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**Committee** Te Kāuru Upper Ruamahanga River Floodplain Management  
Subcommittee  
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## Te Kāuru Upper Ruamāhanga Floodplain Management Plan

### 1. Purpose

The purpose of this report is to:

- Advise the Subcommittee of the preliminary findings from Phase 1 of the Te Kāuru Floodplain Management Plan (TKFMP).
- To seek endorsement of the proposed workstream and programme for Phase 2 of the TKFMP.

### 2. Background

A floodplain management plan for the upper Wairarapa valley, which covers the catchments of six major rivers – Waingawa, Waipoua, Ruamahanga, Whangaehu, Kopuaranga and Taueru – commenced in January 2013.

This project was driven by the need to prepare for renewal of resource consents which affect current flood and erosion risk management; alignment of flood plain management planning processes across the region; an incomplete flood risk picture for the upper Wairarapa Valley; and alignment to international best practice in flood risk management.

#### 2.1 Floodplain Management Planning

Greater Wellington Regional Council's approach to Floodplain Management Planning is documented in its Floodplain Management Planning Guidelines. This aligns with international best practices in floodplain management planning and builds upon the New Zealand Standard, NZS 9401:2008 Managing Flood Risk: A process standard.

The guidelines identify a three phase process for development of a floodplain management plan (FMP). These three phases are:

- Phase 1 – Establish the Context
- Phase 2 – Identify, Assess and Select Management Options
- Phase 3 – Achieve Sustainable Solutions.

The Phase 1 investigations have been completed. This phase of the FMP process involved capturing information on the current state of the river environment including the hazards it presents to the surrounding community, and included a number of separate investigations:

- Hydrological/hydraulic properties of the rivers
- Hazard assessment
- Geomorphic assessment
- Terrestrial and aquatic ecology studies
- Bird nesting/habitat assessments
- Assessment of recreational and amenity values
- Understanding cultural and historical values

This phase involved a number of stakeholder and community engagement meetings to both raise awareness of the project and gather local and expert knowledge which would assist with the investigations.

## **2.2 Recommendations sought by this report**

This report firstly summarises the findings of those Phase 1 investigations.

Secondly this report seeks approval for the programme and engagement strategy for Phase 2, which will involve the development of options for flood risk management.

## **3. Phase 1**

### **3.1 Scope and Study Area**

The Upper Ruamāhanga / Te Kāuru catchment, above its confluence with the Waiohine River, covers an area of 1560 square kilometres. This is made up of the western Tararua Ranges, the Wairarapa plains and the eastern hills.

The geological and climatic characteristics of the Wairarapa are reflected through its rivers – contrasting between the energised, gravel bed western rivers of the Ruamahanga, Waipoua and Waingawa, and the sluggish generally soft sediment bed eastern rivers of the Kopuaranga, Whangaehu and Taueru.

### **3.2 History and Context**

The naming of the Ruamahanga is attributed to a number of stories relating to its translation of ‘Rua’ meaning two and ‘Māhanga’ meaning twins or snare trap. Te Kāuru (head waters) is the name given to the area by Māori for the catchment between Pukaha/Mount Bruce and the confluence of the Ruamahanga with the Waiohine River.

The Upper Ruamāhanga catchment is highly valued within the Wellington region. The western puna (spring of water) and tributaries emerge from the rugged Tararua Ranges. They are well known for their pristine environments and as a result they are much valued for their beauty, mauri, recreational opportunities and spiritual significance. The eastern tributary landform is characterised by undulating hills which is today dominated by agricultural use. However, there remains a strong cultural significance within and around these eastern rivers for Tangata Whenua, and they are popular in some areas for recreational pursuits.

Both the western and eastern tributaries run out onto the fertile Wairarapa plains which have been formed over time through deposition of alluvial material – greywacke alluvium from the Tararua Ranges and alluvial silts and sands eroded from a mixture of mudstones, sandstones and limestones which form the eastern Wairarapa hills.

Through these floodplains run the Waingawa, Waipoua, Kopuaranga, Whangaehau, and Taueru rivers and a number of other smaller tributaries. They all eventually flow into the Ruamahanga River which connects all of these rivers, the mountains and hills on the north, west and east, and southwards through the valley to Wairarapa Moana, and eventually onto Te Kauae raro/Palliser Bay and the Cook Strait/Raukawa Moana.

These rivers are the lifeblood of the Wairarapa and significant both for Māori and non-Māori. People from a range of cultures share a connection at an individual, family, hapu, community, iwi and organisational level, and each value the rivers in their own, and often different ways.

