been completed in March through to May. These works were primarily repair and addition of bank protection works, largely under-taken in concert with mechanical beach clearance with the aim of increasing active channel width and thereby decreasing future erosive power in the reach. It is gratifying to note that these works all appear to have stood-up well to the large flood event which occurred on 27 June.
- 10.8. The flood event in late June has resulted in significant erosion at and downstream of the **Tararua District Council (TDC)** Pahiatua town supply weir. The weir, which is situated in the Mangatainoka River downstream of Pahiatua, had been significantly raised by TDC contractors earlier in the year. Community concern over the increased weir height has been flagged and a meeting between Horizons consent compliance and TDC is scheduled to be held in July to discuss remedial work to the weir and surrounding areas.

TARARUA DISTRICT RIVER MANAGEMENT SCHEME

- 10.9. A significant length of vegetation clearance has been completed in various streams around the region including along tributaries to Mangaramarama, and Makakahi. This work has significantly improved the channel capacity of these streams and therefore reduced flood risk to the surrounding properties.
- 10.10. The length of the Ihuraua Stream was sprayed during April in order to reduce weeds and maintain channel capacity. Maintenance of this type for the Tararua Scheme is primarily divested to private landowners, however the Ihuraua Stream is classed as Schedule B for flood control and drainage thus Horizons retains responsibility for this reach.
- 10.11. Aerial spraying of the Eastern Manawatū area (a reach of the Manawatu River which spans from SH2 Napier Road to Oringi Road) was completed in April, primarily to target willow regrowth.

SOUTH EASTERN RUAHINE SCHEME

- 10.12. The period started with the completion of vegetation clearance on the Mangatera stream, which runs around Dannevirke. The works had been held up due to concerns within the community. A site meeting held in April managed to resolve the issues and works were completed by the end of that month.
- 10.13. Work has been undertaken with the Horizons Freshwater Team on the Tapuata and the Otamaraho Streams. The work undertaken on the Tapuata involved channel clearing and willow removal at a property in the upper reaches in preparation for the creation of a wetland. The work on the Otamaraho followed channel shaping and erosion control works and involved riparian planting with natives and fencing.

UPPER MANAWATŪ – LOWER MANGAHAO SCHEME

- 10.14. Due to limited contractor availability and priority being given to works on flood damaged reaches of waterways which would be inaccessible due to trout spawning restrictions, programmed bank protection works in the lower reaches of the Mangahao and Upper Manawatū Rivers were pushed back to start in May. This has meant a late start to the year and as such only a limited amount of the programmed work has been completed this

financial year. However, significant works have been undertaken at Holderway / King's to improve the alignment of the Mangahao River and protect against erosion.

- 10.15. Over the past year we have been working to expand our pool of trusted contractors which will increase our works capacity over the busy summer period. Once dotterel nesting restrictions are lifted we will carry out any uncompleted works in the new calendar year. The overall size of these works has been affected by a flood event on 27 June, which resulted in increased erosion on already exposed bends.
- 10.16. Work has also been undertaken in conjunction with the Horizons Freshwater Team to plant 2000 native plants and fence and area of beach (at Stafford's) that was cleared of invasive exotic species and shaped earlier in the year.

TAWATAIA - MANGAONE

- 10.17. Regular monthly dam inspections have been carried out and logged in AMIS. No safety issues have been identified, though minor maintenance works are likely to be needed in the 2021-22 financial year.
- 10.18. Regular drain spraying has been completed along the two longest drains, cattle creek and the channel upstream of dam. Due to the difficulty of the terrain, we expect regular spraying to occur along each length approximately 3 yearly.
- 10.19. An intermediate dam inspection (IDSR) was carried out by Stantech. No immediate safety or maintenance work was identified, though hydrological reports and installation of monitoring technology is recommended. These activities should be able to be covered by funds held in reserves.

ENGINEERING ADVICE

- 10.20. Assistance has also been given to Tararua District Council on a range of issues, most notably the new Route 52 extension.

11. SOUTHERN AREA

GENERAL

- 11.1. Staff have been this period completing asset inspections and undertaking minor maintenance on assets to ensure that they remain at the required level of service.
- 11.2. Heavy rainfall towards the end of the period has kept staff busy removing weed and silt from blocked culverts and removing weed build-up from in front of scheme pump stations.
- 11.3. Our electrical contractors have been kept busy over this period responding to various issues at multiple pump stations. This event has highlighted some issues and has identified the need to review some of the electrics within the pump stations.
- 11.4. Meetings were held with the both the Te Kawau and Makerua Liaison Committees to discuss the proposed scheme budget in more detail and to review scheme expenditure to date.
- 11.5. Emily Carroll has decided to move south to take up a role at Environment Canterbury and to be closer to family, her last day will be the 20 August 2021.
- 11.6. Staff attended meetings with representatives Ngāti Tukorehe and Te Tumatakahuki members to discuss the review of the Ōhau – Manakau River Scheme. Both groups were excited by the opportunity to discuss the review and are keen to be involved with the ongoing process.

ŌHAU – MANAKAU SCHEME

- 11.7. The end of June saw a high flow event in the Ōhau River at which was about a 1 in 10-15 year event. The Ōhau River overtopped its stop-banks in the Catley, Burnell, Parkins areas. The event was relatively short lived which enabled the flood-waters to recede within

a couple of days however the post-flood inspections of the channel found that there were a number of significant erosion points that need to be addressed. These erosion sites will be worked on over the following month.

- 11.8. Erosion has been occurring within the Kimberly Reserve on the Ōhau River for some time. An erosion site has occurred adjacent to the open / dog walking area which has been getting closer to a large protected tree. The reserve is outside the Scheme works area so no funding has been available to carry out any work repair any erosion within the reserve. The HDC requested Horizons to carry out work to protect the tree however due the high cost of permanent protection only temporary channel alignment and some bank replacement was completed. The temporary works which was paid for by environmental grant is planned to be replaced by rock installed by HDC at some point.
- 11.9. The event in late June again saw the protected tree put at risk and while majority of the relocated gravel remained in place staff meet with representatives from HDC to discuss the ongoing issues. While there is still no decision around undertaking more robust measures to protect the tree, HDC are keen to relocate some additional gravel material to replace the existing material that was washed away during the July event. While Horizons staff will monitor the works while they are being undertaken all the cost associated with the works will this time be met by the District Council.

KOPUTAROA DRAINAGE SCHEME

- 11.10. Scheme drain maintenance was undertaken this period including the machine cleaning of the Koputaroa Stream from the outlet up to Tavistock Road along with a lot weed pulled off the grills of pump stations.
- 11.11. Concerns continue to be expressed by locals regarding the ongoing additional discharge from the Roslyn Road and Fairfield Road development. The recent heavy rainfall event saw water jump out of Koputaroa Stream channel upstream of the state highway which long term residents indicate that has not occurred in this area in all of the time that they have lived there.

MOUTOA-WHIROKINO DRAINAGE SCHEME

- 11.12. The high rainfall events through June and at the end of July caused a few issues with the scheme pump stations. Number two pump at Cooks is needed to be pulled out due to making excessive noise. Number two pump at Diagonal pump station overheated in its top bearing so was pulled to be inspected and repaired. The submersible pump that was being stored as a backup at KereKere pump station was not able to be connected due to moisture in its power lead. This will be pulled out and repaired also.
- 11.13. The sensors and level controller at the Diagonal pump station stopped functioning. Replacement parts were going to take 3 months to get into the country so a new system was installed. The new system is manufactured in NZ so should be easier to come by parts in the future.
- 11.14. An access culvert over Cooks drain on Kerekere Road had its first pipe disconnect and caused slumping. The first pipes foundation had to be re-laid and the pipe reinstalled.
- 11.15. The Large Pleuger Flood pump was reinstalled after requiring new bearings.
- 11.16. The hinges were repaired on the small Pleuger pump floodgate.
- 11.17. Weed pulling at pump stations and many station checks were carried out this period.
- 11.18. Monitoring wells were installed in the lower section of the spillway as part of the investigation into potential wetland / pump station replacements.

TE KAWAU DRAINAGE SCHEME

- 11.19. S17a floodgate culvert was replaced due to the detreating condition of the culvert, the pipes had become disjointed and separated from the wingwall. A new 8m 450mm dia culvert line and floodgate were installed. The wingwall was placed on two large concrete blocks for stability.
- 11.20. S 6 floodgate was removed and taken to the engineer to be re furnished- due to the gate deteriorating due to rusting. The re furnished gate was attached with new bolts.
- 11.21. S 3 floodgate was also reconditioned due to its age and rusting condition.

12. ENVIRONMENTAL GRANT WORKS AND ENGINEERING ADVICE

- 12.1. All Environmental Grant work is complete with the exception of the Te Rongoroa Marae application which is awaiting funding support confirmation from the applicant.

2020 – 2021 Environmental Grant work

Name	River or Stream	Job No.	Type of work	Work status	Estimated work cost (\$)	Value of grant (\$)
Cvitanovech	Makirikiri	IN1514	Geo fabric	Part Completed	\$14,000	\$4,200
Te Rongaroa Marae	Ongarue	IN1511	Rock Lining, Layering Planting & Earth works	Approved On Hold Awaiting client funding	\$35,354	\$10,606
McKay & Larsen	Kiwitea	IN1516	Bank Protection	Completed	\$3196.66	\$958.99
Dalziel	Makirikiri Stream Upokongaro	IN1518	Channel clearance and planting	Completed	\$1,380	\$414
Randall	Tutaenui	IN1519	Bank Protection	Bank Protection	\$11,878	\$3,563
Hilton Shane	Tapuata Stream	IN1513	Rock Lining	Completed	\$4600	\$1380

13. SIGNIFICANCE

- 13.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Craig Grant
ACTING GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments to this report.

Report No.	21-86
Information Only - No Decision Required	

PRESENTATION: EARTHQUAKE LOSS ESTIMATES FOR FLOOD PROTECTION ASSETS

1. PRESENTATION

- 1.1 Risk management is a critical part of the management of infrastructural assets. An important part of this risk management is our insurance coverage for natural disasters. Whilst the risks associated with flood events is well understood, the potential damages associated with an earthquake are less well understood.
- 1.2 The Canterbury earthquakes highlighted that significant damage can occur to flood protection infrastructure, and that often there is not adequate insurance coverage for such an event. To increase our knowledge and information in this area GNS Science were engaged to undertake a desktop study and estimate the likely damage to our assets associated with an earthquake event.
- 1.3 Vinod Sadashiva from GNS Science will make a presentation to the Catchment Operations Committee on the work that GNS Science has undertaken around developing earthquake loss estimates for flood protection assets.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the presentation from GNS Science.

3. SIGNIFICANCE

- 3.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Jon Bell
INVESTIGATIONS & DESIGN MANAGER

Craig Grant
**ACTING GROUP MANAGER
RIVER MANAGEMENT**

ANNEXES

There are no attachments for this report.

