Canterbury 2021 Flood Recovery Update 2

Ken Tarboton (Aqueus Consulting)
Shaun McCracken (Environment Canterbury)

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Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

200 Tuam Street
PO Box 345
Christchurch 8140
Phone (03) 365 3828
Fax (03) 365 3194

75 Church Street
PO Box 550
Timaru 7940
Phone (03) 687 7800
Fax (03) 687 7808

Website: www.ecan.govt.nz
Customer Services Phone 0800 324 636

Executive summary

Purpose:

This report provides an update on flood recovery progress by Environment Canterbury (ECan) for the period of August through October 2021. It follows the Update 1 report that covered flood response and recovery in June and July 2021.

It documents progress with both response and recovery works and provides a summary of costs to date to support the first claim to the National Emergency Management Agency (NEMA) for eligible like-for-like replacement of assets lost as a result of the flood.

Background:

The significant rainfall event of 28-31 May 2021 over much of Canterbury, resulted in wide-spread flooding across the region. A region-wide state of emergency was declared on 30 May 2021. Flood damage as a result of the exceptional rainfall was significant and widespread across the region, affecting community infrastructure, public and private property and damaging or destroying significant ECan flood protection assets. Physical works in response to this event commenced immediately following the event and flood recovery works are ongoing.

Response and Recovery Progress – this period August to October 2021:

Focus during this period has been on undertaking further temporary works in vulnerable areas while progressing permanent repairs. The previously identified flood damage locations have been further assessed, based on risk and prioritised into approximately 300 flood repair jobs, categorised as high, medium and low priority. High priority jobs were to start as soon as possible, subject to resource availability and procurement requirements. Medium priority jobs were to start as soon as possible with targeted completion by the end of 2022, and low priority jobs, where risks were lower, are planned for completion by the end of 2023. To date approximately 50 flood recovery jobs have been completed.

An interactive web interface was developed to show the status summary for these jobs. It can be viewed at: **ecan.govt.nz/FloodRepairMap**

Requests for tenders have been advertised on the Government Electronic Tendering System (GETS) for five of the larger high priority stopbank rebuild jobs, following Environment Canterbury's procurement practice. Contracts on these jobs are expected to be awarded before the end of 2021, with works starting early in 2022. Several more of these contracts will be advertised prior to Christmas.

Financial Status:

The total costs to the end of October 2021 for Flood Recovery (including response) is $6.6 Million. Of these costs, $5.5 Million are estimated to be eligible for application to the National Emergency Management Agency (NEMA) for a 60% central government contribution above a threshold for like-for-like asset replacement. The threshold for Environment Canterbury is approximately $4.1 Million. An account of the eligible costs will be presented to NEMA for eligibility review, after which the first claim for agreed eligible costs above the threshold will be submitted.

The initial estimated cost for total flood recovery remains at $19.7 Million as estimated in the previous report. The indicative funding mix based on the initial cost estimate remains as previously reported with a likely overall claim to central government for a contribution of $7.5 Million towards Flood Recovery with the remaining $12.2 Million to be funded by Environment Canterbury. These estimated costs will be revised over the next 12 months as many of the larger work sites are repaired and actual repair costs confirmed.

Next Steps:

Proceeding with high priority flood damage repairs (areas at greatest risk) is the highest priority over the next few months. This will be subject to resource (materials and contractor) availability. While significant tree planting and tree edge protection work has been undertaken in the works completed to date, the next major round of tree edge protection work will need to wait until the winter of 2022. To compensate for the time it will take for this tree edge protection to become established, erosion protection bunds

have been included as additional edge protection for the major stopbank replacement works. These bunds will provide erosion protection to the stopbanks until tree edge protection can be established.

Consideration of Climate Change:

During the next period, further consideration needs to be given to options for betterment or improvement on what was previously in place, particularly improvements that account for climate change and the likelihood of increased frequency and more intense rainfall events. Improvement could take the form of creating more room for rivers in fairways that have already been widened by the flood. There may also be the opportunity to undertake cost effective repairs to infrastructure in the vicinity of flood damaged assets, while contractors are working in the area. Climate change betterment and other infrastructure repairs outside of like-for like replacement of pre-flood infrastructure is not eligible for the 60% NEMA subsidy.

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1 Introduction

This report is the second report to be provided to the National Emergency Management Agency (NEMA) documenting Environment Canterbury's Flood Recovery progress from August to October 2021. It follows the initial report which included details of the May 2021 Canterbury flood, and response and recovery activities through to the end of July 2021.

