greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

If calling please ask for: Democratic Services

15 February 2018

Wairarapa Committee

Order Paper for meeting to be held in the Hurunui o Rangi Room, Carterton Events Centre, 50 Holloway Street, Carterton on:

Tuesday, 20 February 2018 at 10.00am

Membership of Committee

Councillor Staples (Chair)	Greater Wellington Regional Council
Councillor Donaldson (Deputy Chair)	Greater Wellington Regional Council
Councillor Laidlaw	Greater Wellington Regional Council
Mayor Booth	Carterton District Council
Councillor Dalziell	Masterton District Council
Councillor Wright	South Wairarapa District Council
Nelson Rangi	
Horipo Rimene	

Recommendations in reports are not to be construed as Council policy until adopted by Council

Wairarapa Committee

Order Paper for meeting to be held on Tuesday 20 February 2018 in the Hurunui o Rangi room, Carterton Events Centre, 50 Holloway Street, Carterton at 10.00am

Public Business

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Please note that these minutes remain unconfirmed until the meeting of the Wairarapa Committee on 20 February 2018.

Report 17.455
9/11/2017
File: CCAB-628029985-54

Minutes of the Wairarapa Committee meeting held on Thursday, 9 November 2017 in the Hurunui o Rangi room, Carterton Events Centre, 50 Holloway Street, Carterton at 10:04am

Present

Councillors Staples (Chair), Donaldson (Deputy Chair) and Laidlaw (Greater Wellington Regional Council), Mayor Booth (Carterton District Council), and Councillors Dalziell (Masterton District Council) and Wright (South Wairarapa District Council).

Nelson Rangi and Horipo Rimene.

Public Business

1 **Apologies**

There were no apologies.

2 **Declarations of conflict of interest**

There were no declarations of conflict of interest.

3 **Public participation**

Jamie Falloon, Peter Gawith, Esther Dijkstra, Richard Parkes, Rob Stone, Diane Mathers, and Chris Peterson, as members of the Wairarapa Catchment Communities Organisation, gave a presentation to the Committee in relation to the Organisation's vision, purpose and goals.

Moved *(Cr Wright/ Mayor Booth)*

That the Committee congratulates the Wairarapa Catchment Communities Organisation on the work they have undertaken so far and that they support the concept of Catchment Communities in principle.

The motion was **CARRIED**.

4 **Confirmation of the minutes of 3 August 2017**

Moved *(Cr Laidlaw/ Mayor Booth)*

That the Committee confirms the minutes of 3 August 2017, Report 17.276.

The motion was **CARRIED**.

5 **Proposed Natural Resources Plan update**

Oral Report

Matt Hickman, Manager, Environmental Policy, gave a presentation updating the Committee on the progress of the proposed Natural Resources Plan.

6 **Public Transport update**

Wayne Hastie, General Manager, Public Transport, spoke to the report.

Report 17.435 File: CCAB-628029985-41

Moved *(Mr Rangi/ Cr Donaldson)*

That the Committee:

1. Receives the report.

2. Notes the content of the report.

The motion was **CARRIED**.

7 **Ruamāhanga Whaitua Committee update**

Alastair Smaill, Project Manager, Whaitua, spoke to the report.

Report 17.436 File: CCAB-628029985-44

Moved *(Mr Rimene/ Mayor Booth)*

That the Committee:

1. Receives the report.

2. Notes the content of the report.

The motion was **CARRIED**.

8 **Are we meeting our environmental outcomes in the Ruamāhanga catchment?**

Megan Oliver, Team Leader, Aquatic Ecosystem and Quality, spoke to the report.

Report 17.246 File: CCAB-628029985-16

Moved *(Cr Wright/ Cr Donaldson)*

That the Committee:

1. Receives the report.

2. Notes the content of the report.

The motion was **CARRIED**.

Noted: Officers agreed to report to the Committee with further information regarding the activation of flood warning alarms and the appropriate level of Olsen P sites.

9 **Wairarapa - general update**

Report 17.446 File: CCAB-628029985-46

Moved *(Cr Donaldson/ Cr Laidlaw)*

That the Committee:

1. Receives the report.

2. Notes the content of the report.

The motion was **CARRIED**.

The meeting closed at 11:55am.

Cr A Staples
(Chair)

Date:

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Report	**2018.36**
Date	13 February 2018
File	CCAB-628029985-78
Committee	**Wairarapa**
Author	**Angus Gabara, Manager, Rail Operations**

Public Transport Update

1. Purpose

To provide analysis on the recent performance of the Wairarapa rail service and outline the measures and initiatives currently underway.

2. Background

The customer experience on Wairarapa rail services has been severely impacted by generally poor punctuality, occasional major disruptions, high passenger loading on certain services, and of late, under-performing air conditioning.

The challenges facing the Wairarapa line differ in a number of fundamental ways from other lines in the Metlink passenger rail network:

- The length of the journey/line is much longer (Masterton is 60km beyond Upper Hutt Station)
- The track infrastructure is near life expired and includes an 8.8km tunnel
- The signalling system is basic
- All of the track north of Trentham is single tracked
- All services must pass through the busy Hutt Valley
- There are a low number of services, so each service delay has a big impact on overall line performance
- The line north of Upper Hutt is not electrified so only different and limited rolling stock is available
- Previous initiatives (additional newer carriages, more powerful locomotives, timetable changes, etc.) have generated significant growth which places increased expectation and pressure on aging assets.

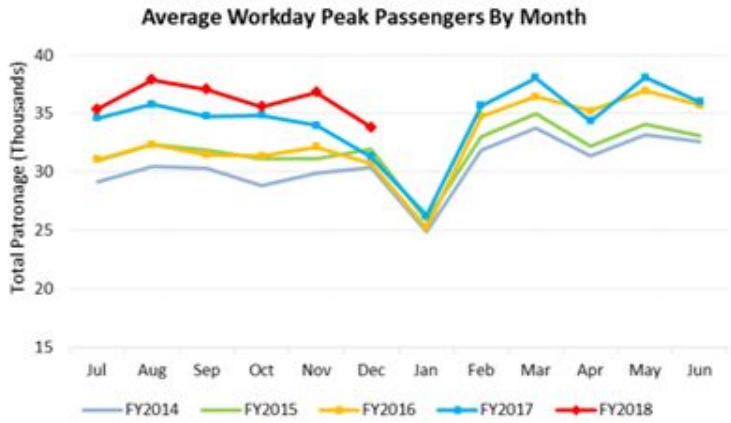
It is worth noting, perhaps incongruously, that peak patronage on this line is up **5.3%** year-to-date to December 2017 and customer satisfaction improved by **10%** in the latest survey. These statistics provide all the more reason why, despite the challenges, our customers deserve a better service and a number of initiatives are underway to improve as many aspects as possible.

While there are limited quick fixes to the infrastructure challenges, even in the medium term, it is important to mitigate impacts as much as possible and ensure that steps are taken to secure longer term improvements.

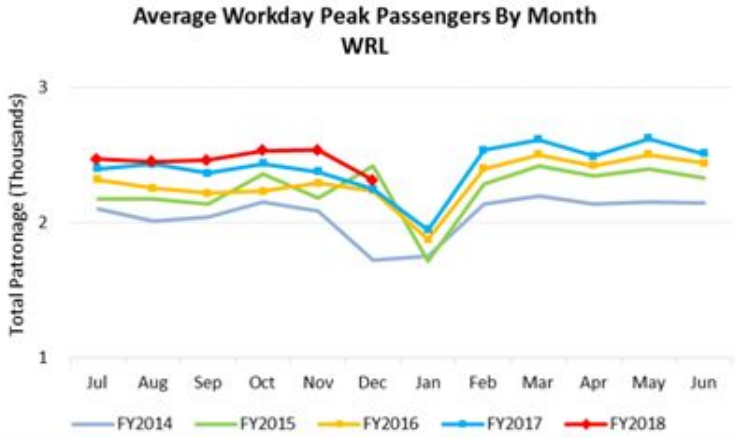
3. Rail patronage

Rail patronage continues to grow strongly across the network (up 7.1% year-to date to December). The best trend indicator of growth is average workday peak passengers by month.

The table below is the combined peak (both AM and PM) patronage for the total Metlink rail network (including Wairarapa services). The approximate workday average of 36,000 peak customers in November FY2018 represents an average of 18,000 individual rail customers using the trains at peak times (most likely to and from work or study) each day during that month.