Report No.	21-87
Information Only - No Decision Required	

PRESENTATION: DEVELOPMENT OF AN ANZAC PARADE FLOOD RESILIENCE STRATEGY

1. PRESENTATION

- 1.1. Council's current Long-term Plan outlines, amongst other things, the development of a resilience strategy for part of Anzac Parade in Whanganui exposed to the Whanganui River flooding.
- 1.2. Massey University Professor and EQC Chair in Natural Hazards Planning Bruce Glavovic is leading the strategy development, assisted by post-doctoral fellow Dr. Martin Garcia. Both Bruce and Martin will provide an update on the strategy process to date and on the public engagement forums planned between now and the end of the year.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information presented in the update on the Development of an Anzac Parade Flood Resilience Strategy.

3. SIGNIFICANCE

- 3.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Wayne Spencer
AREA ENGINEER NORTHERN

Craig Grant
**ACTING GROUP MANAGER
RIVER MANAGEMENT**

ANNEXES

There are no attachments for this report.

Report No.	21-88
Information Only - No Decision Required	

TE PŪWAHA PROJECT UPDATE

1. PURPOSE

- 1.1. This item updates members on work associated with repairs to the Lower Whanganui River training structures, the Horizons operational component of the Te Pūwaha / Whanganui Port Revitalisation Project.

2. EXECUTIVE SUMMARY

- 2.1. With the adoption of the 2021-31 **Long-term Plan (LTP)** Horizons has not yet accepted ownership for the various training structures that regulate the alignment of the lower reach of the Whanganui River. Their ownership remains with Whanganui District Council (WDC) but Horizons has assumed responsibility for ongoing maintenance and repair works. Those structures have, for various reasons, been neglected for many decades; their condition is poor and continuing to deteriorate.
- 2.2. The structures are, amongst other things, an integral part of an operable port for the city and accordingly Horizons has been working on a plan to repair those structures in parallel with aspirations that the WDC has for the city's port. Funding for both projects and other associated commercial projects through Kānoa was confirmed in July of 2020.
- 2.3. Overarching those plans is the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 and in particular Tupua Te Kawa – the natural law and value system of Te Awa Tupua, which binds the people to the river and the river to the people. Ensuring that the values defined by Tupua Te Kawa are imbued through the project has required a fundamentally different way of working for staff, requiring more emphasis on collaboration and engagement.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 21-88.

4. FINANCIAL IMPACT

- 4.1. The LTP, in its current form, has limited provision within the Lower Whanganui Scheme budget relating to repairs to the river training structures. That expenditure profile was set before discussions with central government around the prospect of obtaining Kānoa assistance from central government had shown any promise.
- 4.2. The current Long-term Plan includes both the revised capital expenditure budget and the new Kānoa revenue source, with the intent of including the expanded / accelerated expenditure profile in the updated LTP. That requires a larger revenue requirement from both targeted and regional river and drainage rates alongside the contributions from the WDC and Kānoa. Total project cost is estimated to be \$15M with \$7.5M met by way of a grant from Kānoa A and a \$1.8M contribution from the WDC, with the balance falling to Horizons. The project (training structures) is due for completion in March 2025.

- 4.3. In keeping with a project of this size and scale the estimated delivery cost covers a wide range of components across staff time, survey, design, consenting and construction. Some conservatism / margin exists within the \$15M estimate largely related to one of the biggest cost variables - rock rip-rap supply. The project requires a considerable volume (in the order of 70 to 80 thousand tonnes), with fairly demanding specifications particularly for the mole armouring / heads.
- 4.4. Tenders for North Mole rock supply close at the end of July; hence, a greater accuracy of rock price will be known at that time.
- 4.5. Costs related to both the Project Director Role and the application of the principles of Tupua Te Kawa are largely unbudgeted, noting that the latter is a statutory requirement. Provision has been made for RMA-related processes – requirements related to Te Awa Tupua are expected to be offset to some degree by reduced resource consent costs (the strength of the relationships with both iwi / hapu and the local community that will result from the Te Awa Tupua process) but the bulk of the expenditure will rest as an additional cost.
- 4.6. The portion of the cost with these two aspects proposed to be borne by Horizons is estimated to be up to \$500k. The view of the project delivery team is that these costs are unlikely to be accommodated within the overall \$15M budget and therefore will not be matched by the 50% funding from Kānoa. Budget over expenditure remains a risk and these overruns will have to be worn by Horizons over coming years.
- 4.7. The costs incurred prior to the signing of the funding agreement, dating back to 2018, have been confirmed eligible for 50% funding by Kānoa and will be claimed at the first payment milestone. These costs are estimated to be approximately \$358k.

5. COMMUNITY ENGAGEMENT

- 5.1. An extensive work programme has been completed to place Te Awa Tupua at the heart of the Te Pūwaha programme in a way that has established a unique partnership model between Horizons, WDC, Whanganui Iwi, central government, private business and the Whanganui community.
- 5.2. Te Pūwaha is the first truly community-led exercise for a project under the legal status of the Whanganui River as Te Awa Tupua and the North Mole repair is the first component. As such, the fundamental approach has been to kick-start a fresh and ongoing way of working together, built on widespread community engagement that means we are truly focused on how to empower our community, improve our collective wellbeing, and create economic and recreational opportunities for our people. This partnership model will ensure that Tupua Te Kawa becomes an innate way of working within all Te Pūwaha activities.
- 5.3. Previous projects have taken a consents-led approach where the community is largely restricted to making submissions, and it has often become an adversarial process. Under Tupua Te Kawa, the partnership model is multi-faceted and aims to work simultaneously at various levels to ensure, with the community, we examine the environmental, social and other implications, find solutions and then lodge resource consents as a technical detail.
- 5.4. Te Mata Pūau have demonstrated, through frontloading our engagement, efforts to listen and reflect on how we can address community concerns and aspirations, but most importantly, it has been about relationships. The Te Pūwaha Project provides a unique opportunity for people to connect with the land and the environment and to ensure the construction of the project in accordance to Tupua Te Kawa while creating opportunities for tangata whenua and the wider community.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. There is no significant business risk impact with this item. Project-related risks are highlighted elsewhere in the item.

7. CLIMATE IMPACT STATEMENT

- 7.1. While the work associated with fortifying the river training structures primarily addresses deferred maintenance over many decades, clearly the work also needs to consider climate change effects; rising sea levels, more frequent storms and a changing flood frequency for the awa. The design includes those aspects and was reviewed by coastal engineering experts from engineering consultancy Tonkin and Taylor, in part to ensure adequate consideration was given to climate change impacts.

8. BACKGROUND

- 8.1. The importance of a port and the evident operational complexities with a river port saw significant investment by the Harbour Board and its predecessors in training structures along the lower reach of the Whanganui River in the late 1800's and early 1900's; the moles, revetments and various groyne structures that line the lower reach of the river. The present-day value of that investment (including all of the various dividing walls and other measures that were constructed essentially from the town bridge to the mouth) is significant – as much as \$100M.
- 8.2. The decline of the port's fortunes meant little investment in those structures over the past 40 to 50 years, while part of Whanganui (particularly commercial / industrial / infrastructure) continued to develop around the alignment set by those structures. The transfer of port ownership from private owner to WDC, WDC's intent to revitalise the port and the importance of the training structures (amongst other things) to port operation put the condition / integrity of those structures back in the spotlight.
- 8.3. The level of Horizons operational involvement in Whanganui (in a river management context) has been progressively building since 2007.

9. DISCUSSION

- 9.1. Focus with project delivery, in parallel with community and iwi engagement, is currently centred on three main areas – rock supply, resource consent and construction of the North Mole.
- 9.2. Request for tenders for the North Mole rock supply were released on 25 June and closed on 26 July. Significant interest from prospective suppliers was shown through attendance at the meeting of tenderers on 9 July. Upon award of a rock supply contract, Horizons will have satisfied all conditions precedent within the funding agreement and the first instalment of funding will be made available by MBIE.
- 9.3. As noted elsewhere, the application of the Te Awa Tupua approach has had a beneficial effect, addressing some of the risks but also developing relationships that are ultimately likely to help expedite the process. A resource consent application was filed on 16 July to Horizons as the governing regulatory body. The notification type is still to be advised, although it is anticipated that limited notification is the most likely. Horizons, as the applicant believe that the comprehensive community engagement, alongside strong partnership with iwi and hapu will ensure timely approval of a resource consent for construction commencing late in 2021.
- 9.4. Construction tender documents are currently being compiled and will be directly linked to the pending rock supply contract. It is critical to ensure the accuracy of the content and methodology within these documents to allow a working relationship between the two

contracts and effective construction. Construction work on the North Mole is scheduled to commence in November 2021 and conclude in November 2022.

- 9.5. The application of Tupua Te Kawa required by the 2017 Te Awa Tupua statute rests with **Ngā Tāngata Tiaki (NTT)**, the post-settlement governance entity for Te Awa Tupua. That leans heavily on input at a hapu / marae / whanau level to apply the principles of Tupua Te Kawa in their purest form. The hapu mandated group Te Mata Pūau has formed to be the voice of local hapu and to lead the funded project partners to a greater understanding of their obligations to Te Awa Tupua and Tupua Te Kawa.
- 9.6. Upholding Tupua Te Kawa has introduced a change in mindset from one where we have traditionally mitigated or offset negative construction effects; to now, where we attempt to enhance or implement where we can, any positive effects or benefits. The term mouri ora, mouri awa and mouri tangata describes the betterment of wellbeing, the river and people and is the model we are working to within Te Pūwaha. It allows iwi and hapu at place to be centre of all decision making and provides an opportunity to achieve broader outcomes that aren't necessarily directly focused on the project objectives.

10. TUPUA TE KAWA

- 10.1. Under the legally defined status of Te Awa Tupua, a set of innate values called Tupua Te Kawa, now guides all decision-making in respect of the Whanganui River.

Ko Te Kawa Tuatahi

- a) **Ko te Awa te mātāpuna o te ora:** the River is the source of spiritual and physical sustenance:

Te Awa Tupua is a spiritual and physical entity that supports and sustains both the life and natural resources within the Whanganui River and the health and well-being of the iwi, hapū, and other communities of the River.

Ko Te Kawa Tuarua

- b) **E rere kau mai i te Awa nui mai i te Kahui Maunga ki Tangaroa:** the great River flows from the mountains to the sea:

Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the Whanganui River and all of its physical and metaphysical elements.

Ko Te Kawa Tuatoru

- c) **Ko au te Awa, ko te Awa ko au:** I am the River and the River is me:

The iwi and hapū of the Whanganui River have an inalienable connection with, and responsibility to, Te Awa Tupua and its health and well-being.

Ko Te Kawa Tuawhā

- d) **Ngā manga iti, ngā manga nui e honohono kau ana, ka tupu hei Awa Tupua:** the small and large streams that flow into one another form one River:

Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua.