This report provides an update on response and recovery works undertaken to the end of October 2021, including a summary of their costs. Communication and community engagement is also summarised in this report.

Details of the flood event of 28-31 May 2021 have been provided previously so are not repeated in detail here, other than the following summary for completeness.

The significant rainfall event of 28-31 May 2021 over much of Canterbury, resulted in wide-spread flooding across the region. Rainfall amounts exceeding the largest 72-hour rainfall totals on record were recorded at 28 of Canterbury's 84 rain gauges. Mount Somers rain gauge recorded 546mm in 72 hours, more than double the previous record 72-hour total. A region-wide state of emergency was declared on 30 May 2021. Flood damage as a result of the exceptional rainfall was significant and widespread across the region, affecting community infrastructure, public and private property and damaging or destroying significant ECan flood protection assets. Peak flows exceeded design capacities in several rivers in the Ashburton, Timaru and Mackenzie districts resulting in several stopbank breaches and extensive erosion control vegetation loss.

2 Flood Repair Progress

The previous report indicated that close to 500 damage sites, identified as part of flood response, had been assessed for risk, and 281 sites had been assessed as requiring permanent repairs. An interactive web site, discussed below in the community and communication engagement section, was developed to track repair progress at these sites and provide a publicly available summary of flood repairs.

Flood repair status for each job, categorised as below, is updated daily on the web site.

Table 2-1: Definition of flood damage status descriptions

Status	Definition
Draft	We have identified that repairs are required at this location and scoping of the job is underway.
Accepted	The job has been fully scoped, and a start date allocated.
Open	Works are underway at the site.
Monitoring	Initial works have been completed. These works are being monitored as it is considered likely that further work may be needed at the site.
Completed	Works have been completed and the job is closed.

Due to the large number of jobs required as part of this flood recovery effort, there is some variability in the status of jobs. For example, damage to a site where both tree edge protection and the stopbank were washed away, may originally have been listed as a single job, however in order to get the stopbank repair done as a priority, the job has now been split into a stopbank repair (to be done within the next three months) followed by tree edge planting (to be done in the winter of 2022). Also, for efficiency, repairs to stopbanks within the close vicinity of each other are sometimes combined into a single job for procurement and construction. Hence the status of flood damage repairs which is summarised for each district in Table 2-2 below, should be considered as being representative of the status of flood damage repairs at this stage (to the end of October 2021), however will not match exactly what is shown on the web site as the website is updated daily with direct links to the ECan job management system.

Key points to note from the table below are that work in flood damage repair is progressing steadily with approximately 50 flood damage repairs complete to date. Some of the repairs are in a monitoring phase because they were completed as temporary repairs and monitoring will determine whether or not further

permanent repairs will be required. Open jobs are currently underway while draft and accepted jobs have yet to commence.

Table 2-2: Status of flood damage repairs by District at 31 October

2021 Flood Repair - Job Status (Number in each category)						
District or Description	**Draft**	**Accepted**	**Open**	**Monitoring**	**Completed**	**Total**
Flood monitoring					4	4
Selwyn	13					13
Ashburton	98		13	7	23	141
Orari-Waihi-Temuka	47	9	2	2	5	65
Opihi	8		1		2	11
Ashley	2				2	4
Waimakariri-Eyre-Cust	6		3		3	12
Upper Hinds	2		1		2	5
Lower Hinds	5		1			6
Little River					1	1
Response not allocated to a District	6	2		2	8	18
Totals	**187**	**11**	**21**	**11**	**50**	**280**

Flood Recovery expenditure to the end of October 2021 summarised according to the Districts in the table above is included in the Financials section.

The following images are provided to give a representative overview of the type of work underway and/or completed to date.

Figure 2-1: Erosion Protection Bunds under construction with tree edge replacement (Anchored Tree Protection) yet to start. Ashburton River. Job 23545.

Figure 2-2: Stopbank repair underway with tree edge replacement yet to start. Orari River at Railway Bridge. Job 23718.

Figure 2-3: Anchored tree edge protection replacement repair where erosion was within 30m of stopbank edge. Orari River at Racecourse. Job 23715.

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Figure 2-4: Anchored Tree Protection installation underway. Bowyers Stream. Job 23871.

Figure 2-5: Completed stream diversion, buried tree line, deflection bunds. South Ashburton River. Jobs 23632 & 23633.

Figure 2-6: Buried Tree line during installation. South Ashburton River. Job 23628.

Figure 2-7: Completed Anchored Tree Protection Groynes. South Ashburton River. Job 23590.