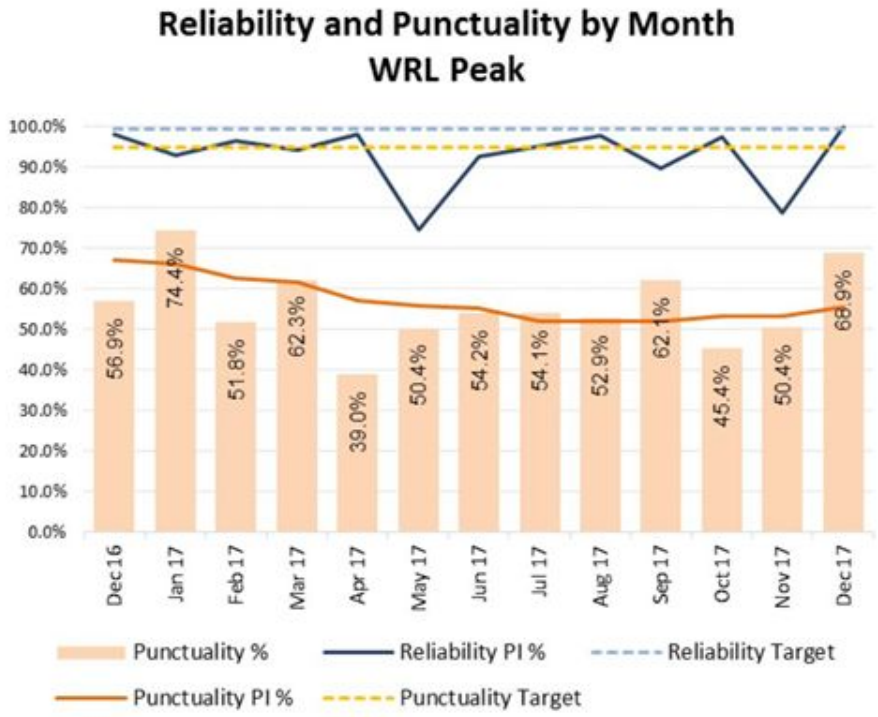
As mentioned above similar strong growth (5.3%) is seen on the Wairarapa line using the same measure, as shown below.



4. Performance metrics

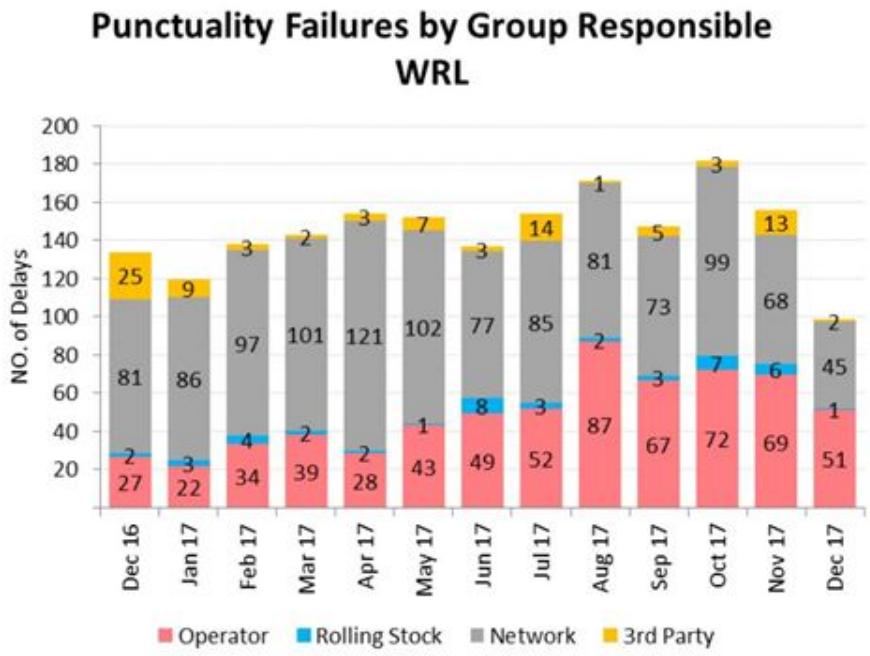
Prior to the air conditioning issues, the majority of the recent complaints and media attention relate to reliability, punctuality and passenger capacity.

4.1 Wairarapa rail peak services reliability and punctuality



The improvement in punctuality in December to **68.9%** (up from **50.4%** in November) is a step in the right direction. Unfortunately this change will have coincided with summer heat speed restrictions and is still well below the performance of the electrified lines which averaged around 90% in December.

It should be noted that under the older measurement system (that only measured manually in and out Wellington Station) these results would be about 5 - 6% higher.

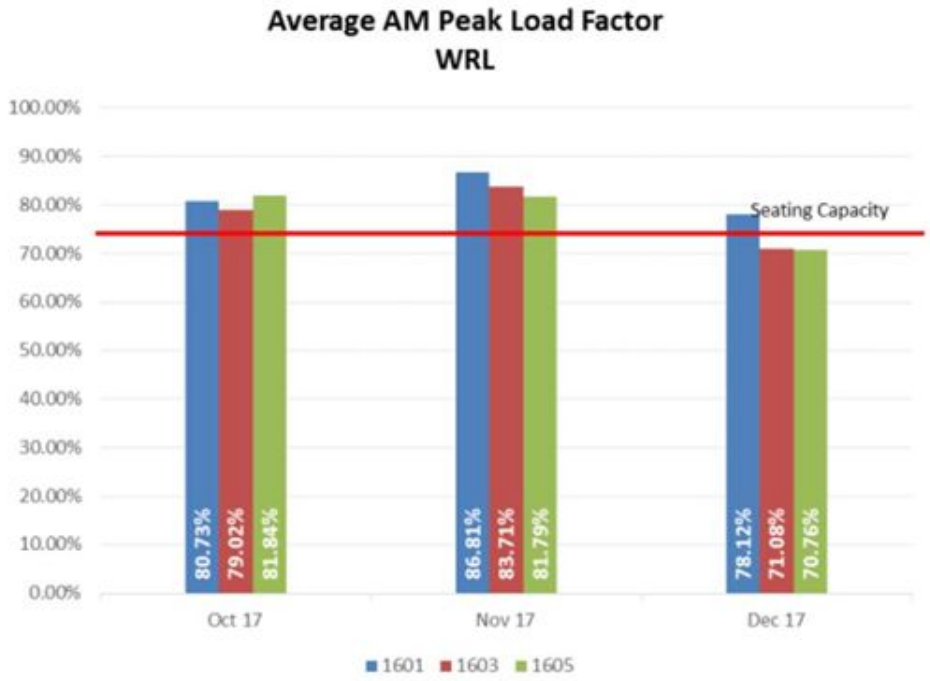


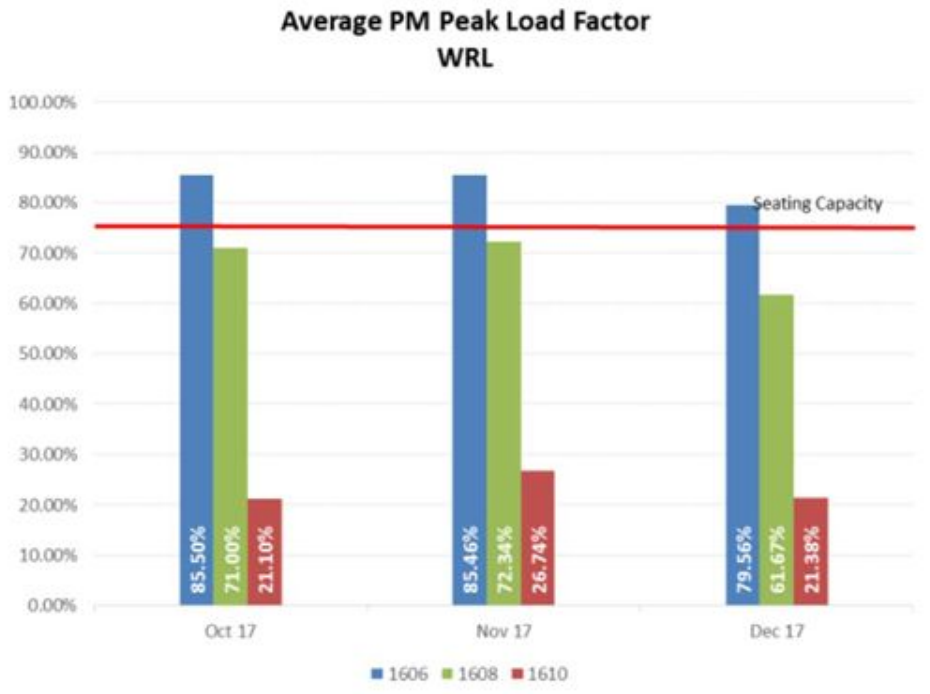
The above graph depicts the groups responsible for punctuality failures. Clearly, in most months the state of the track network is the main contributor to delays. Operator-caused delays have had a significant impact in the last five months. Rolling Stock-caused delays, while being a minor contributor in the number of incidents, when they do happen tend to take much longer to recover from, therefore having a far greater impact on customers due to the age and scarcity of carriage and locomotive stock.