11. CONSULTATION

- 11.1. No specific consultation (other than that planned as part of project delivery) is intended with this item.

12. TIMELINE / NEXT STEPS

- 12.1. As previously mentioned, current delivery team efforts are focused on refining the physical technical aspects of the North Mole construction. Rock supply tender evaluation is scheduled for 29 July and this will inform more accurate financial project forecasting.
- 12.2. A public community meeting is to be held on the evening of 10 August in Castlecliff, Whanganui. The purpose of this is to communicate wider Te Pūwaha project information, including the training structures and port precinct development (WDC and Q-West), but also to present concept plans for the surrounding North Mole area that have been developed through community feedback and with key members of the Castlecliff Community. It is important to note that the work being proposed here is not directly funded through Kānoa, instead it is an example of community collaboration and the opportunities that enhancement seeks to provide.
- 12.3. Stage 2 of the Horizons component of work sets to upgrade the South Mole and reinstate the Tanae Groyne. Engagement of surveyors, designers and ecologists is currently being progressed to commence the co-design process alongside Te Mata Pūau.

13. SIGNIFICANCE

- 13.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Dougal Ross
PROJECT ENGINEER

Craig Grant
ACTING GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments for this report.

Report No.	21-89
Information Only - No Decision Required	

CLIMATE RESILIENCE PROJECTS

1. PURPOSE

- 1.1. The purpose of this item is to update members on progress with delivering the Flood Protection Climate Resilience Projects.

2. EXECUTIVE SUMMARY

- 2.1. In April 2020, Horizons along with other regional councils and unitary authorities submitted a list of flood protection shovel ready projects for central government funding consideration. Approval in principle was announced in July, with each project confirmed by Council (including the local share contribution) in August; central government confirmation was subsequently received in September / October.
- 2.2. Although the projects represent welcome investment in flood protection by central government that investment comes with a substantial challenge – the delivery timeframe. Accordingly, at the November 2020 Audit, Risk and Investment Committee meeting, it was agreed that staff provide regular updates on delivery of the projects.
- 2.3. At this early stage delivery is behind the programme contained in the funding agreement, noting that this picture (personal communication with Kānoa - Regional Economic Development & Investment Unit staff (formerly Provincial Development Unit)) is a universal one across the sector. There are a range of reasons for that, primarily shaping the delivery team and building momentum – bringing consultants on board, scoping the project elements and bringing the external resource on board needed to undertake the work. With new leadership the Projects team has re-evaluated its delivery of the Climate Resilience Projects, creating and implementing detailed project plans for the Climate Resilience Programme and for each project. Despite the fact that we are well into winter and the weather this time of year is not generally conducive to undertaking project work, the Projects team has been able to award multiple supply and construction contracts. This has resulted in significant expenditure in the last quarter of the 2020/21 financial year.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 21-89.

4. FINANCIAL IMPACT

- 4.1. There is no direct financial impact associated with this item.

5. COMMUNITY ENGAGEMENT

- 5.1. Whilst no consultation is considered necessary with this particular item, community engagement and consultation will be critical in terms of the successful delivery of the Climate Resilience Projects. To this end detailed communication strategies are being developed as part of the project plans.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. Two significant risks relating to this programme have been identified - the risk of extended community engagement causing delays to the programme. Should this risk be realised construction of works programmed for the 2021/2022 summer construction season would be delayed until the 2022/2023 construction season with serious flow on effects for project delivery.
- 6.2. The other significant risk concerns delay to the consenting process. In particular the Foxton flood mitigation project could experience significant delays should the Minister decline to refer the project to the expert consenting panel as part of the fast track consenting process. This risk is largely around the engagement required as part of the fast track consenting process. With the communication strategy in place the likelihood of this risk is considered to be low. However, the consequences would be significant resulting in missing the 2021/2022 summer construction season.

7. CLIMATE IMPACT STATEMENT

- 7.1. This item reports on progress with project delivery but as previously noted the projects themselves will improve the resilience of the Lower Manawatū Scheme, the Rangitikei Scheme and the town of Foxton to the effects of climate change (more frequent floods, sea level rise).

8. BACKGROUND

- 8.1. Early in the COVID-19 lockdown central government sought options from infrastructure owners for providing economic stimulus through infrastructure investment. River managers from around the country compiled a single 'sector' application – a national compendium of shovel ready flood protection projects totalling \$299.2M; in June central government approved a grant of \$211.5M. Horizons' component of that application totalled \$35.9M with a grant amount of \$26.9M.
- 8.2. The success of that application is a direct result of the efforts the sector has been making to engage with central government around co-investment in flood protection; the value-add flood protection infrastructure provides to the national economy, how vulnerable transport links and other key lifelines are without it and the instances where central government benefits but the operating costs often fall on a relatively small ratepayer base. That dialogue also emphasises the future challenges with a changing operating environment, principally the need for investment to improve resilience in the face of climate change.
- 8.3. The investment made by central government is under the banner of 'shovel ready' emphasising the urgency of the spend to achieve that economic stimulus and accordingly the projects have a nominal three year delivery timeframe. That necessitates close / particular management of issues that have the potential to extend delivery timeframes. The November 2020 meeting of the Audit, Risk and Investment Committee considered a management plan addressing that discrete set of risks.

9. FOXTON FLOOD MITIGATION

- 9.1. This project is separated into three parts - Stage 1 addresses the capacity / integrity issues related to Kings Canal along the eastern edge of the town, Stage 2 the modifications required to convey floodwater into / through the Whirokino basin, and Stage 3 pumping floodwaters out to the Foxton Loop. It differs to the other three projects in that the benefit is in part tied to completing all of the project elements. Stage 1 provides some benefit but the full benefit is realised with Stages 2 & 3.
- 9.2. Pressures on project management resource (the prioritisation afforded to Lake Horowhenua boat ramp construction, and the resignation of the last Projects Team Leader)

has resulted in some delays. The lead time of some elements (resource consents, land purchase) adds to the challenges with this project, as does some vocal local opposition.

- 9.3. Design for Stage 1 is complete (barring design changes that may be requested by project partners) with design for Stage 2 nearing completion. Modelling work for Stage 3 has commenced. The project has an element of property purchase that does impact the critical path (the sequence of events that defines the completion date). Those are the footprint for the Cook Street wetland, the Duck Creek wetland and the new pump station. All three negotiations are underway although delays in receiving valuation assessments has resulted in some delays.
- 9.4. Consenting is also a critical path matter - a consultant planner has been employed to assist. That includes the use of the fast-track provisions and assuring compliance with the new National Environmental Standard.
- 9.5. A relatively simple measure that will speed up construction work (and help the expenditure profile early in the project) is to have materials ordered and delivered in advance – contractually materials supplied by the Principal (Horizons). Those materials include the large box culvert units that will replace some of the small pipe culvert crossings of Kings Canal and the sheet piling that will be incorporated into the rebuilt Kings Canal stopbank.
- 9.6. Construction of the box culverts has been commenced by local civil engineering contractors Riverside Construction who tendered the lowest price and also met many of the social procurement objectives of the Climate Resilience Project with Kānoa - Regional Economic Development & Investment Unit. A small amount of vinyl sheetpiling has been purchased to trial driving in local conditions prior to confirming the supply contract for the sheetpiling materials.
- 9.7. Noting that representatives from Ngāti Raukawa and the **Horowhenua District Council (HDC)** meet fortnightly with the delivery team to ensure a collaborative approach to project delivery.
- 9.8. Whilst existing funding for this project was based on an estimated project cost of \$9.2M more recent cost estimates, based on increasingly detailed design and current market rates, have resulted in a current project estimate of \$11.2M. Horizons and HDC co-funding would be \$2.23M and \$2.46M respectively. Horizons portion being funded \$1.63M from the Foxton East Drainage Scheme and \$0.6M from the Whirokino Drainage Scheme. HDC have \$0.504M in their LTP this year with the remainder yet to be secured.
- 9.9. Existing funding from Kānoa - Regional Economic Development & Investment Unit is \$4.5M. River Management's Projects team is currently seeking reallocation of an additional \$2.025M from the cancelled Kumeroa Quarry project to the Foxton Flood Mitigation project.
- 9.10. A letter was received on 18 June 2021 from Charlotte Muggeridge of Harness Henry (purportedly representing the Whirokino Scheme landowners). This letter threatened a judicial review of the decision making process behind Council's selection of the fast-track consenting process for this project. The reasoning behind this request is that Council is using the fast-track process to avoid consultation. Clearly this is not the case and a response stating this was sent on Council's behalf by Dave Randal of Buddle Finlay on 6 July 2021.

10. PALMERSTON NORTH

- 10.1. A contract for the **Closed Circuit Television (CCTV)** inspection of all pipeline penetrations of the city's stopbanks by contractor Intergroup Limited is close to completion. This is a key resilience element – stopbank failure is often linked to soil / structure interface (Edgecumbe). Intergroup will accurately ascertain the condition of those pipelines with any

issues identified flagged to the asset owner for rectification (most are Palmerston North City Council (PNCC) assets).

- 10.2. Gasworks Drain Improvements – works involve removal of approximately 100 large poplars shading the stopbank at the north end of the bridal path. This will facilitate the planting of native shrubs and construction of new pathways. Options assessments have been completed for the Bisley Street retaining wall, Belvedere Crescent stopbank improvements, and Albert Street scour remediation works. An ecological assessment has been completed for the Bisley Street retaining wall sub project.
- 10.3. Other work underway as part of this project include engaging with consultants Tonkin and Taylor to produce an options assessment for the Tremaine Avenue gabion basket replacement.
- 10.4. Working alongside PNCC with pegging of the proposed Kakatangiata stopbank realignment to assist landowners to visualise the proposed works. Survey and design of repair at Cecil Street on the Mangaone Stream is to commence within the next two weeks.

11. LOWER MANAWATŪ SCHEME

- 11.1. Work on the Lower Manawatū Scheme Climate Resilience Project has advanced well during this reporting period. Rock supply to Foxton Beach has commenced for the approximately 400m rock armouring to protect the existing stopbank. Procurement is in its final phases to appoint a contractor to undertake the construction of this rock armouring, which is expected to be completed by September.
- 11.2. Several projects are also progressing through their respective design phases. Design has been undertaken for a new rock lining at Te Matai Road on the Manawatū River upstream of Palmerston North City. Staff are currently working in partnership with PNCC to progress this work, as it will support PNCC's development of a shared pathway between Ashhurst and the city, as well as increasing the resilience of the stopbank network.
- 11.3. A constructive workshop was held with representatives from Iwi, DoC, and Horizons' Freshwater team to look at developing plans for the Makererua Swamp. This wetland area is adjacent to the Tokomaru River and Waterfall Creek and there is a strong desire to enhance the area whilst increasing the resilience of the infrastructure assets at this location.