It has been estimated that to date around 5,000 trees have been planted in the berms of the affected rivers to replace some of the erosion protection vegetation that has been lost. This has been a huge effort, particularly in the Ashburton catchment. The majority of these trees have been salvaged from the river fairways (central portion) and therefore not only add erosion resilience to the river berms but also has the benefit of reducing the risk of debris build-up on downstream infrastructure such as bridges and water intakes.

Proceeding with high priority flood damage repairs (areas at greatest risk) is the highest priority for the next few months. This will be subject to resource (materials and contractor) availability. While significant tree planting and edge tree protection work has been undertaken in the works completed to date, the next major round of tree edge protection work will need to wait until the winter of 2022 to maximise tree

survivability. To compensate for the time it will take for tree edge protection to become established, erosion protection bunds have been included as additional edge protection for the major stopbank replacement works. These bunds will provide a degree of erosion protection to the stopbanks until tree edge protection can be established.

3 Procurement

All of the emergency response work and temporary flood damage repairs were undertaken using ECan's list of pre-qualified contractors. Some future reinstatement works, particularly anchored tree protection will still need to be procured in this way. This is because the work is complex and hard to specify, it is best completed by experienced operators on an hourly rate basis under adequate supervision. However, wherever possible, larger works will be put to open tender following best procurement practice.

In the reporting period, requests for tenders (RFT) have been advertised on the Government Electronic Tendering System (GETS) for five relatively large stopbank replacement works on the Orari, Waihi and Ashburton Rivers. These works total approximately 2.7km of stopbank replacement. It is planned that the tenders will be evaluated, and Contracts awarded on these tenders before the end of the calendar year. Preparatory site works are expected prior to the end of the 2021 calendar year, with the bulk of the repairs occurring in January – March 2022.

4 Financials

Flood Response and Recovery

Flood response costs to the end of October 2021 are $6.6 million as summarised in Table 4-1 below. Approximately $3.7 million has been spent on Flood recovery during the report period from August to October 2021. Costs are subdivided into the flood affected river rating districts.

Table 4-1: Canterbury 2021 Flood Response Costs at 31 October 2021.

Description	Est. Non-Eligible Costs	Est. Eligible Costs	Total Costs To Date
Flood monitoring costs	192,740	95,459	288,199
Selwyn 2021 Flood Repair	8,913	12,290	21,203
Ashburton 2021 Flood Repair	188,532	3,873,615	4,062,147
Orari-Waihi-Temuka 2021 Flood Repair	126,772	506,434	633,206
Opihi 2021 Flood Repair	11,073	17,680	28,753
Ashley 2021 Flood Repair	12,313	99,685	111,999
Waimakariri-Eyre-Cust 2021 Flood Repair	19,831	459,256	479,087
Upper Hinds 2021 Flood Repair	2,693	24,029	26,722
Lower Hinds 2021 Flood Repair	2,168	5,520	7,688
Little River 2021 Flood Repair	1,753	2,734	4,487
Sub-Total	566,787	5,096,703	5,663,490
CD Emergencies - Weather Event May 21	387,899	26,642	414,541
Flood Recovery Advisory Group	51,483	-	51,483
Other Cost Codes	94,809	335,807	430,616
TOTAL	1,100,978	5,459,152	6,560,130

Flood monitoring costs include external goods and services such as post flood surveys and inspection flights, and external contractor on ground services not specified into a particular rating district. The estimated non-eligible monitoring costs include ECan staff costs, staff travel, vehicle use and administrative charges.

Flood repairs costs for each of the affected rating districts relate to both temporary and permanent flood damage repairs undertaken as part of the Flood Recovery Project.

Figure 4-1 below shows the expenditure profile to date. It is to be expected that the profile will not be an even spend over the 2 year forecasted lifespan of the project. Rather it will have an initial high rate of spend that gradually decreases. The temporary works have been completed and larger stopbank rebuilds while be phased earlier so will alter the spend profile.