4.2 Wairarapa rail services peak customer loads

The graphs below show the peak load factors for the three AM and PM peaks services. The red line represents seating capacity and the service numbers represent the following timetabled departures:

Service Number	AM Peak (dpt. Masterton)	**Service Number**	PM Peak (dpt. Wellington)
1601	5.46am	1606	4.25pm
1603	6.20am	1608	5.30pm
1605	6.47am	1610	6.18pm





As the graph depicts, AM peak services have a maximum of about 50 people standing, across between 6 to 8 carriages, by the time it reaches Wellington Station. On AM peak services on the electrified network, it is not uncommon to have between 50-75 people standing on a single 2-car unit at Wellington Station.

However, the electrified Matangi units are specifically designed to support this level of metropolitan commuter capacity.

The imbalance on PM peak services on the Wairarapa line is clearly shown in the second graph above. Unsurprisingly, this is the service that has received the most complaints regarding the insufficient cooling in the recent spell of hotter weather.

5. Initiatives

5.1 Immediate focus

Below is a list of actions taken by Metlink to respond to recent concerns from customers on Wairarapa services since December 2017.

December

- Announced independent investigation into a series of earlier mechanical rolling stock issues that caused significant customer disruption and discomfort. SNC-Lavalin Rail & Transit PTY Ltd, New Zealand, will conduct the investigation and a brief description of the scope of the investigation is included as **Attachment 1**.

- Senior GWRC officers met with Lyn Patterson, the mayor of Masterton, council officers, Members of Parliaments, and representatives, to discuss short and long term issues on the line

- Provided a day's free travel for beleaguered Wairarapa customers leading up to Christmas

- Announced a 30% discount on Wairarapa 10-trip and monthly passes for February.

January

17/1: Temperature data loggers installed in carriages to monitor trends

19/1: Senior GWRC officers met with local Wairarapa councillors, council officers, Members of Parliament, and representatives to discuss a joint approach in support of business cases on funding infrastructure renewals

22/1: Temperature and air-conditioning data sent to a rail air-conditioning specialist in Australia for analysis

22/1: GWRC Chair and CEO met Minister of Transport and other members of Labour Cabinet to discuss business case and opportunities for funding

24/1: Sales of discounted monthly passes starts

25/1: GWRC team begins trialling changes to ventilation system to improve performance - including:

- Running air-conditioning all day

- Curtains pulled, keeping doors shut
- Cutting new vents into a/c risers (see image below) in the saloons

26/1: GWRC agrees process with Tranzit and Transdev for additional buses to meet late (due to track heat restrictions) running Wairarapa services

29/1: Air-conditioning specialist begins work in Wellington on assessing system performance

29/1: Introduced two bus alternatives for 4:25pm WLG-MAS service to mitigate crowding and additional heat load

29/1: Begun offering ice blocks on the 4:25pm service from Wellington.

30/1: Air-conditioning modifications achieved testing carriage temperature at 18 degrees all while sitting empty in the sun

30/1: On-train posters explaining actions on air-conditioning, and request for line upgrade funding

30/1: Discounted 10-trip tickets go on sale

31/1: Air-conditioning modifications carried out on all 8-cars (of 4:25pm) train.

31/1: We received the following feedback on social media:

Other actions

We are investigating adding another carriage to the 4:25pm (to make a 9-car) to relieve overcrowding on what is the busiest Wairarapa service. This is made more possible by the modifications to allow the different carriage types to be more compatible. Operational complexities still need to be managed in regard to platform lengths, generator capacity and passenger safety.

Since December, GWRC has engaged regularly and openly with media on issues and shortcomings related to the service, and what Metlink is doing to address them. We have also been putting actions in the context of the network upgrade business cases and engaging with Wairarapa customers via social media channels. Meetings are planned with some of the leading activist customers to outline our current actions and plans for the line.

5.2 Recent focus

Timetable change in November 2017

Wairarapa off-peak services were timetabled to have shorter journey times than during the peak. While patronage is lower than the peak, off-peak "dwell" times at stations are generally similar to or longer than at peaks because of the loading of bicycles, luggage and prams, etc. This has resulted in poor performance of the Wairarapa off-peak services. A timetable change on 19 November helped address this by increasing scheduled off-peak service journey times.

Timetable change in July 2018

Another minor timetable change in July is designed to better align with the new bus networks across the Region. For the Wairarapa line, this is designed to deliver a slightly smoother path through the more congested Hutt Valley line.

Carriage compatibility

Modifications to the compatibility of the two types of carriages used on the Wairarapa line have been completed such that we should no longer have trains that are shorter than planned due to maintenance schedules. It is now possible to substitute the limited number of SE carriages (6) with an additional SW carriage (18) when an SE car is required for planned maintenance.

Additional 32 carparks at Solway

32 additional park and ride carparks were provided on existing railway land at Solway Station. This has removed the practice of parking on the roadside around a hazardous intersection.

Business Case preparation and submission

In conjunction with KiwiRail, we have prepared and submitted two Crown Business Cases for consideration in the 2018 Central Government Budget round.

Title: **Network Track Infrastructure Catch-up Renewals**
Value: $96 million
Benefit cost ratio: 2.7
The primary focus is life-expired track infrastructure on the Wairarapa line and other critical track infrastructure on the busiest parts of the wider network, including the treatment of high risk slopes. This case is about catching up on the historic underinvestment in the underlying Crown track asset and providing a genuinely fit for purpose rail network. At the moment the quality of our commuter service from the Wairarapa is seriously compromised by the inadequacy of the track infrastructure.

Title: **Unlocking Network Capacity and Improving Resilience**
Value: $100 million
Benefit cost ratio: 1.8
The focus is upgrading the network to provide sufficient capacity to manage existing and future growth in peak patronage (up 13.6% over last 3 years). This programme delivers network improvements that allow higher frequency peak services and longer peak trains to cater for forecasted peak passenger demand through to 2030. The upgrades ensure commuter rail can maintain a balanced mode share between road and rail during peak periods, and sustain the efficiency and resilience of the wider transportation network.

5.3 Longer term development – GWRC Proposed Long Term Plan

As discussed above, if performance, reliability, journey times and capacity are to be addressed then there will need to be significant investment in terms of:

- Improved rail infrastructure (renewals) with higher line speed and reduced/removed speed restrictions
- New rail infrastructure in terms of double tracking under the "Unlocking Capacity" programme which will increase capacity between Upper Hutt and Trentham reducing impact on the Wairarapa
- More reliable new rolling stock such as Electro/Diesel Multiple Units
- Enhanced train signalling
- Enhanced level crossing controls.

The first step to delivering on the investments, if and when adequate funding is committed, will be a significant exercise to plan, programme, procure and implement the complex and interdependent works packages. The programme will also need to mesh with regular maintenance and renewals, existing approved major renewals (Hutt and Johnsonville overhead wire system replacement) and most importantly regular passenger services. Minimising the impact on customers from such a programme of work must be paramount.