12. RANGITIKEI

- 12.1. The Rangitikei River Enhancement Project is now in full swing, with channel widening work being the main stay of work, completing 50ha of noxious weed control via aerial spraying, and 18.4ha of exotic vegetation removal. As well as 1ha of amenity enhancement, 0.3ha of drainage enhancement (undertaken in partnership with the Rangitikei Scheme), and 1.5km of gravel management along the Tutaenui Stream.
- 12.2. Evaluation of land ownership and lease agreements, along the Rangitikei River corridor below Bulls Bridge, has been completed, along with concept drawings for the project.
- 12.3. Positive discussions have been had with Ngāti Apa to develop a partnership on the project. A plan is being drafted identifying key areas that Ngāti Apa could assist the project including; plant establishment crews, plant nursery opportunities, fencing crew opportunities, cultural design, plant species selection, Wetland / Drain water quality monitoring, and the co-design of pathway locations and river access points etc.
- 12.4. A community meeting was held in Scotts Ferry to discuss the planned repair to the rock lining, the community was supportive of the project and repair job. Work to procure the rock supply is underway, along with the access track to the stock pile site.

13. COMMENT

- 13.1. The River Management Projects team are in the process of co-ordinating a high level programme hui with Iwi to begin building a solid relationship towards a collective undertaking. We are also preparing a workshop to provide insights on ways that we can meet social procurement objectives associated with these projects.
- 13.2. Craig Grant, Jon Bell, and Shaun Edwards attended the **River Managers' Special Interest Group (RM SiG)** Climate Resilience Programme workshop where Kānoa - Regional Economic Development & Investment Unit emphasised the importance of delivery of the programme and the focus from central government on achieving good social procurement outcomes.

14. TIMELINE / NEXT STEPS

- 14.1. The project will continue as planned until scheduled completion in 2024.

15. SIGNIFICANCE

- 15.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Shaun Edwards
PROJECTS TEAM LEADER

Craig Grant
ACTING GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments for this report.

Report No.	21-90
Information Only - No Decision Required	

LAND MANAGEMENT PROGRESS REPORT

1. PURPOSE

- 1.1. This report covers work carried out by the Natural Resources and Partnership – Land Management team during the period 1 March to 30 June 2021. It includes the activity areas of **Sustainable Land Management Initiative** (SLUI), Regional Land and Coast, and Nursery.

2. EXECUTIVE SUMMARY

- 2.1. This report focusses on the operational targets of the Annual Plan 2020-21 Land Management Activity for SLUI, Regional and Coast, and Nursery budget activity areas. It also provides updates on the contract targets with **Te Uru Rakau** (TUR), formerly Forestry NZ, regarding delivery of the SLUI programme. The annex provides a more detailed update on progress.
- 2.2. This activity report relates to the period 1 March to 30 June 2021. End-of-year targets have been updated but at the time of writing financials had yet to be closed off and reconciled, so figures in this report are provisional to end of year.
- 2.3. Autumn and early winter was dry and mild and, while pasture growth has been adequate in most areas, landowners with winter planting programmes have been concerned about soil moisture levels. Widespread rain in June helped give landowners confidence to proceed with winter tree planting while the drier autumn period helped fencing contractors to continue erecting fences in hill country.
- 2.4. Tree survival from last year's grant works generally has been very good. Poplar and willow poles have had high (85-90%) establishment and very good growth rates, while afforestation blocks have generally established well. However, dry conditions and poor siting resulted in some failures in pockets on the eastern coast and around Taihape.

SLUI

- 2.5. The SLUI programme has entered into a contract with TUR with the **Hill Country Erosion Fund** (HCEF) contract providing for more than \$6.4 million in funding over four years. This report completes the second year of the contract, with the TUR contribution being \$1.388 million, Horizons' contribution \$3.677 million, and an estimated landowner contribution of \$4.3 million in cash and \$500,000 million in-kind. These contributions provide a total estimated budget of \$9.855 million and at this stage the total landowner contribution for 2020-21 is estimated to be \$4.8 million.
- 2.6. The **Whole Farm Plan** (WFP) programme was contracted to complete 22,500 ha of new plans plus 2,000 ha of one-off paddock maps. The WFP contract and **Long-term Plan** (LTP) target has been met with 23,000 ha complete but the contract (not LTP) for one-off paddock maps target has not been met with just 1,004 ha completed.
- 2.7. The environmental works programme was contracted to complete 3,065 ha of "on the ground" works with the LTP target being 3,100 ha. The programme has provisionally met both targets with more than 3,800 ha of work completed.
- 2.8. Over the first two years of the contract, 170% of the 6,505 ha target has been met with more than 11,207 ha of work completed.
- 2.9. The Land Information Team completed a SLUI Quality Control Report in May 2021. Overall the report found areas of work completed were approximately 6 percent larger than originally mapped, while effectiveness of works is 12-20% lower than literature values from

Manaaki Whenua LandCare Research. Other findings are that mapping accuracy has improved over time with increased use of iPads in the field and 67% of works have been targeted to Top priority or highly erodible land.

Regional and Coast

- 2.10. The Regional and Coast programme is funded via general rate targeting advice and grants for erosion control works on a one-off basis within the Whanganui River Catchment. These works will be largely outside the SLUI contracted area and in funding partnership with the **Whanganui River Enhancement Trust (WRET)**. In total, the 175 ha target of land for erosion control works has been met with 196 ha of work completed between the combined programmes.
- 2.11. The Industry Partnership programme proposed supporting five initiatives promoting sustainable land use and good management practice on farms within the region. Seven projects were supported.
- 2.12. The Soil Health programme maintains the Regional State of the Environment soil quality monitoring programme through a regional network of soil health assessments, and a general advice programme around soils and soil health.

Nurseries

- 2.13. Council operates a number of poplar and willow pole nurseries to produce planting material for erosion control programmes. The aim is to produce and source a total of 30,000 poles per season.
- 2.14. The 2020-21 winter pole season was completed with final numbers showing 32,600 2.5-3.0 m poles distributed to landowners.
- 2.15. The claim programme (inspections and payments of grants) for the 2020-21 year had only completed 26,592 poles by the end of the financial year with approximately 6,000 poles still to claim. This was due to staff focussing on sale and distribution of additional poles available this winter which resulted in claims being deferred. Staff turnover has also contributed to the delay in some claims being completed. These outstanding claims will be picked up with the 2021-22 pole claims. However, the lower claims total results in fewer active farm plans, fewer hectares of works and lower grant expenditure.
- 2.16. The pole production and purchase programme for winter 2021-22 is on track to deliver around 37,500 poles this winter.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 21-90 and Annex.

4. FINANCIAL IMPACT

- 4.1. There are no direct financial impacts associated with this report. However, it does update members on a number of financial matters associated with SLUI, Regional and Coast, and Nursery activities.

5. COMMUNITY ENGAGEMENT

- 5.1. Consultation was carried out through the 2012-22 **Long-term Plan (LTP)** and newly approved 2021 LTP. Te Uru Rakau has a key role in part-funding and overseeing the SLUI section of this activity.

6. CLIMATE IMPACT STATEMENT

- 6.1. This item reports on Horizons' activity in relation to our Annual Plan targets and is not considered to have a climate change impact. The land management activity includes a range of planting programmes, the benefits of which have been reported to council in various items.

7. SIGNIFICANT BUSINESS RISK IMPACT

- 7.1. There are no significant risks inherent in the adoption of the recommendations contained in this report.

8. SIGNIFICANCE

- 8.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Grant Cooper
LAND & PARTNERSHIPS MANAGER

Jon Roygard
GROUP MANAGER NATURAL RESOURCES & PARTNERSHIPS

ANNEXES

- A Land Management Progress Report



LAND MANAGEMENT ACTIVITY – 1 MARCH TO 30 JUNE 2021

1. OVERVIEW

- 1.1.1 The purpose of this report is to update Council on the Land Management activity within the **Sustainable Land Use Initiative** (SLUI), Regional and Coast, and Nursery activities carried out under the Annual Plan and the **Te Uru Rākau** (TUR) contract.
- 1.1.2 The Land Management programme's primary activity is to reduce hill country erosion in order to increase the resilience of the region to storm events and improve water quality. At the end of 2021 financial year SLUI had completed more than 597,000 ha of **Whole Farm Plans** (WFPs) across 822 farms.
- 1.1.3 The Land Management Programme's progress in the 2020-21 financial year was:
- SLUI – 23,000 ha of new WFPs, 3,832 ha of grant works. Meeting both Annual Plan and Contract targets although the contract target for paddock maps was not met, with 1,004 ha completed against a target of 2,000 ha;
 - Regional and Coast and **Whanganui Catchment Strategy** (WCS) – 197 ha of grant works including cost-share work with the **Whanganui River Enhancement Trust** (WRET) meeting their financial and Annual Plan targets (175 ha);
 - Industry Partnerships – supported seven initiatives, exceeding the target of supporting at least five;
 - Nursery – last winter produced 32,600 poles for distribution to landowners for works in the 2020-21 year, exceeding the target of 30,000, and this winter approximately 37,500 poles will be distributed for works in the 2021-22 year;
 - Joint Venture Forestry – completed the silviculture work that was delayed last year by Covid-19 and fire risk, and worked through a substantial amount of the 2020-21 programme; updated measurements for forest growth and **Emissions Trading Scheme** (ETS) requirements;
 - Nursery Irrigation – estimates and quotes received for parts of the development with more work needed regarding the water supply.

- 1.1.4 In the last few months of the financial year, staff concentrated on finishing as many claims as possible and processed 250. The bulk of these claims were for fencing (riparian or retirement) but there was also a large number of late pole claims for the year. In late May and June staff had to switch their priorities to allocation and distribution of the winter 2021-22 poles as harvesting from the nursery started in early June.



Photo 1 – Completing fencing claims in June – Ohakune. Photo: Ryan Connor

- 1.1.5 Pole numbers are up this year with nearly 40,000 available for sale. By the end of June staff had orders for nearly 37,500 poles and were still working on finding homes for the remainder. This is a big increase on the 32,600 poles sold last year. There has been a slight over-demand for willow poles despite a solid increase in nursery stock.
- 1.1.6 Staff completed the March and May milestone reporting and invoicing for the SLUI contract.
- 1.1.7 Figures provided in this report were correct as at 30 June 2021 but there may be some adjustments as late claims are processed and the database is re-checked. There could be small adjustments made before the Annual Report is finalised. To this end all Annual Plan and contract targets should be considered provisional at the time this report was written.

2 REPORT ON PROGRESS

2.1 ANNUAL PLAN AND CONTRACT TARGETS (2020-21)

2.1.1 The Annual Plan and **Hill Country Erosion Fund** (HCEF) contract targets for 2020-21 are shown in the table below.