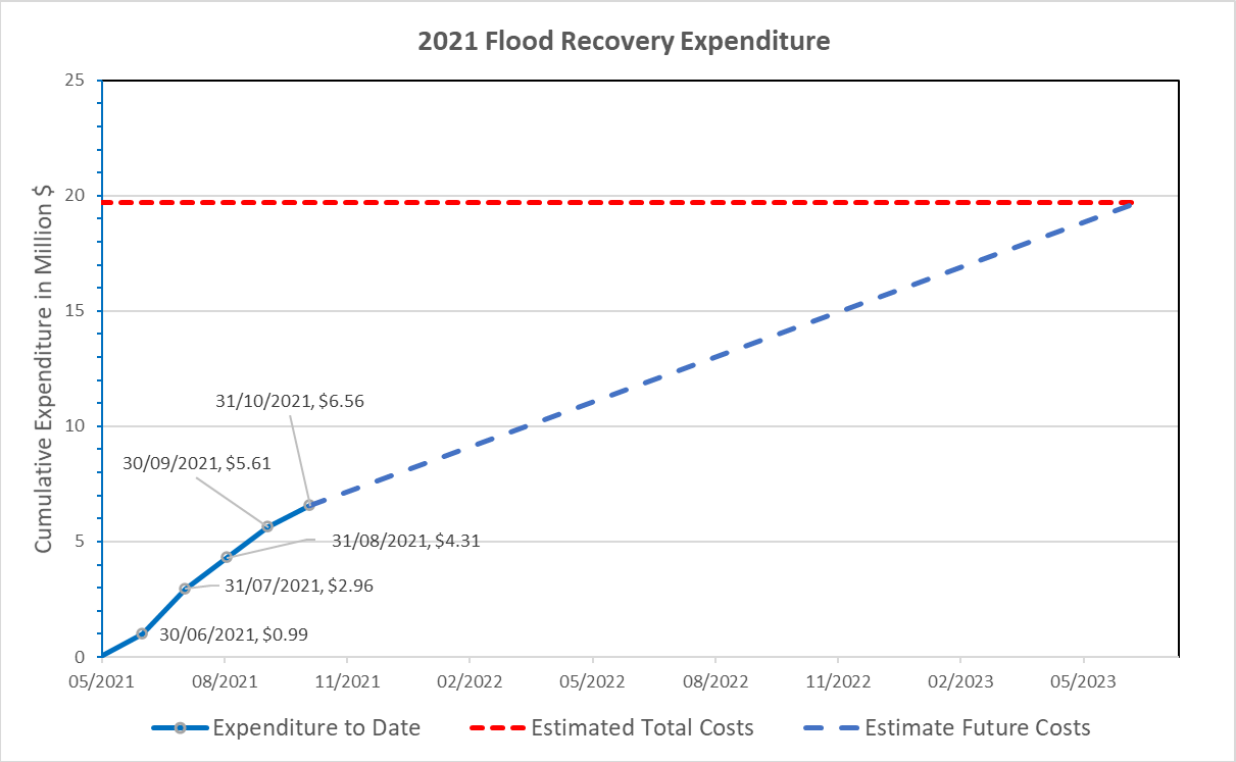

Figure 4-1: Summary of Flood Recovery Expenditure Profile.

NEMA Eligible Costs

Government policy[1] is to reimburse 60 percent of the combined eligible costs (response and essential infrastructure costs above 0.002 percent of the net capital value in the case of regional councils. For environment Canterbury the threshold has been determined to be $4.1 million.

As presented in Table 4-1 above, Environment Canterbury has assessed that of the Flood Recovery expenditure to the end of October 2021, approximately $5.5 million are NEMA eligible costs (subject to NEMA confirmation). A detailed breakdown of Flood Recovery costs will be prepared for submission to NEMA for eligibility review and assessment, after which the first claim for agreed eligible costs above the threshold will be submitted. It is expected that the first claim will be for approximately 60% of $1.4 million.

Estimated Cost Apportionment

The overall estimated cost for flood recovery remains $19.7 million. Initial cost estimates, provided previously have only been updated for Flood Recovery costs to the end of October 2021 in the table below. An updated overall estimated Flood Recovery Project cost will be provided in future based on actual costs and NEMA agreement on eligible costs.

[1] Section 33 of the Guide to the National CDEM Plan, 2015.

Based in these estimates, the overall cost for Flood Recovery to Environment Canterbury is estimated to be $12.2 million with an expected central government contribution of $7.5 million through claims to NEMA.

Table 4-2: Estimated flood recovery costs with portion estimated as claimable from NEMA.

Estimated Costs	**Million $**
Response and recovery costs to 31 July 2021	$2.9
Flood Recovery August to October 2021	$3.7
Estimated Future Flood Recovery Costs	$13.1
Total Flood Response & Recovery Estimate	**$19.7**
Estimated non-Eligible Recovery Costs	-$3.1
ECan Threshold for NEMA claim	-$4.1
Eligible for 60% government subsidy (NEMA)	**$12.5**
Estimated Funding Mix	**Million $**
ECan initial threshold	$4.1
ECan – Non Eligible Costs	$3.1
ECan – 40% of Eligible Costs	$5.0
Total ECan Estimated Cost	**$12.20**
NEMA – 60% of Eligible Costs	$7.5
Total	**$19.7**

5 Risks

Due to the extent of flood damage and the number of breakouts and breaks through flood protection infrastructure, the risk of further inundation remains high until permanent repairs can be implemented.