Electro/Diesel Multiple Units

The concept at this stage is to replace GWRC's aging Wairarapa fleet and KiwiRail's Capital Connection fleets with modern Electro/Diesel Multiple (E/DMU) units, similar to Auckland and Wellington Electric Multiple Unit trains, but with the ability to run on electricity in the metro area and switch to diesel propulsion outside of the electrified network. These versatile, longer

distance trains, operated under GWRC's Metlink brand, would provide enhanced levels of service and capacity on existing routes and invigorate regional development opportunities across the lower north island. As a minimum, the new fleet will allow additional services from Masterton and Palmerston North and provide additional capacity and flexibility on the electrified metro networks. A separate business case for this proposal is being developed by GWRC (again with support from NZTA, Horizons Regional Council and Wairarapa councils) as indicated in the Capital Connection business which was recently presented to the Government.

Additional peak services

Introducing additional services in either the peak or off-peak before delivering at least some of the above longer term improvements will require compromises and has the potential to introduce greater stress and fragility to the existing services and customers. The GWRC Draft Long Term Plan seeks to address some of these longer term solutions.

6. Communication

This report is likely to be widely referenced by stakeholders and media statements will be prepared.

7. Consideration of Climate Change

The matters requiring decision in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

7.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

Officers have considered the effect of the matter on the climate. Officers recommend that the matter will have a positive effect on reducing diesel emissions and improve the overall sustainability of the rolling stock fleet. The E/DMUs will reduce the operation of diesel traction power within the Wellington electrified network.

Officers note that the matter does not affect the Council's interests in the Emissions Trading Scheme (ETS) or the Permanent Forest Sink Initiative (PFSI)

7.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

Officers have considered the impacts of climate change in relation to the matter. Officers recommend that climate change has no bearing on the matter.

8. The decision-making process and significance

No decision is being sought in this report.

9. Engagement

Engagement in relation to the matters outlined in this report is ongoing.

10. Recommendations

That the Committee:

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

Report prepared by:	Report approved by:
Angus Gabara Manager, Rail Operations	**Wayne Hastie** General Manager, Public Transport

Attachment 1: Brief description of the scope of investigation to be carried out by SNC-Lavalin Rail & Transit PTY Ltd, New Zealand

Attachment 1 to Report 18.36

1. How SNC-Lavalin will conduct the investigation

Further to communications in December 2017 and January 2018, SNC-Lavalin Rail & Transit Pty Limited (SNC-Lavalin) has prepared this Offer of Services for the investigation.

1.1 Background

Transdev is contracted by GWRC to operate the Wellington passenger rail network (this is part of Metlink). This includes services linking Wellington and the Wairarapa operated by diesel powered loco-hauled carriages. Transdev have separate agreements with KiwiRail for the provision of a mainline locomotive for each train, and with HR for the maintenance and servicing of the carriage stock.

Following a number of mechanical breakdowns during recent months on the Wairarapa Line, GWRC require an independent investigation to determine the causes of the failures and provide recommendations to improve service reliability. This is the primary objective for the study. The focus is on fleet mechanical faults and failures i.e. to do with carriage or loco, as well as any related operational failures. Network faults are excluded from this investigation unless they can be attributed to causing mechanical failure (significant work has already been completed in this area and a $100M investment in track upgrades has been proposed to Government).

GWRC have indicated that the investigation report is likely to be made available to the public. Also, the investigation will require working with multiple contracted parties i.e. KiwiRail, Transdev and HR. Sensitivity is required to ensure these parties work collaboratively to identify root causes and options for improving the level of service.

1.2 Scope

SNC-Lavalin proposes the following scope:

1) GWRC conduct an introductory meeting between stakeholders outlining the objectives, scope and method proposed. The meeting would clearly outline the process, identify the requirements for specific information and site access etc during the investigation, identify any requirements on SNC-Lavalin by stakeholders (e.g. for safety during depot visits), and otherwise address any concerns.

2) Individual meetings with parties to target areas for closer investigation. This may include discussion of the items listed below.

3) A review of recent (i.e. previous 12 months) fault and failure history logs and information from each party, including any recent operational debriefs. This includes reviewing service delay minutes, fault attribution and analysis that has identified faults that have caused significant delay and impact to passengers. This part of the investigation will also look into the Failure Reporting, Analysis and Corrective Action System (FRACAS) or equivalent system used to identify root causes and prioritise defects to resolve. SNC-L will also look into the framework with which the FRACAS (or equivalent) system operates. Does the

system allow effective cooperation between contracted parties to identify root causes of faults?

4) A review of recent work done by all parties to improve the level of service – specifically related to maintenance, servicing and operations. SNC-Lavalin appreciates that significant work has already been carried out to identify options for improvement, however there may be benefit in an independent analysis of what was done to repair defects, what processes govern repairs and whether they identify underlying issues or just the specific failed component.

5) Investigation activities "in the field", including:

    a. Engineering inquiry of rolling stock condition and suitability to meet reliability targets (locos and carriage stock).

    b. A review of Minimum Vehicle Operating Standards (MVOS) – what are the standards for the rolling stock, are they fit for purpose, and how are they applied?

    c. Review of maintenance and servicing procedures/regimes and the quality of this work in particular with respect to the identified potential causes of failure. This includes locos and carriage stock separately. Who is in charge of defining the maintenance regimes and ensuring their effectiveness?

    d. How do engineering changes to address defects get implemented? Does the engineering change process support the timely resolution of defects to aid service delivery?

    e. Staff training – Do staff have the training and knowledge to manage identification and resolution of rolling stock defects, and effectively manage service delays that have occurred due to mechanical failure (as applicable to the various roles involved)?

    f. Review of start-up /operating procedures in Masterton prior to the morning peak, and in Wellington prior to the evening peak.

    g. Observation of onboard operations during running between Wellington and Masterton.

6) Track condition - are there any aspects of the infrastructure which are likely to significantly contribute to rolling stock defects e.g. is the track condition likely to significantly impact the rolling stock failure rates? SNC-Lavalin would use fault and failure data to form a view on this.

7) SNC-L will prepare a final report detailing the known failures, areas of high risk and potential causes of failure, and for each a recommendation for reducing the likelihood and/or consequence of failure.

    The approach would be to conduct the investigation with a clear objective to identify solutions to improve the service.

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Te Pane Matua Taiao

Report	**2018.28**
Date	9 February 2018
File	CCAB-628029985-74
Committee	**Wairarapa Committee**
Author	**Kat Banyard, Project Advisor**

Ruamāhanga Whaitua Process Update

1. Purpose

The purpose of this report is to update the Wairarapa Committee on the progress of the Ruamāhanga Whaitua (the Whaitua) process.

2. Background

The Whaitua process is a community-led, collaborative planning process to address a number of land and water management issues and carry out our obligations under the National Policy Statement for Freshwater Management (NPS-FM). The programme aims to improve the integration of activities and achieve better resource management practices which reflect local aspirations.

The Region has been divided into five whaitua or catchments (see Figure 1). Whaitua committees, consisting of community members and partner representatives, will make recommendations to the Council through a Whaitua Implementation Programme (WIP) report. These committees are a partnership between GWRC, iwi, territorial authorities and the community.

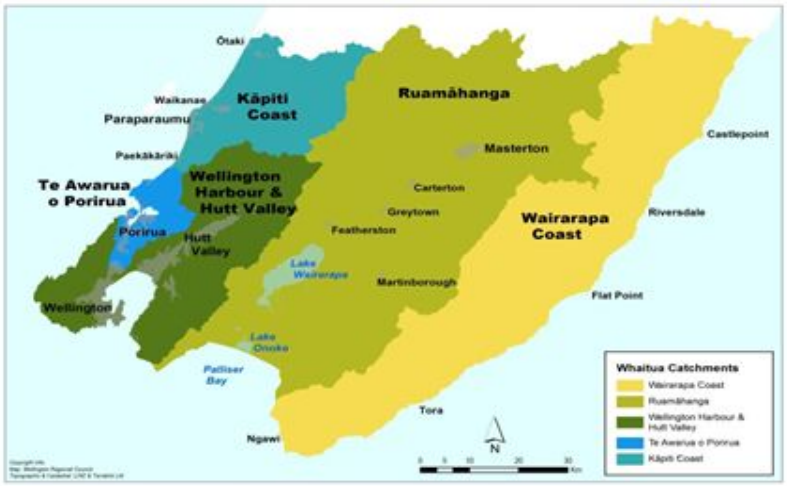


Figure 1: Whaitua catchments

A WIP will contain strategies and actions that will form a programme of work to implement the NPS-FM in the catchment area of the whaitua committee. It will include both regulatory provisions and non-regulatory programmes. The regulatory provisions will be included progressively into the Natural Resources Plan by way of plan changes into the whaitua specific chapters. The recommendations from WIPs are not being considered as part of the current Proposed Natural Resources Plan Schedule 1 process.