Table 1: Annual Plan and HCEF contract targets 2020-21 – Correct at 30 June 2021

MEASURE	ANNUAL PLAN	HCEF CONTRACT	TARGET	YTD	PROVISIONAL RESULT
Sustainable Land Use Initiative (SLUI)					
Erosion reduction works programmes in targeted SLUI catchments (ha)	3,100	3,065	3,100	3,832	Met target
Whole Farm Plan properties mapped per year (ha)	20,000	22,500	22,500	22,869	Met target
Farm or paddock assessments mapped per year (ha)		2,000	2,000	1,004	Not met target
Case study completed (number)		1	1	1	Met target
Feasibility reports (number)		6	6	4	Not met target
Regional and Coast					
Manage grant programmes to deliver erosion reduction works (ha)	175		175	197	Met target
Support industry initiatives that promote sustainable land use (number)	5		5	7	Met target
Operate council nurseries and source additional commercial pole material to deliver poplar and willow poles to control erosion (number of poles)	30,000		30,000	32,600 ¹	Met target

¹ This relates to poles distributed in winter 2020 for the 2000-21 financial year and meets the target for that year. As noted, approximately 6,000 of these poles have not been claimed in Land work programmes in the 2020-21 financial year. These claims will be completed in 2021-22 along with the winter production of approximately 37,500 poles.

2.1.2 All five of the Annual Plan targets and four of the six Contract targets were met. The exceptions are:

- Farm or paddock map assessment (HCEF Contract) 2,000 ha. These projects are completed by staff and are either small extensions to existing farm plans, mapping works before a farm plan is completed, or one-off assessments for one-off jobs. They have tended to be lower priority and more reactive than proactive.

It is noted that the target for new Whole Farm Plans was 20,000 ha in the LTP and 22,500 ha in the HCEF contract, and the targets were exceeded with 22,869 ha completed.

- Feasibility Reports (HCEF Contract) six, completed four – these reports relate to working with landowners who need more information around the feasibility of establishing forestry blocks on their land. Four were completed in 2020-21, but there was less demand from landowners than in previous years. Some used forestry consultants while others were happy with their own knowledge or the support from their LMA. This missed target has had no impact on getting afforestation projects approved

2.1.3 The seven industry partnership programmes completed included support for:

Ballance Farm Environment Awards

- The year was interrupted due to Covid-19,
- Completed the 2019-20 winner's field day in November 2020,
- Started planning 2021-22 programme.

Beef and Lamb (B & L) and other partners

- Catch cropping (using short term crop after grazing) project looking at ways to reduce sediment loss, this project will wind up in spring,
- Continued with intensive winter grazing project with sheep, to compare sediment, nutrient and bacteria losses compared to cattle grazing,
- Supported intensive winter grazing campaign to support best practice,
- Spoke at B & L field days and workshops, including trees on farm and ETS.

Poplar and Willow Research Trust and other partners

- Supported release of the Giant Willow Aphid parasitic wasp biological control agent,
- Supported a research project into the establishment, life cycle and potential distribution of the poplar sawfly,
- Horizons staff member continued as a Trustee of the Poplar and Willow Research Trust,
- Continued membership of the Technical Advisory Group and the Nursery Managers' Group,
- Supported with sites and measurement of field trials.

Taumarunui Sustainable Land Management Group

- Membership, and attendance at meetings.

New Zealand Farm Forestry Association

- Membership,
- Attended meetings and spoke at field days.

Farmed Landscape Research Centre (Massey University)

- Sponsorship of annual workshop,
- Input into development of Intermediate and Advanced Farm Environmental Planning Courses.

LandWISE

- Sponsorship of annual conference.



Photo 2 – Winter trees, Stormy Point. Photo: Georgia Hodgson.

3 SLUI ACTIVITY

3.1 WHOLE FARM PLAN (WFP) PRODUCTION

3.1.1 WFPs are a tool for bringing new land into the programme and for allocating grants to farms on various land types (priority land). An important part of maintaining the momentum of SLUI is the ability to bring new farms, new land and new work into the programme. This table shows the plans completed in SLUI's **life-to-date** (LTD) and progress with bringing new plans into the programme.

Table 2: WFP production (life-to-date) – Correct at
30 June 2021

No. of Plans	Hectares	Comments
795	575,000	WFPs completed in SLUI to 30 June 2020 – 51 plans
42	22,869	Plans/ha mapped in SLUI in 2020-21
0	0	Plus plans/ha on list to be mapped in 2020-21
7	4,283	Plans that were on the list to be mapped in 2020-21 but now moved to 2021-22 financial year.

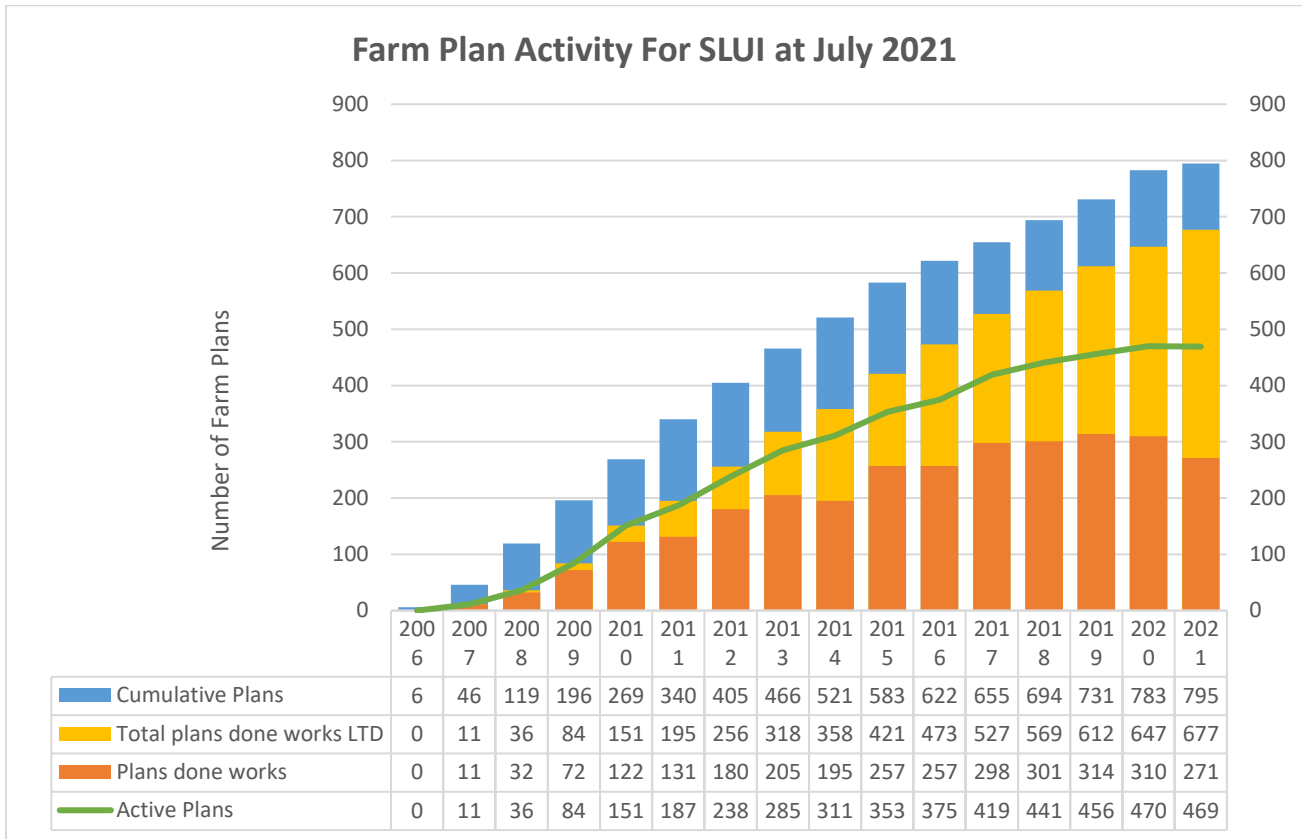
3.1.2 Fifty plans were allocated to the contractor in 2020-21, with 42 completed, seven carried over to 2021-22 and one put on hold by the landowner.

3.1.3 The seven plans (4,283 ha) carried over to this financial year will be first priority for mapping. There are 11 more plans on the list for this year so far, bringing the total allocated to 9,474 ha.

3.1.4 A further eight plans (1,004 ha) were mapped by Horizons staff. These were a mix of paddock maps and extensions to existing farm plans.

3.2 WHOLE FARM PLAN ACTIVITY

3.2.1 The contract targets focus on the number of plans completed and the activity of individual plans over the life of the programme. On an annual basis they provide another measure of SLUI activity. The number of plans active in any one year can and does change.



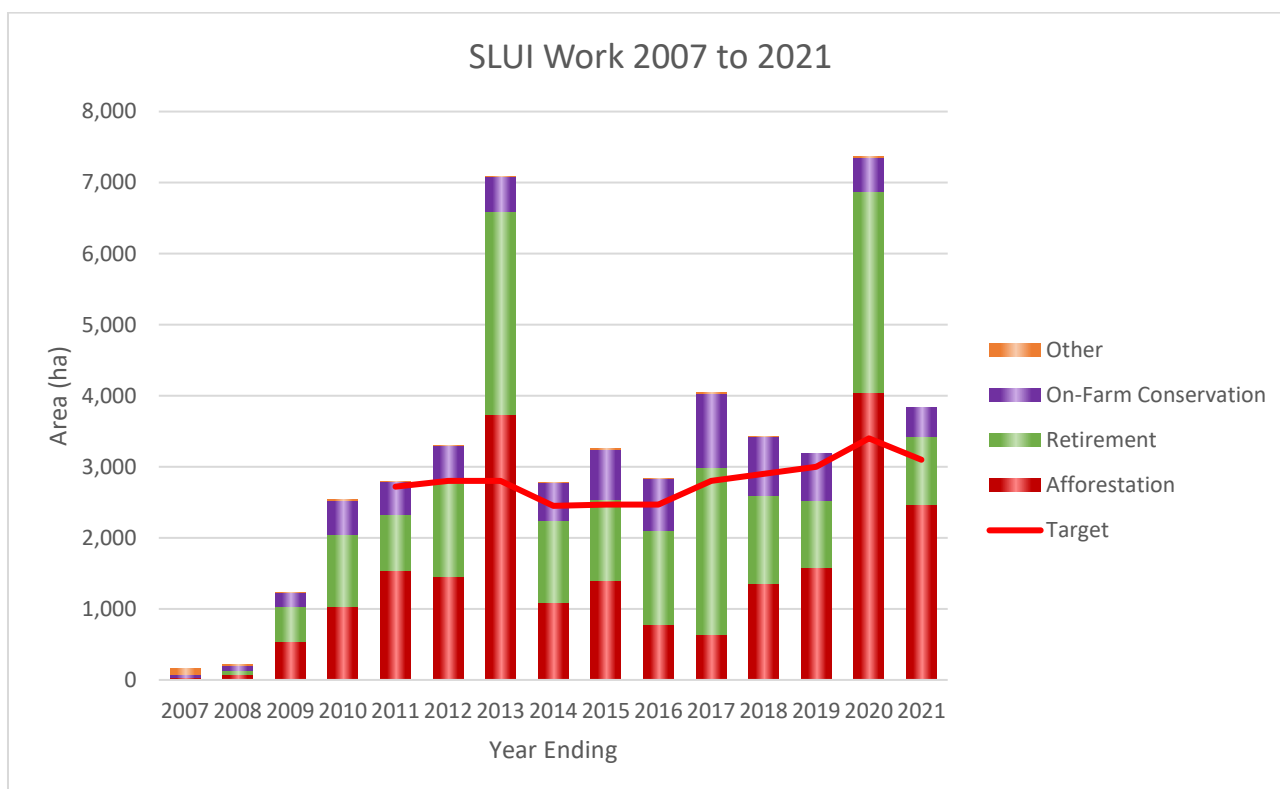
Graph 1: Farm Plan Activity at July 2021. Note this graph is not updated with all new WFPs as at 30 June.