The following table provides a summary of residual risk and ongoing risks to the flood recovery programme together with mitigation actions to reduce the likelihood of the risks becoming issues.

Table 5-1: Residual and Flood Recovery Project Risks

Risk	**Description**	**Mitigation Action**
Further Floods	Severe weather may cause further flooding before or during flood damage repairs. This could increase the flood damage.	Undertake temporary repairs as soon as possible. (Complete) Communicate elevated residual risk to the community, especially in areas where river break-out has occurred. (Complete & Ongoing)
Spring thaw	High spring flows in the rivers when snowmelt occurs could pose further flood risk.	Assess most likely locations of high flows following spring thaws. Undertake priority temporary repairs in these areas. (Complete)
Funding	Security of funding	Ongoing communication with ECan Councillors is needed to keep them aware of funding needs from Council Reserves and potential risks. (Underway / Ongoing) Work closely with NEMA to maximize NEMA contributions and flood recovery. Closely monitor contractor and materials cost. Follow council procurement processes. Public tender for large works. (Underway / Ongoing)

Risk	Description	Mitigation Action
Material availability	The availability of material, particularly to undertake tree replacement. Both heavy and light anchored bank protection requires significant lengths of cable and anchors (typically concrete blocks).	Councils around the country have been made aware of ECan's need for steel cable. Alternative sources are being investigated. Immediate needs are covered. Contingencies may need to be considered, including the use of higher cost rock protection where material availability limits the reinstatement of anchored tree protection.
Tree growth time	The time for re-establishment of tree edge protection poses a risk until trees can be established.	In critical areas of high risk, alternatives, particularly rock protection, may need to be considered to mitigate risk. As far as is practicable, live trees are being salvaged from the river fairways and being utilised in repair works. Many of these large trees will resprout and form the future erosion protection.
Staff Resource	Staff resources are limited to undertake oversight and coordination of significant flood damage repairs.	Consider additional contract resource for flood damage assessment, prioritisation and works and on-site works supervision that cannot be delivered in-house.
Programme length	Property owners want works associated with their property undertaken first.	Prioritise flood damage repairs based on risk and develop and implement a communications plan. (ongoing) Communicate directly with property owners, and with the community as a whole keeping them informed of works priorities. (ongoing)
Ground conditions	River levels from time to time will restrict access and be generally unsuitable to undertake large scale works.	Monitor river levels and plan works for drier months if possible. Communicate this risk to directly affected landowners. (ongoing)

6 Communications and Community Engagement

An essential part of undertaking flood recovery is ongoing communication and community engagement.

The Environment Canterbury Flood Recovery web page is the primary means of communicating information regarding flood recovery efforts. Communication via the website is an effective way to communicate project progress to a wide audience and engage the community, particularly during periods where community engagement has been somewhat hampered by Covid 19 restrictions. The Flood Recovery webpage is located at: ecan.govt.nz/flood-recovery

During the reporting period, a live map indicating the status and location of flood damaged sites needing repairs was added. This interactive map can be accessed from the above webpage, or located directly at: ecan.govt.nz/FloodRepairMap

This map, and its associated summary tables, provides information on all flood damage repair jobs for the affected Canterbury districts. Summaries can be viewed based on user selection either of "All" areas, or by selecting a specific district. Clicking on each individual repair site on the map gives top-level information about the nature of the repair at that location and its status. A screen clip of the website is included in the following figure.

One-on-one communication continues with affected landowners particularly around works planned or underway on or adjacent to their land. The interactive web page provides a valuable tool to keep landowners updated on the status of works at specific sites that affect them or are of interest to them.

ECan also worked with other agencies to issue a 'Flood Recovery Update Newsletter'. The full ECan update newsletter is attached as an appendix to this report.