The Ruamāhanga Whaitua Committee was the first of the five committees to be established in December 2013.

The Wairarapa Coast Whaitua Committee will be the last of the five committees to be established, currently scheduled for 2020.

3. Update on progress

3.1 Developing freshwater objectives

The Ruamāhanga Whaitua Committee (the Committee) has developed a draft set of freshwater objectives - the environmental states they want to see achieved in rivers and lakes in the Ruamāhanga catchment. Freshwater objectives have been developed for measures required by the NPS-FM, such as *E.coli* and periphyton, and for others measures the Committee think are important, such as native fish and macroinvertebrate community health. Where the Committee is looking to recommend an objective that is an improvement on the current state it has agreed on a timeframe for this to occur.

The Committee has developed their draft freshwater objectives using a range of information and knowledge. This includes the aspirations of the community and iwi, science and technical information from the Collaborative Modelling Project (including social and economic impact assessments), their own knowledge, the five guiding principles set out by Te Upoko Taiao – Natural Resources Plan Committee, and the legislative requirements from the NPS-FM, for example, that they have to maintain or improve water quality.

When working on their freshwater objectives, the Committee identified *E.coli* as a key water quality measure to improve across the whaitua. High levels of *E.coli* impact on swimming, other recreation activities, Māori customary use, and mahinga kai - all values important to the community. Some rivers in the Ruamāhanga whaitua are below the definition of 'swimmable' in the NPS-FM as it relates to *E.coli* levels. Nationally, the NPS-FM requires 90% of specified rivers and lakes to be swimmable by 2040, and requires improvements across all waterways by this time.

Lake Wairarapa was also identified as a key place for improvement, as it has very poor water quality. The Lake currently does not meet two national bottom lines and is in a supertrophic state. The Committee noted that improvement is going to be hard to achieve, and is likely to take significant time and effort due to the complex nature of interactions in the Lake. Modelling of mitigation options show that the improvement of the Lake will likely require both reducing the amount of pollutants reaching the lake and changing the hydrodynamics of the lake.

3.2 Draft approach to water allocation

The Committee has developed a draft approach to water allocation and has started engaging with the community and stakeholders on one aspect of it. The current focus is on the proposals to raise minimum flows in the Upper Ruamahanga and Waipoua Rivers and to seek greater restriction of Category A groundwater users at minimum flow. Letters have been sent to water users who would be directly affected if the Committee's proposed changes were implemented. These users have been invited to engage with the Committee through community meetings and drop in sessions in mid-February. The Committee is looking for feedback on their potential changes, the timeframes over which any changes could be phased in, and any innovative solutions to aid a transition.

4. Key work in the coming months

The Committee will now complete its work on freshwater objectives and developing its policy packages to deliver on these objectives in more detail. This will include considering whether the policy approaches they have developed so far for water allocation, managing contaminants, and river management, will lead to the water quality improvements needed for the draft freshwater objectives to be met.

The Committee will complete their water allocation discussions in late February. From March, the Committee will engage broadly with the community and stakeholders on the 'whole package' – the draft objectives and policy packages across all water bodies. The Committee will use feedback from these engagements to develop final recommendations for the WIP. It is expected the WIP will be presented to Greater Wellington Regional Council in mid-2018. As per the Committee's Terms of Reference, if any part of the WIP is inconsistent with the Council's view or statutory requirements, any elements can be referred back to the Committee for further consideration.

5. Communication

No communication is necessary as a result of this report.

6. Consideration of climate change

The matters addressed in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

6.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

The matters addressed in this report will have no significant effect on the climate.

Officers note that the matter currently does not affect the Council's interests in the Emissions Trading Scheme (ETS) or the Permanent Forest Sink Initiative

(PFSI). However, recommendations made by the Whaitua Committee could provide a co-benefit of mitigating climate change. For example, the retirement and planting of erosion-prone land could give effect to sequestering carbon. However, this will not be able to be further analysed until the Whaitua Committee make their recommendations. Officers involved in this work will ensure this is considered in the final WIP report.

6.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

An assessment of the impacts of climate change on rainfall and catchment hydrology has been undertaken by NIWA. This information will feed into analysis of impacts on water allocation and contaminant generation and flow. Policy responses will be required to address these issues. Consideration of these is ongoing.

7. The decision-making process and significance

No decision is being sought in this report. This report is for the Wairarapa Committee to receive an update on the progress of the Ruamāhanga Whaitua process.

7.1 Engagement

Engagement on this matter is unnecessary.

8. Recommendations

That the Committee:

1. ***Receives** the report.*

2. ***Notes** the content of the report.*

Report prepared by:	Report approved by:	Report approved by:
Kat Banyard Project Advisor	**Alastair Smaill** Team Leader, Whaitua	**Nigel Corry** General Manager, Environment Management

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Report	**2018.14**
Date	14 February 2018
File	CCAB-10-456
Committee	**Wairarapa Committee**
Author	**Mark Hooker, Senior Project Engineer - Floodplain Management Plans**

Mangatarere Stream flood hazard

1. Purpose

To communicate information to the Committee about flood hazard information for the Mangatarere Stream and its floodplain which includes parts of Carterton township.

2. Background

A 2012 report by Opus International Consultants, prepared for Greater Wellington Regional Council (GWRC) in order to give a regional overview of flood vulnerability and the impacts of climate change, identified the Mangatarere Stream flood hazard to Carterton as a high priority to address. Local knowledge and Flood Protection Operations staff awareness of flood breakout points and overflow paths also reinforced that assessment.

GWRC requested Opus to carry out a preliminary flood hazard assessment (FHA) for the Mangatarere Stream in order to confirm the priority and help set the scope for a future full FHA. This work provided preliminary flood hazard maps (**Attachment 1**) showing two main breakout locations that affect mainly the north and west sides of Carterton.

The flood risk and overflow paths are already identified in the Wairarapa Combined District Plan although to a smaller degree, as that information was based on a 50-year return period/2% annual exceedance probability (AEP) flood and did not take climate change into account.

The draft reports were used for internal purposes only (including prioritising a full Mangatarere Stream FHA in GWRC's LTP) and were not communicated to the public. Following subsequent discussions with Carterton District Council (CDC) officers, the 2014 report was finalised in late 2017 and the information has been provided to CDC. This information is referred to in the rest of this report as the preliminary flood hazard information.

3. Comment

The Opus 2017 report includes flood maps for the 100-year/1% AEP flood event. A scenario including a 20% increase in flows to account for climate change has been mapped. This scenario in particular shows some flood hazard to areas of existing development in Carterton. This hazard primarily follows existing streams or areas that are clearly historical flow paths of the Mangatarere Stream.

No freeboard has yet been included on the flood maps, as this would be part of a more detailed study including an analysis of uncertainties and is not a straightforward exercise in this case. In lieu of mapping the freeboard, and in consultation with CDC, we have produced an additional scenario with the flow increased by a further 20% on top of the climate change scenario. This area has been called the "flood study area" and will be used to communicate the preliminary flood hazard information that we have for this catchment.

The hydrology and flood modelling reports have been peer reviewed by GWRC staff but have not been subject to a detailed technical peer review or independent audit, nor the community consultation that a full FHA would involve. It is important that the information be made available to the community and other stakeholders, and this approach of defining a "flood study area" was felt to be a sensible compromise that still allows us to communicate the potential flood hazard but indicates that there is further investigation to be undertaken.

A more detailed study is currently (in preparation of the draft 2018-28 LTP) scheduled to be done in 2018-20. This will involve much more detail and analysis than the preliminary assessment and include the independent audit and peer review process Council agreed to in Report 17.259. Significant areas of work will include:

- Community and stakeholder engagement, and opportunities to contribute
- A detailed hydrological study given the short period of record for the Mangatarere Stream gauge
- New survey and LiDAR acquisition
- More detail in the hydraulic model, especially at bridges and known areas where flows break out
- More detail in the urban area
- Peer review and independent audit.

GWRC will use the preliminary information in providing flood hazard advice and in scoping the full FHA later this year. CDC will use it in considering resource consent applications, setting floor levels, spatial/structure planning and in Land Information Memorandums (LIMs).