- 3.2.2 Graph 1 looks at the farm plan activity as a whole and in any particular year. It is a “stacked column graph” where the orange, yellow and blue components of the column add up to the total number of plans in SLUI at the end of any given year. For example, in 2020-21 there were 795 plans completed over the life of SLUI, 677 had completed some works (85% active, up from 83% the year before), and 271 plans had completed some work in that year (i.e. 34% of plans active in 2020-21). The number of plans completing works is down from 310 in 2019-20 to 270 last year.
- 3.2.3 The solid green line tracks “currently active” farm plans where active is taken to be “has completed works in the last three years”. The number of “currently active” plans at the end of 2019-20 was 470 (60%). In 2020-21 this decreased by one to 469.
- 3.2.4 As expected, the data in Graph 1 shows a trend of more active plans (yellow stacked column) as we bring on 40-50 new plans per year. The number of plans active in any given three-year period (green line) has slowed. While to some extent this reflects older plans dropping off and becoming less active this year, we have had a number of new staff join the team and we have a number of claims that were not completed by the end of the financial year; while many of these will already have been “active” some would have added to the “currently active” set.

3.2.5 The plans that have done works this year dropped from 310 in the previous year to 271 in 2020-21. Active plans that have done works at least once in the last three years decreased from 470 to 469. This was a result of staff prioritizing distribution of the additional poles available for winter 2021 and deferring claim processing as a result, rather than fewer farms doing works. Approximately 60 pole claims and 40 riparian fence claims were rolled over from last year to this year and if these claims had been completed the numbers would have been higher.

3.3 SLUI LIFE-TO-DATE AND OUTCOMES

3.3.1 SLUI life-to-date annual works completed are shown in Graph 2.



Graph2: SLUI works completed by work type during the life of the programme against annual contract targets (red line). See Graph 3 for the change in job status through the year.

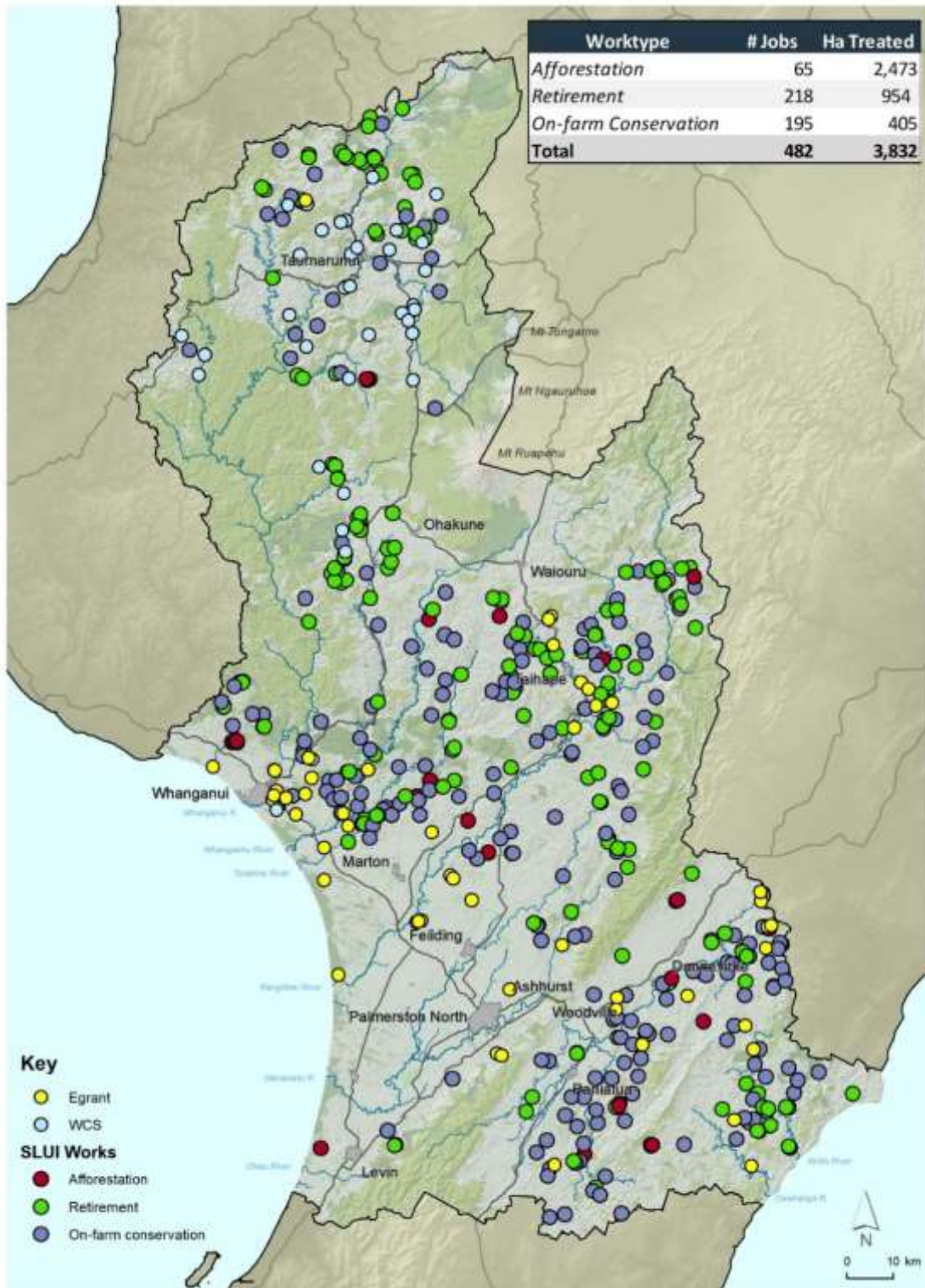
3.3.2 Each year since 2010 the contract target for hectares of works completed has been exceeded.

3.3.3 The most work was completed last year with just over 7,000 ha of work. Afforestation and retirement made up the bulk of the work.

3.3.4 The notable years for afforestation were 2013, when there was a high level of uptake for the Afforestation Grant Scheme, and 2020, when there was a large amount of carbon and carbon/timber forestry established.

- 3.3.5 Retirement programmes also peaked in 2013 and 2020. In 2013 this was due to a large amount of jointly funded Ngā Whenua Rāhui work completed in the Whanganui and Whangaehu catchments. In 2020 a large contribution was due to one major retirement project in the upper Rangitīkei Catchment with 1,315 ha completed, which was 50% of the total retirement work.
- 3.3.6 On-farm conservation (purple) is predominantly space planting and gully planting with poplar and willow poles but also includes structures and earthworks. It is consistently about 500-1,000 ha per year and the limitation is largely pole supply. In the 2020-21 financial year there were approximately 60 pole claims outstanding and the works completed dropped to 404 ha. Pole supply has increased by around 5,000 poles for the 2021-22 financial year (approximately 15% increase). It is noted that pole supply is expected to be lower next winter for work in the 2022-23 financial year.
- 3.3.7 At the current rate of progress, analysis suggests it will take 112 years to carry out works on all the top priority land that is currently in pasture. This calculation is based on completing approximately 3,000 ha of work per year with 1,000 ha on top priority land, about 500 ha of which is in pasture. The other 500 ha is retirement of existing tree-covered land. All the high priority land that is currently in pasture is estimated to take 252 years of works.
- 3.3.8 Outcomes for SLUI have been modelled by **Manaaki Whenua Landcare Research** (MWLCR) and this work was reported for Horizons in the 2019 **State of Environment Report** (SOE) at page 19.
<https://www.horizons.govt.nz/CMSPages/GetFile.aspx?guid=a77bc2a4-381f-4660-8ef9-4e2486ac7165>
- 3.3.9 The Science and Land teams are working with MWLCR to update their modelling, which should be completed by June 2022. This work is focusing on modelling the outcomes of SLUI in relation to sediment in rivers, including the new targets of the **National Policy Statement for Freshwater Management** (NPS-FW). The work is scoped to investigate the impact of SLUI life-to-date i.e. if it continues at a similar pace or if it were doubled in pace, and what the impact of climate change would be on the mid-century and end-of-century outcomes.

This is understood to be the first piece of work in New Zealand linking a land management programme with the NPS targets and climate change.



2021 Worktype Locations

Map prepared by W McKay, NRP Group on 14/07/2021

Map 1: Location of all grant works completed this financial year (SLUI and Regional and Coast). Note the hectares completed does not include the Regional Grant and WCS works.

3.4 YEAR-TO-DATE ACHIEVEMENTS

3.4.1 The table below shows the types of works completed and claimed in the 2020-21 financial year.

Table 3: Works year-to-date completed and claimed, by grant amount and land priority

Work Type	Claims	Farms	Grant \$	Hectares By Land Type					Total Ha
				Other (ha)	Not Erodible (ha)	Erodible (ha)	High Priority (ha)	Top Priority (ha)	
Afforestation	65	39	857,663	25.7	229.4	1,046.8	896.8	274.5	2,473.2
Retirement	77	65	539,233	8.0	43.0	198.7	198.5	174.3	622.4
Riparian Retirement	115	81	727,612	1.4	43.3	91.9	40.5	119.3	296.4
Wetland Retirement	25	23	118,368	0.0	13.3	20.3	0.5	0.8	35.0
Managed Retirement	1	1	3,168	-	0.0	0.4	-	-	0.4
Pole Planting	196	195	266,079	5.8	16.3	249.4	90.8	42.6	404.8¹
Other	3	3	47,745	-	-	-	-	-	-
Total	482	288	2,559,869	40.9	345.3	1,607.6	1,227.1	611.6	3,832.4

¹ As noted in Sections 4.2.5 and 4.3.6 – more poles went into the ground but approximately 60 claims are still to be completed; this may equate to approximately 5,000-6,000 poles, 150 ha of work and \$70,000 grant cost.