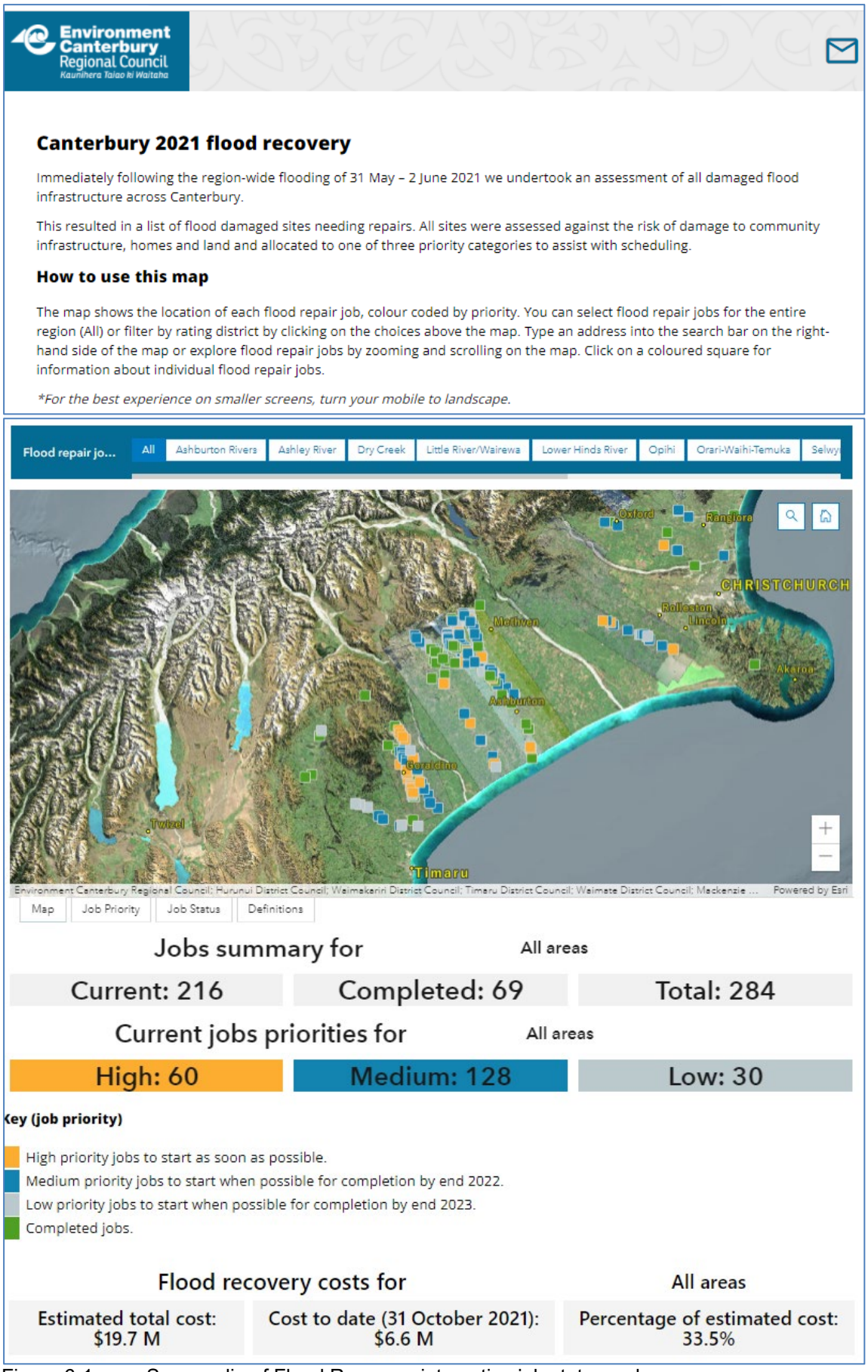

Figure 6-1: Screen clip of Flood Recovery interactive job status web page.

Meetings

More formal updates have been provided by way of the following meetings with council and rating district liaison committees. Furthermore, Environment Canterbury staff were kept informed of the flood recovery efforts through an all-staff presentation on 13 October 2021. Additionally, many one-on-one meetings with impacted landowners have been undertaken to discuss works proposed at their property.

Table 6-1: Summary of Public Meetings, August – October 2021

Date	Meeting Description
6 August 2021	Flood recovery hui with Mayors, TA recovery managers, rural leaders, local iwi, and others
9 September 2021	Catchment Sub-committee meeting with the Mayors of Canterbury councils
16 September 2021	Update hui with Arowhenua Runanga
7 October 2021	Catchment Sub-committee meeting
13 October 2021	ECan internal staff 'Discover Flood Recovery' Session
18 October 2021	CDEM (Civil Defence Emergency Management) Joint Committee meeting
26 October 2021	Ashley River / Rakahuri Rating District Meeting
26 October	Lower Rakaia Liaison Committee Rating District Meeting

* Other rating district and Liaison committee meetings are planned for November 2021 (to be reported in future).