4. Communication

It is important that GWRC makes this information available so that people can make their own risk-based decisions. CDC is supportive of using the information to inform its own planning and regulatory functions. Our focus will be on advising people, recommending building floor levels and dissuading inappropriate development on a case-by-case basis.

The outline plan for communicating this information is:

- 7 Feb 2018: Workshop with CDC councillors
- 20 Feb 2018: Wairarapa Committee meeting
- Late Feb 2018: Joint CDC/GWRC letter drop to all affected properties. Flood Study Area loaded onto GWRC public map system
- Late Feb 2018: Joint CDC/GWRC press release
- Early March 2018: Public drop-in session to discuss flood hazard info and questions
- Late 2018: Update to all parties, with opportunities to provide info and participate in the full FHA

This process is consistent with our normal process for communicating flood hazard information, albeit that the community's opportunity to provide input and to consider draft flood hazard maps will take place during the full FHA rather than the preliminary work.

This flood hazard information and approach was discussed with CDC Councillors at a workshop on 7 February 2018. CDC Councillors acknowledged the need to make the information available and to carry out a more detailed investigation involving input from the community. They expressed concern that the information would have an impact on people and should be well explained, and treated sensitively, in any communication to affected landowners and residents. They also suggested giving the community an opportunity to meet with Council officers to discuss the information and answer any questions. This is reflected in the drop-in session proposed in the plan above.

This will also be reported to GWRC's Environment Committee for information.

5. Consideration of climate change

The matter described in this report has been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

5.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

Officers have considered the effect of the matter on the climate. Officers recommend that the matter will have no effect.

Officers note that the matter does not affect the Council's interests in the Emissions Trading Scheme (ETS) or the Permanent Forest Sink Initiative (PFSI)

5.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

Officers have considered the impacts of climate change in relation to the matter. Climate change impacts on the flood hazard have been considered by applying an increase in stream flows to reflect future climate change. This has been done in accordance with the climate change allowances previously endorsed by Council.

6. The decision-making process and significance

Officers recognise that the matters referenced in this report may have a high degree of importance to affected or interested parties.

The matter in this report has been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act). Part 6 sets out the obligations of local authorities in relation to the making of decisions.

6.1 Significance of the decision

Part 6 requires Greater Wellington Regional Council to consider the significance of the decision. The term 'significance' has a statutory definition set out in the Act.

Officers have considered the significance of the matter, taking the Council's significance and engagement policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance as no decision is being made.

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

6.2 Engagement

Engagement on the matters contained in this report aligns with the level of significance assessed. In accordance with the significance and engagement policy, no engagement on the matters for decision is required.

7. Recommendations

That the Committee:

1. ***Receives*** *the report.*

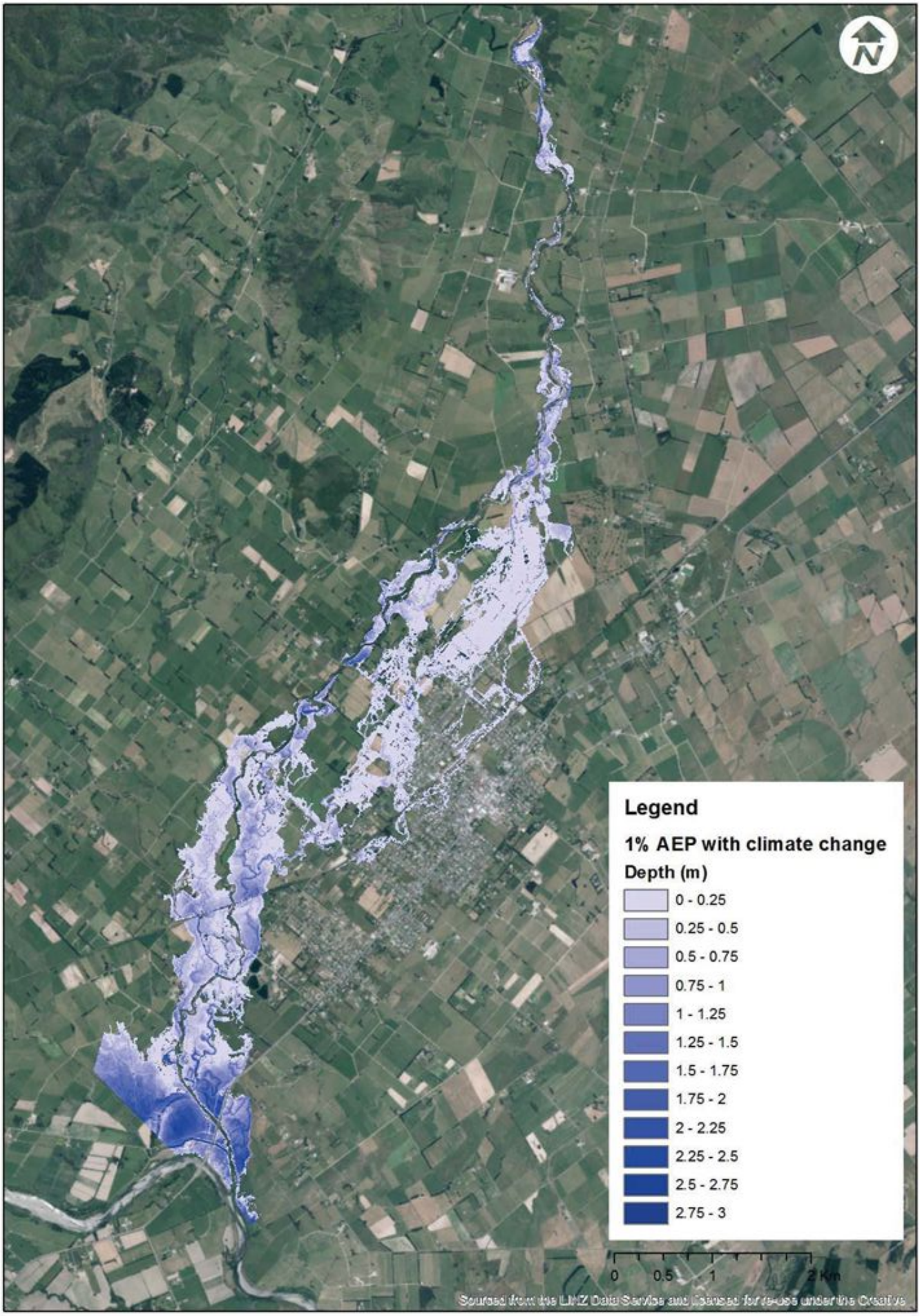
2. ***Notes*** *the content of the report.*