3.4.2 The 3,832 ha of works completed and claimed is 124% of the Annual Plan full-year target of 3,100 ha and 125% of the TUR Contract target

3.4.3 Hectares completed by land type shows 1,839 ha (48%) of work claimed to date this financial year is on High priority and Top priority land. The bulk of this work has been completed on afforestation projects.

3.4.4 There have been 482 claims completed on 288 farms. This is fewer than last year, a record year, but there are still potentially 60 pole claims and 40 fencing claims outstanding.

3.4.5 There was 168 km of fencing completed, 2.8 million trees planted including 41,000 riparian plants in the 2020-21 financial year.

3.5 FORECAST VS ACTUAL (TARGETS VS ACTUAL BY WORK TYPE)

3.5.1 Table 4 shows the forecast and actual figures against target for 2020-21. The work programme is fluid and changes throughout the year. Some changes are due to postponements or cancellations and some are due to new plans coming on-stream and bringing in new work programmes. The dollars shown in the table are the grant cost. It is unclear yet how Central Government's Freshwater rules governing river fencing will affect the work programme but it is likely more riparian fencing will be completed and requests for funding will increase, although this is

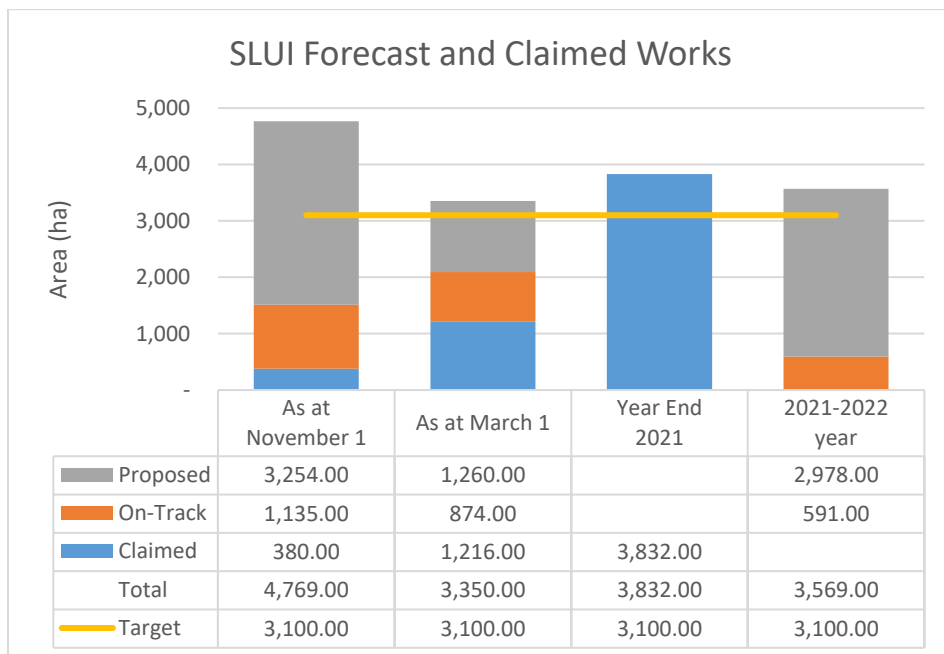
already over-allocated. Further ahead, farmers may choose to redirect funding from afforestation or other works to riparian protection, and as a result the programme may struggle to meet some targets.

Table 4: Work during 2020-21 financial year (contract vs forecast vs actual by hectares and dollars).

Work Type	Hectares				Dollars \$ x 1,000			
	Contract Target	Forecast	Actual	Actual vs Contract	Contract Target	Forecast	Actual	Actual vs Contract
Afforestation	1,250	1,475	2,473	+1223	939	1,056	858	-81
Retirement	600	714	622	+22	261	819	539	+278
Riparian Retirement *A	220	573	332	+111	357	1,672	846	+489
Managed Retirement	85	17	0.4	-84	25	27	3	-22
Space Planting & Gully Planting	900	665	404	-496	398	315	266	-132
Structures/Earthworks	10	1	0	-10	60	7	0	-60
Other (inc. blank)	0	35	0	0	63	25	48	-15
Total *B	3,065	3,480	3,831.4	+767	2,103	3,921	2,560	+457

*A – includes wetland retirement

*B – Annual Plan Target is 3,100 ha, SLUI Contract Target is 3,065 ha.



Graph 3: Changes to SLUI job status through the year and works allocated for the next financial year. "On-track" means the Land Management Adviser has re-confirmed the work with the landowner or is confident the work will proceed. Graph 3 updates Table 4 with more recent forecasts.

- 3.5.2 Table 4 compares contract target (ha and \$) to forecast and actual. Individual work targets can vary widely, i.e. in reality the contract was to deliver 3,065 ha and the mix of work types will change from year to year. Graph 3 tracks the changes in amount of work and the certainty of that work being completed over the course of the year and into next financial year, as understood through conversations with landowners.
- 3.5.3 Graph 3 shows that jobs allocated for the 2021-22 financial year sit above the target at 3,569 ha. On-track works are largely those carried over from 2020-21. We are still actively seeking works for the year.

3.6 JOINT VENTURE FORESTRY OPERATIONS

- 3.6.1 Horizons has interests in 10 **joint venture** (JV) forests (under a registered Forestry Right) with a net stocked area of 1,387 hectares. A report on these forests was provided to Council in April 2017. Work and expenditure in the forests includes rates and insurance payments, maintenance of tracks and fences, pest control, audits and inspections, monitoring and measurements, arranging silviculture, valuations for external audit, maintaining ETS registration and reporting, and liaising with landowners.
- 3.6.2 The Silviculture Contract with Penetito Forestry has been extended for a further two years. This was agreed through the contract negotiations and procurement process carried out and reported to Council in PX 19-200. A works plan for 2021-22 has been written and agreed.
- 3.6.3 Thinning operations on Seddon's forest have been completed. This operation required use of a contractor to manage roading stop/go operations for trees on the road edge.
- 3.6.4 Wright's and Thompson's thinning was completed along with Thompson's track maintenance.
- 3.6.5 Forest 360 have completed plotting for carbon measurement.
- 3.6.6 Consultant Allan Bell completed a forest audit, checking our plotting and growth measurements were being carried out appropriately.
- 3.6.7 Orme and Associates were engaged to carry out forest valuation work which was completed in mid-June in order to meet end-of-year reporting requirements.
- 3.6.8 Pricewaterhouse Coopers have been engaged to report on a number of the forestry issues, including how these forests are accounted for within the Horizons financial system, accounting treatment of the valuation and how we report on potential income and costs (including provision for replanting), and management and accounting treatment of carbon. This report is nearing completion.

4 REGIONAL AND COAST, WHANGANUI CATCHMENT STRATEGY (WCS) AND WHANGANUI RIVER ENHANCEMENT TRUST (WRET)

4.1 PROGRESS ON ENVIRONMENTAL GRANT FUNDING AND ADVICE

4.1.1 Environmental Grant funding is in place to support landowners to undertake works that will reduce erosion and protect the environment. This funding is targeted slightly differently between the **Regional Land and Coast** (RL&C) environment grant and the **Whanganui Catchment Strategy** (WCS) grant. Under the WCS, support from **Whanganui River Environmental Trust** (WRET) enables a greater variety of work to be funded and at higher grant rates in some areas.

Table 5: Work area and budget expenditure 2020-21 – Correct at 30 June 2021

Grant Type	WORK AREA (ha)				BUDGET (\$)			
	AP Target	Allocated	Complete	AP % Complete	AP Budget	Allocated	Complete	AP % Complete
WCS	75	137	96	123	113,000* ¹	187,645	116,947	103
RL&C	100	151	101	114	80,000	138,691	77,185	96
Total	175	288	197	118	193,000	326,336	194,132	101

Note *1 - this is \$50,000 Horizons and \$63,000 WRET

- 4.1.2 WRET allocation of grant funding for the 2020-21 financial year was \$63,000, with a share cost invoiced to WRET of \$61,508. This left a WCS grant cost to Horizons of \$55,439, slightly over budget.
- 4.1.3 Of the 100 projects completed, 51 were for pole planting, 21 riparian retirement and nine for retirement.
- 4.1.4 The 51 pole planting projects totaled 3,891 poles.
- 4.1.5 Eighteen of the 21 riparian projects were completed in the WCS area, reflecting the WRET commitment to these projects and the greater emphasis of riparian projects by the Land team in this area with the Freshwater Team supporting other parts of the region.
- 4.1.6 Eight afforestation projects were completed with 20,281 trees established.
- 4.1.7 It is noted that Dick Lancaster has stood down from the Taumarunui Sustainable Land Management group due to health reasons. Dick has been the mainstay of the group since its inception and his drive and influence will be missed.

4.2 INDUSTRY PARTNERSHIPS

BALLANCE FARM ENVIRONMENT AWARDS (BFEA)

- 4.2.1 The local organising committee for the BFEA programme met in late May with Nadine Olsen as the new coordinator. Entrants are open for the 2021-22 year and the BFEA website has been updated to give potential entrants more information regarding the process. [Ballance Farm Environment Awards \(nzfeawards.org.nz\)](http://nzfeawards.org.nz)

POPLAR AND WILLOW RESEARCH TRUST (PWRT)

- 4.2.2 The PWRT held a meeting in May and planned an extra meeting in mid-July to discuss future planning, including long-term funding.
- 4.2.3 PWRT has used the new funding from the One Billion Trees programme to support wider extension programmes with a workshop for regional council staff pm pole planting, varieties, site selection and planting to be held in Masterton in September.
- 4.2.4 Land Management Advisor Weston Brown has supported the PWRT set up a new trial site near Taumarunui which will evaluate establishment and growth of three-metre poles, stakes and rooted cuttings.

BEEF AND LAMB NEW ZEALAND (BLNZ)

- 4.2.5 Staff attended two further BLNZ workshops covering farming and the ETS. BLNZ has engaged Forest 360 to present to farmers about how the ETS may affect them and Horizons staff have attended to clarify funding available through our grant programmes.
- 4.2.6 The winter grazing campaign, a multi-funded project between industry bodies and regional councils, continued this year.

The June update follows:

What was done in April & May?