7 Betterment Opportunities

The future state of Canterbury's braided rivers may well look different to the pre-flood state, particularly when referencing overall river width, indigenous biodiversity, mahinga kai, recreation and other values. Because fairway widths have been reduced over the last 50 years, in many cases it may not be acceptable to simply build back 'like for like'.

In undertaking flood recovery repairs consideration is being given to opportunities for betterment that create a better balance between:

- providing an acceptable (or design) level of flood protection,
- incorporating the effects of climate change,
- restoring river ecosystems,
- incorporating "te mana a te wai",
- allowing more room for rivers,
- recognizing land owner expectations and
- provide a fair and reasonable transition pathway for change.

Furthermore, there may of necessity be some inadvertent betterment. This includes the need to replace the function of an asset with a different asset that performs the same function. For example there may be certain locations where it is necessary to replace tree river edge protection with rock protection because of the level of risk, and the time limitations to establish replacement tree edge protection. As these opportunities are considered there will be ongoing discussion with NEMA as to the government co-funding eligibility.

Appendix 1: Flood Recovery Newsletter October 2021

Canterbury flood recovery

Update October 2021: Environment Canterbury continues flood recovery work throughout the region after the unprecedented weather event in May 2021.

Flood Protection – Recovery Manager, Shaun McCracken provides key updates on the recovery programme.

- A lot of work has been happening in our rivers over the winter, we have been focussing on major erosion sites with work to re-establish lost river berm vegetation.
- As we move into the summer months, we will be doing less river berm vegetation reinstatement and more stopbank repair and rebuild.
- We are organising several stopbank repair/build contracts in the Selwyn/Waikirikiri, Ashburton/Hakatere, Orari, Opihi and Waihi rivers. Repairing this infrastructure will keep communities safe while we also consider possible opportunities for future betterment. The tenders will be advertised in November 2021, with construction commencing before Christmas for some and early January for others.
- River systems remain vulnerable and we're aware of the stress this is causing in the community, particularly ahead of forecast rain events. We are in regular contact with MetService and flood controllers are on duty monitoring the situation 24/7.
- Gravel demand from contractors is steady and where appropriate we are waiving fees to encourage extraction in the Ashburton/Hakatere catchment.
- An aerial mapping survey (LiDAR) is underway, the first output we will produce is a map of bed level elevation to accurately assess gravel availability. We expect this to be complete in mid-November.

New interactive flood recovery map

To provide key information on the timing of recovery work, a new online Canterbury flood recovery map is available.

Colour-coded by priority, you can select flood repair jobs for the entire region or filter by district, as well as search by address.

As it is a new tool, there could be minor errors. Please get in touch with us if you have any feedback on how we can improve the tool.

View the map:
apps.canterburymaps.govt.nz/FloodRecovery

Flood frequency data

Preliminary flood frequency estimates are now complete, this was a significant undertaking and difficult due to gauge wash outs and bed level changes. Please note the estimates provided below have yet to be formally reviewed and should be considered indicative only.

River and Site	Max flow recorded (m3/s) (year of flood)	May 2021 event ARI* (years)	Peak flow May 2021 (m3/s)
Ashley at Gorge	1173 (2021)	~100	1173
Ashley at Lees Valley	179 (2021)	~100	179
Okuku at Fox Creek	650 (2021)	>200	650
Ashley at Rangiora	1845 (1993)	~10-20	1529
Eyre at Trigpole Road ford		~100	45
Cust Main Drain at Threlkelds Road	117 (1995)	~10-20	99
Hawkins at Willows	29 (2021)	~100	29
Hororata at Mitchells Road	49.8 (2021)	~50	50
Selwyn at Whitecliffs	342.7 (2000)	~20-50	224
Selwyn at Coes Ford	447.55 (2021) (recorded - +50m3/s overflow as per past modelling makes this 497.55)	~20-50	448
Ashburton at SH1	1794 (2021)	~200	1794
Sth Ashburton at Mt Somers	450 (1868)	~100	430
North Ashburton River at Old Weir	515 (2021)	~200	515
Taylors Stream at SH72	276.4 (2021)	~200	276
Bowyers Stream at SH72	210.3 (2021)	>200	210
Stour at Barossa	248 (2021)	>200	248
Pudding Hill Stream at Mt Hutt Retreat	209.8 (2021)	>200	210
Hinds Sth Branch at Syphon	177 (2021)	>200	177
Temuka at Manse	1100 (1986)	~20	812
Orari at Gorge	1244 (1868)	~20-50	916
North Opuha River at Clayton Road Bridge (ECS)	138 (2021)	~20-50	138
Waihi River at Waimarie (+Waihi River at DOC reserve)	210 (1986)	~20	167

**ARI (Average Recurrence Interval) is the average time period between floods of a certain size. For example a 100-year ARI flow can be expected to occur on average once every 100 years.*

Councillor Ian Mackenzie provides a financial summary for current and future flood recovery programme actions.