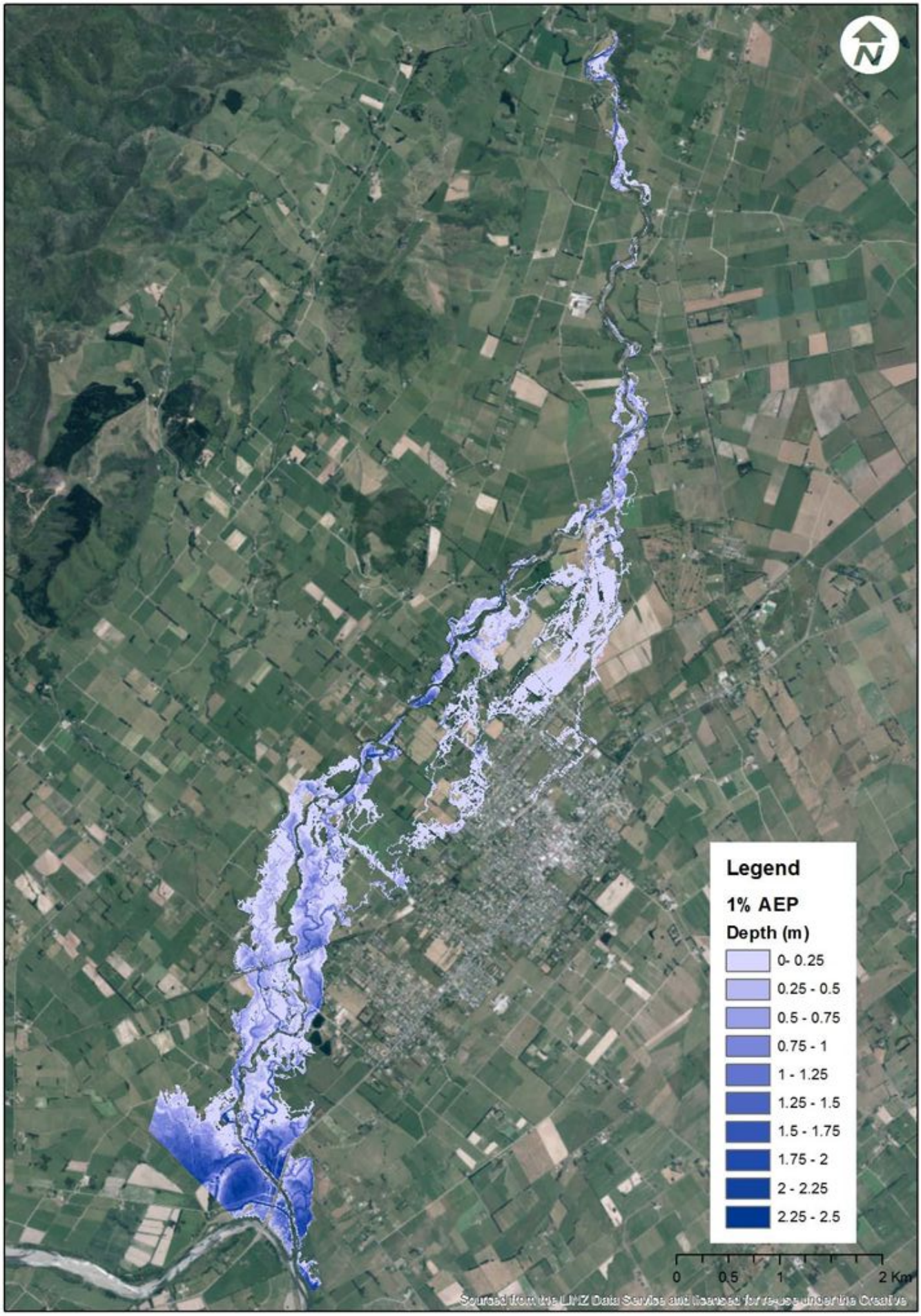
3. ***Recommends*** *that GWRC Council endorses the use of the Mangatarere Stream flood study area maps by Carterton District Council to inform planning and regulatory functions.*

Report prepared by:	Report approved by:	Report approved by:
Mark Hooker Senior Project Engineer - Floodplain Management Plans	**Graeme Campbell** Manager - Flood Protection	**Wayne O'Donnell** General Manager - Catchment Management

Attachment 1: Flood maps for 1%AEP flood, 1% AEP + climate change, Flood Study Area

Attachment 1 to Report 18.14




Legend
1% AEP
Depth (m)
0- 0.25
0.25 - 0.5
0.5 - 0.75
0.75 - 1
1 - 1.25
1.25 - 1.5
1.5 - 1.75
1.75 - 2
2 - 2.25
2.25 - 2.5
0
0.5
1
2 Km


Legend
Flood study area
0
0.5
1
2 km
Sourced from the LINZ Data Service and licensed for re-use under the Creative

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Report	**2018.29**
Date	9 February 2018
File	CCAB-628029985-75
Committee	**Wairarapa Committee**
Author	**Cr Adrienne Staples, Chair - Waiohine FMP Steering Group**

Waiohine FMP update

1. Purpose

This report is to provide the Committee with a brief update on the Waiohine Flood Management Plan (FMP) project and the meetings of the Steering Group. It also seeks the Committee's consideration of a recommendation on interim flood maps that has been made by the Project Team and endorsed by the Steering Group.

2. Background

The Waiohine FMP Project Team ordinarily meets weekly and reports on its work, along with any recommendations or issues, to the Steering Group. The Steering Group provides direction to the Project Team, considers its recommendations, and reports to the Wairarapa Committee. The Steering Group membership includes:

- Cr Adrienne Staples (GWRC), Chair
- Cr Barbara Donaldson (GWRC)
- Cr Colin Wright (SWDC)
- Horipo Rimene (Rangitāne)
- John Boon (Waiohine Action Group (WAG))
- Michael Hewison (WAG)
- Cr Mike Ashby (CDC)
- Murray Hemi (Kahungunu)
- Cr Paora Ammunson (SWDC)

- Cr Russell Keys (CDC).

3. General update

The Project Team has made good progress and is working together well. The Project Team facilitator has estimated progress at about 30%. Major work areas have included:

- Development and calibration of a new flood model, using new technology to represent a much finer level of detail
- Fields associated with the modelling, such as historical floods, hydrology, climate change, uncertainties
- Examining design horizons and levels of flood protection
- Stakeholder engagement.

The immediate focus of the Project Team will continue to be freeboard, uncertainties and flood mapping because these lie on the critical path of the project. There is also a push to engage (or re-engage) with iwi and stakeholders before looking at any detail at river management, stopbanks or other flood management responses.

Stakeholder feedback to date has raised questions for the Project Team around how this FMP fits with the wider aspirations of the community around the river environment and integrated catchment management. In particular, questions have been asked about how the FMP will relate to the Whaitua process. We would like to seek input from the community about their vision for the river, and ways to achieve community "guardianship" during the implementation of the FMP. Some stakeholders are concerned that the scope/terms of reference for the Project Team's work, being focussed on managing risk from floods and erosion, are too narrow.

4. Flood mapping

A key focus for the Project Team at present is the development of new flood maps. The mapping is being revised due to concerns raised by the community in response to the (now revoked) draft FMP and also by matters raised by the Independent Auditor and previously reported to this Committee. This revision of the flood mapping is critical to progress on the FMP because we must first agree what the flood hazard is before we decide how it should be managed.

The underlying hydraulic model (flood model) has been revised and is currently being peer-reviewed. Preliminary results from the model indicate a significantly smaller flood spread than the previous mapping which is currently in use by GWRC and SWDC. These preliminary results make the same assumptions about climate change and "freeboard" (uncertainties) as the previous mapping because those two topics have yet to be completed by the Project Team, working with the hydraulic modelling consultant. These will be included in the final mapping later this year.

Both the current (December 2014) and the most recent (February 2018) maps are **attached** to this report as **Attachment 1** and **Attachment 2**.

The Project Team and Steering Group considered that the recent mapping is an improvement over the previous mapping, due to a more successful calibration taking into account a greater degree of local knowledge and more appropriate flood events. The new model also represents the floodplain to a much greater degree of detail and includes new survey information. We have therefore recommended that this new mapping (subject to peer-review of the underlying model) should be released as an interim map until the maps have been independently audited and consulted on with the community, at which point they will be finalised.