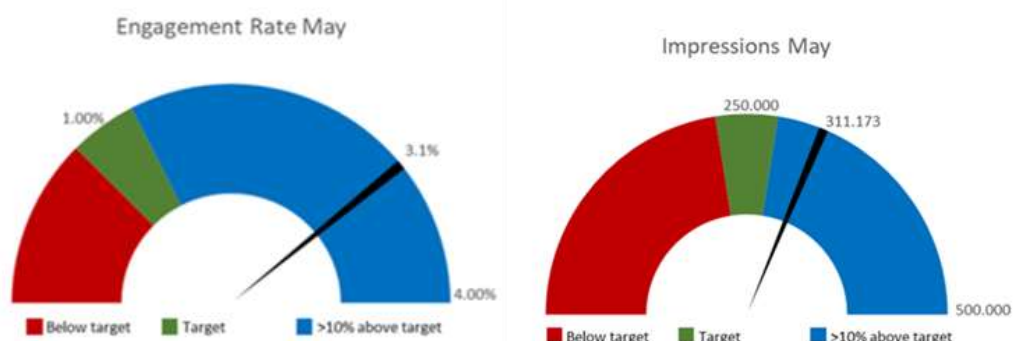
- Three advertisements were placed, in Central Rural Life (CRL), Southern Rural Life (SRL) & Farmers Weekly.
- Eight news stories were written and published (2 in B+LNZ eDiary, Rural Co and Canterbury Farming, CRL and SRL)
- Ten good management practice resources were shared through B+L social media & eDiary.

What was happening in June?

- Seven advertisements in Farmers Weekly, CRL & SRL
- Fourteen good management practice resources
- Three news stories.

How are we tracking compared to last year?

Beyond expectations with both metrics far above target levels for May 2021:



Target ranges (green) are based off last year's results.

OTHER

- 4.2.7 Staff attended and presented at a number of events including farm discussion groups and farmer visits. Central Government's Freshwater rules, especially intensive winter grazing and the low-slope map for river fencing, have continued to dominate discussions.
- 4.2.8 Staff attended the Horizons Oranga Wai meetings in Kimbolton, Taihape, Ohakune, Taumarunui and Whanganui, and report good landowner attendances.
- 4.2.9 Land staff were on site at the Horizons display at the Central Districts Field Days.
- 4.2.10 Where appropriate staff supported catchment care groups including Whangaehu, Otinui, Pohangina, Upper Manawatu, and others.
- 4.2.11 Staff presented on erosion and land-use issues in the Whanganui Catchment to Lincoln University students on their annual North Island field trip.
- 4.2.12 All Land Team were on site for a training day for planting poles. The day started at the Woodville Nursery and covered pole handling, health and safety, trailer loading and load security, before going on-farm to cover pole variety selection, siting and planting. We have five staff in their first year of advising farmers on poles so this was a very important opportunity for experienced staff to pass on their knowledge.

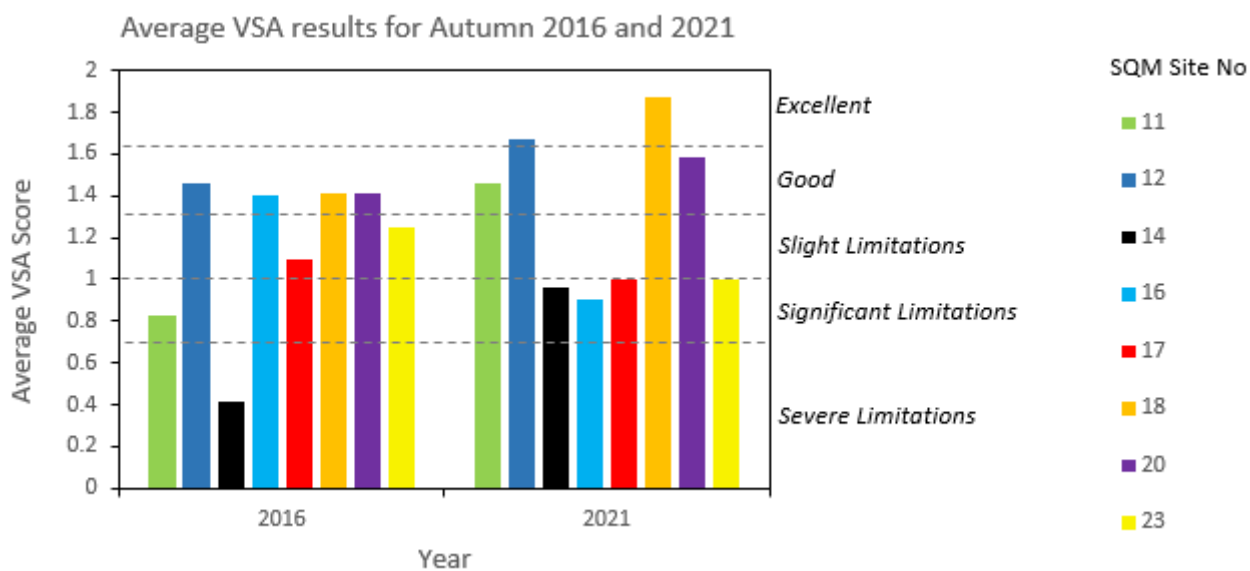


Photo 2 – Staff training in pole planting – Oroua catchment, London’s Ford. Photo: Sara Mathieson.

4.3 SOIL HEALTH

- 4.3.1 **Soil Quality Monitoring** (SQM) continued during autumn with 12 SMQ site visits between May and June. Nine of these sites were originally visited in Autumn 2016 and these were the first repeat visits.
- 4.3.2 SQM site visits were undertaken on a range of land-use types including dairy, sheep, trees, dry-stock and vegetable farms. There was a particular focus on including vegetable farms, with three new sites added to the programme during the autumn 2021 run. One was on Manawatu series soil (Recent) on the lower river flats in Palmerston North and two were on Ohakune series soils (Allophanic) between Raetihi and Ohakune.
- 4.3.3 Samples from the autumn 2021 run have been sent to **Manaaki Whenua Landcare Research** (MWLCR) for analysis. Once these results are back, letters will be written to

the landowners to present and interpret the results. **Visual Soil Assessments (VSAs)** conducted on the autumn 2021 SQM sites have been completed with eight able to be compared to 2016 results. On average, the results indicate the Kairanga and Tokomaru silt loam sites had improved their soil structure, colour and worm count in spring 2021 compared with spring 2015. This appears to relate to a more favorable preceding winter-spring, as well as a longer interval since the sites had been cropped.



Full analysis of the soil physics, soil chemistry and VSA results will be conducted over the coming months. Preliminary analysis of the VSA results shows that, SQM sites generally have improved over time. This is likely related to the length of time under pasture or a longer interval since the sites have been cultivated. Soil quality has been shown to decline with increasing frequency of cultivation (Taylor *et al.* 2017). This is highlighted by the decline in VSA scores for sites 16, 17 and 23 where the soil is subject to continuous cultivation with little to no rest periods. The SQM programme aims to share and explain soil quality information to landowners, to help influence land management decisions.

4.4 SUPPORT FOR CONSENTS AND COMPLIANCE

4.4.1 Advice to landowners regarding the need for consents or compliance for a number of activities which may be permitted or require consent, including:

- One on vegetation clearance where a consent was required,
- One on vegetation clearance where no consent was required,
- One on tracking/earth disturbance on land in the hill country zone where consent was required.

5 NURSERY

5.1 WORK PROGRAMME TO DATE

5.1.1 WRET-supported nurseries in the Ruapehu District:

- A small number of poles were harvested from the Manunui Nursery and a small number of private grower poles will be available,
- The WRET-funded nurseries are on track for harvest next winter.

5.1.2 Woodville:

- The bulk of this year's Horizons supply will be from the Woodville nursery. Harvest started in the first week of June with the contractor's crew ranging from 2-4 staff, two being experienced workers. By the end of June 10,800 poles had been cut, trimmed, sorted and stacked ready for distribution;
- One truck and trailer load of poles and sleeves was delivered to Taihape (Photo 2), with poles for both Taihape and Taumarunui deliveries.



Photo 3 – Bulk pole delivery from Woodville Nursery to Taihape depot. Photo: Sara Mathieson.

- A number of shelterbelts need to be removed but finding contractors is problematic as there are no contractors willing or able to do the full job;
- Waste piles have been burnt and in future there will be more of an emphasis on mulching as much material as possible;
- Investigation into irrigation development continues and we have an estimate for construction of a water storage dam, but are having difficulty getting confirmation of water supply and dam liners from Tararua District Council;
- A plant seedling storage area has been completed and is being utilised by the Freshwater team to store bulk plant supplies for delivery to individual riparian projects;
- The pole storage system has now been in place for three years and is working well. Individual bays contain bundles of poles that can be labeled with variety, number in the bay and date cut so that staff will pick up the oldest poles and record the number they have taken. The sprinklers placed on the tops of the bay posts allow poles to be kept moist without being oversoaked.



Photo 4 – Pole storage bays at Woodville Nursery with each bay displaying information on number of bundles, variety and date cut. Photo: Sara Mathieson.

5.1.3 Bulls:

- The Woodville harvest contractors were also completing the Bulls harvest. The team switched from Woodville to Bulls in mid-June with completion due for the end of June. An estimated 4,800 poles will be cut;
- An outdoor cold shower has been installed for any chemical spills;
- There was an attempted break-in to the shed. The area has been reinforced and we have purchased two security cameras with one installed as a trial;
- A newly-cleared area is being prepped for planting in willow stakes this spring.

5.1.4 Weber:

- There will be a small harvest of 250 willow poles from Weber this winter;
- We are reviewing our management of this area. The land is leased from Tararua District Council and, if we decide to relinquish the lease, the area will have to be cleared and re-grassed.

5.2 ACTIVITY DURING JULY-SEPTEMBER

5.2.1 During July-September staff will:

- Complete the SLUI WFP contract allocation to LandVision – at July 1 they had been allocated 17 properties totaling 9,474 hectares with a further 11 properties totaling 7,617 hectares to allocate. These will be assessed and allocated based on Top priority farms first;
- Update the grant allocations for the SLUI works programmes – currently 356 jobs totaling 3,569 hectares are allocated to 2021-22 but most staff have yet to record their pole-planting jobs. This indicates that we are going into the year with SLUI more than fully allocated. Staff will continue to assess new jobs and add to this during the 2021-22 year as past experience tells us some jobs will drop off, and Council-approved use of reserves will allow for some over-allocation;
- Update the Egrant and WCS allocations for works programmes – currently 25 Egrant jobs totaling 48 hectares, and 20 WCS jobs totaling 51 hectares;
- Finalise the Forestry report undertaken by PWC with a draft already commented on;
- Continue to cost and firm up the Woodville Nursery irrigation development;
- Finalise a project with Manaaki Whenua Landcare Research on an update to the Sednet model incorporating all Land Management programmes i.e. not just SLUI;

- Continue with the pole sales and delivery, and assist and demonstrate planting. This will be a major component of the July-August workload;
- Only carry out claim processing if contacted by landowners as this is a lower priority than completing winter planting programmes;
- Keep in contact with landowners carrying out afforestation programmes with 45 programmes at this stage totaling 1,131ha of afforestation ranging in size from 1-140 hectares;
- Deliver plans completed in the 2020-21 financial year. This involves working through the information in each plan and discussing possible work programmes. It may also include on-farm inspections;
- Complete end-of-year reporting for Annual Report, Contract Milestone reporting, and Whanganui River Enhancement Trust;
- Set a date for SLUI Advisory Group meeting.