Current Recovery Work: Financial Update

The current estimate to repair Environment Canterbury owned flood protection infrastructure is $19.7M ("like for like" only). We expect to be able to claim $7.5M of this as co-funding from the National Emergency Management Agency (NEMA), which leaves $12.2M with Environment Canterbury to finance.

Environment Canterbury will include a suggested funding proposal for the remaining $12.2M as part of our Annual Plan.

To support Council decision making in this space:

- A workshop was held with flood effected Mayors in September and a further one is planned for November. At this meeting flood recovery, river rating schemes' potential expansion, and a regional catchment rate to fund work outside rated scheme areas were discussed. There was support for consideration, with the community, of a regional rate to fund flood recovery. It was also agreed that we should consider a regional rate to fund river works outside existing scheme areas and explore the opportunity for more comprehensive whole of river/catchment rating schemes. It was also agreed that no one option was right for all our rivers and that river management options need to be tailored to each catchment.
- The Catchment Subcommittee, which Councillor Ian Mackenzie co-chairs, discussed funding for flood recovery when it met on 7 October. The recording of the meeting will be up on the Environment Canterbury website soon. The Committee next meets on 18 November. Options included whole of region rates (with options on the basis of property value or a uniform charge) or a combination of targeting affected areas (Ashburton, Timaru, Selwyn and Waimakiriri) and a cross region rate. We'd be interested in feedback on these options. The Catchment Committee favoured a regional rate using a mix of uniform charge and property value based rates. The $12.2m that Environment Canterbury will have to fund is to restore flood protection to the level it was at before the floods.
- Rating District Committee meetings for all schemes where work is planned to be significantly different to the current Long Term Plan are being scheduled over the next month to gather recommendations and views. If the current financial model remains the same (that is all the costs for flood recovery lie within the affected rating districts) then the targeted rates collected in these schemes will need to rise. One of the alternative options the Council is considering is a new 'flood recovery' rate for a period of two years as discussed above and informally supported by the districts' mayors. River rating schemes will still have to fund the rebuilding of financial reserves which have been used up paying for some of the recovery work and of course on-going maintenance costs.
- This year we will have funded roughly $10m of the total recovery cost of $19.7m from reserves and borrowings. The second $10m will have to be agreed to in our annual plan process. ($7.5m of that will be recovered from NEMA).
- We will also progress reviewing river rating schemes' funding. These reviews will not only include the relative weightings each part of the catchment is responsible for but also whether there are non-contributing beneficiaries of flood protection because of development within the

catchment (such as expanding towns) that should be included in river rating schemes. These reviews may also consider what level of protection is appropriate given the changing value of assets needing protection. This is complicated work that will require considerable community input. As such it will take time but is being progressed. Some of these options would be more easily enabled if we are successful with the next two items.

Future focus

- Over the next 12 months we will prepare a business Case to NEMA to ask for financial support for "betterment". If successful, the works could be co-funded by NEMA. Substantive work is yet to begin on the business case, but it may include requests to adapt existing infrastructure (relocate stopbanks), for new infrastructure and funding for land acquisition. Flooding is New Zealand's most common natural hazard and it's important with recent events and the future impacts of climate change that we are proactive and take this opportunity to ensure we have the most resilient flood protection in place as possible.
- We are actively talking to Central Government about permanent co-investment in flood protection. In 2018 Environment Canterbury supported a bid by all Regional Councils in New Zealand for permanent co-investment for flood schemes given their national importance and the billions of dollars of assets they protect. The schemes also protect a significant amount of crown infrastructure and the fact the crown does not contribute anything is not fair. Environment Canterbury is now leading a supplementary case study to the 2018 bid to keep the conversation alive. The case study has strong support from the Canterbury Mayoral Forum and there is a particular focus on Ashburton within in it. The aim of the case study is to encourage Central Government to add a permanent budget line to future budgets. I look forward to sharing a draft with you in the coming months.

Find out more about the flood recovery: ecan.govt.nz/flood-recovery

Feedback is welcome, please let us know your views.

Flood Protection – Recovery Manager

Shaun McCracken: shaun.mccracken@ecan.govt.nz

Environment Canterbury Regional Council

Councillor Ian Mackenzie: councillor.ian.mackenzie@ecan.govt.nz