5. Recommendations

That the Committee

1. ***Receives** the report.*

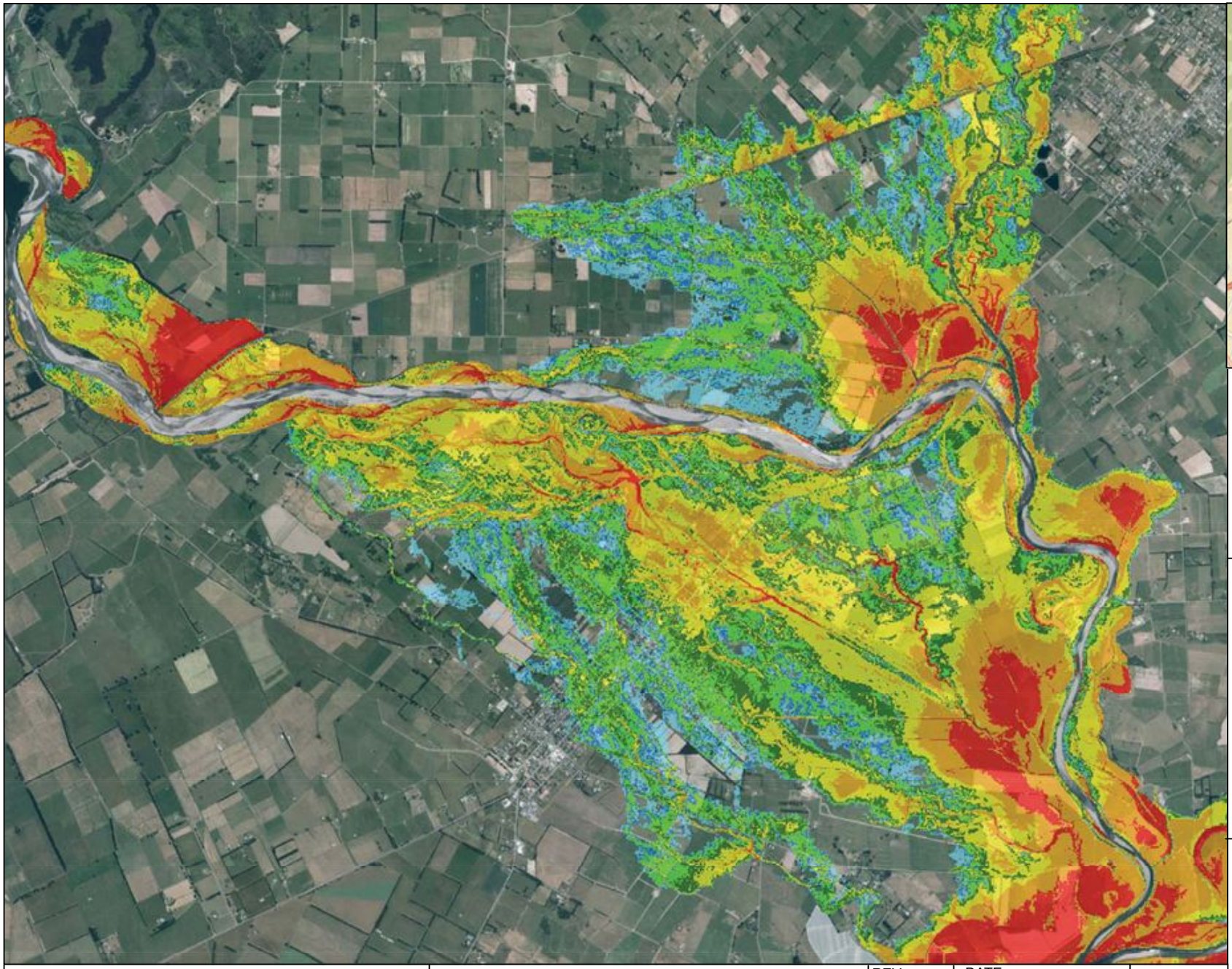
2. ***Notes** the content of the report.*

3. ***Recommends** to GWRC Council that the flood maps be released for interim use, once these have satisfied the requirements of the peer-review and been re-endorsed by the Project Team.*

Report prepared by:

Cr Adrienne Staples
Chair - Waiohine FMP
Steering Group

Attachment 1: 2014 (current) flood map
Attachment 2: 2018 (latest preliminary) flood map



Attachment 1 to Report 18.29

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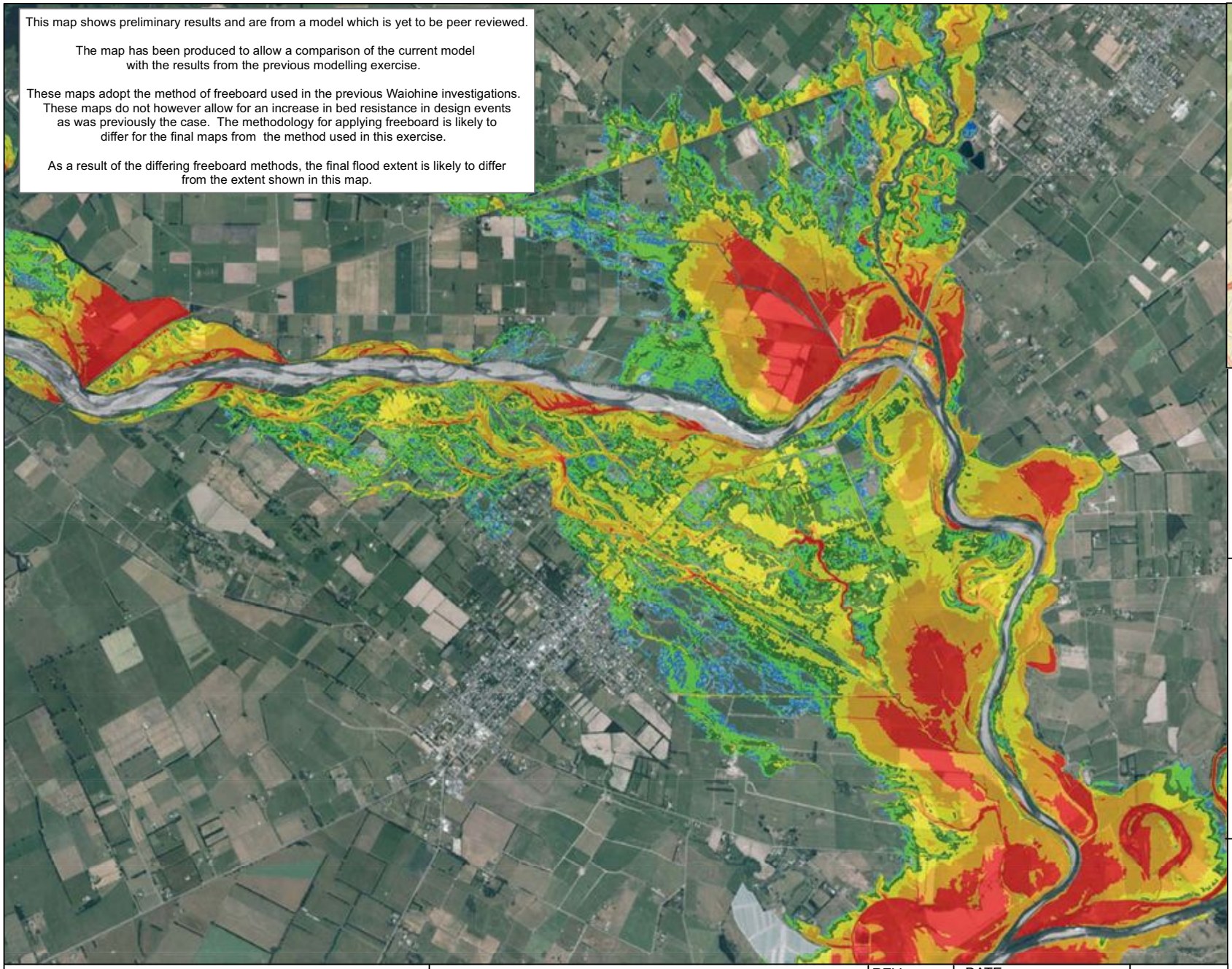
Legend

Peak Flood Depth (m)

- 0
- 0 - 0.05
- 0.05 - 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 2
- 2+

PROJECT	MAP TITLE	REV	DATE
Waiohine River Hydraulic Modelling	**Results from previous modelling exercise 100 year including climate change and freeboard**	**01**	**11 November 2017**
		A3 SCALE **1:30,000**	AUTHOR **Matthew Gardner**

N

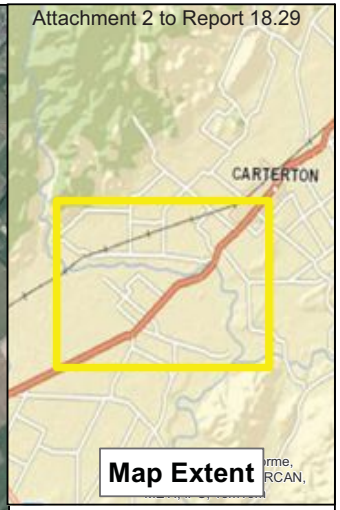


This map shows preliminary results and are from a model which is yet to be peer reviewed.

The map has been produced to allow a comparison of the current model with the results from the previous modelling exercise.

These maps adopt the method of freeboard used in the previous Waiohine investigations. These maps do not however allow for an increase in bed resistance in design events as was previously the case. The methodology for applying freeboard is likely to differ for the final maps from the method used in this exercise.

As a result of the differing freeboard methods, the final flood extent is likely to differ from the extent shown in this map.



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Te Pane Matua Taiao

Legend

Peak Depth (m)

- 0
- 0 - 0.05
- 0.05 - 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 2
- 2+

PROJECT	MAP TITLE	REV	DATE
Waiohine River Hydraulic Modelling	**Preliminary 100 Year Flood Depth Map Including climate change and model freeboard**	**01**	**10 February 2018**
		A3 SCALE **1:30,000**	AUTHOR **Matthew Gardner**

N