The land-use of the catchment is dominated by native forest in the upper Tararua Ranges, which transitions into a range of primary production activities (plantation forestry, dry stock grazing, dairying and cropping), rural lifestyle development, and urban areas on the floodplain.

Tangata Whenua have had a long standing connection spanning many generations with the Ruamahanga River and all of its tributaries. Both Kahungunu ki Wairarapa and Rangitāne o Wairarapa currently share in the role of Kaitiaki for these catchments.

Non-Māori have been present in the Wairarapa for a shorter period. However, over several generations they also have developed strong ties to the land and landforms. Some of the families were present on the first European settler ships, and they have made their mark on the modern social, political and physical landscape through recurrent involvement in the ongoing development changes in the Wairarapa.

Today the Wairarapa has a distinct identity. It has both a legacy of, and a future rich with cultural significance to Māori. With strong agricultural roots (the

leading industry in the area), it is also noted for the quality of its landscape and associated recreational opportunities, and its hosting of a number of regional events and concerts. Home to some 40,000 residents, the Wairarapa has produced or become home to more than a representative share of well-known ambassadors ranging from noted scientists and engineers to popular musicians and film directors.

### **3.3 Hazards**

The above snapshot of the upper Ruamāhanga catchment is not complete without consideration of natural hazards. Communities throughout history have had to adapt to a changing natural environment.

For early Māori and the first European settlers this led to an approach whereby permanent settlements existed but were supported by the establishment of seasonal sites. The timing of these would be driven by a range of factors including flood risk, and their location governed by proximity to important and lucrative resources, which were often very close to rivers. These sites would provide easier transport links, improved access to water, food and fertile land.

Today, some of these settlement sites have grown into large towns and their permanency has become well established. Their increased size has put them in a position where some parts of the community have spread out into areas of greater hazard. This, combined with changing environmental conditions, leads to growing conflicts between flood hazard and community, and results in increasing risk to both life and property.

### **3.4 Phase 1 Investigation Outcomes**

The investigations completed during the first phase of the floodplain management planning process have created a clear picture of the values of the rivers and the adjacent floodplain and identified the risks that exist in the relationships between flood hazards, people and communities, values and the way in which the interactions between these are managed. A summary report for Phase 1 is contained in **Attachment 1** to this report.

#### **3.4.1 Key Outcomes**

The main outcomes of Phase 1 investigations, which will need to be addressed through Phase 2, can be summarised as:

- Flood risk affecting homes, businesses and critical infrastructure in both rural and urban areas of the catchment;
- Erosion risk affecting productive land and critical infrastructure situated near the river corridor;
- Conflicts between current river management techniques and cultural, environmental and social values;

- Relationships between communities, groups and individuals involved with the management of rivers;
- The current funding, rating and governance methods used to pay for flood, erosion and river management.

### 3.4.2 Flood Risk

The updated July 2014 1-in-100 year return period flood models for the Te Kāuru Upper Ruamāhanga FMP have identified some areas of additional flooding greater than that identified in modelling carried out in 1995 which informed the Wairarapa Combined District Plan.

The most significant change from the superseded 1-in-100 year flood model is for northern Masterton where a large number of new properties (2,043) will be classified as within a flood hazard area. Of these properties, 296 houses are considered to be at risk of damage from flooding within a low hazard area, and 23 homes or habitable structures close to Oxford Street and Mawley Park are considered to be in a high hazard area.

Carterton urban area has not been identified as affected by the 2014 modelled 1-in-100 year return period flood risk.

Outside of the urban centres the July 2014 flood model aligns relatively closely with the superseded 1995 modelling, and the current district plan zones. There are relatively few additional landowners who weren't already identified as affected by a flood hazard.

The total flood damages across the project area have been modelled to be \$40M from a single 1-in-100 year return period flood event. This contributes to an estimated average annual flood damage of \$1.7M.

Flood risk and associated impacts on primarily economic and social values remain one of the key drivers behind the need for river and flood risk management activities.

### 3.4.3 Erosion Risk

Tackling erosion risk is a large part of current river management practices. The Phase 1 investigations have identified erosion hazard study areas which primarily affect the western gravel bed rivers – Waingawa, Waipoua and Ruamahanga.

These potential - but currently managed - erosion losses for the western gravel bed rivers are estimated to be approximately \$0.6M per year.

Erosion risk and associated economic and social values remain one of the key drivers behind the need for river and erosion management activities.

#### 3.4.4 Conflicts

The need for flood and erosion risk management activities creates an extensive list of issues in relation to the cultural, social and environmental values of rivers. These range from concerns about who pays which affects current rating methods and allocations used to fund flood risk management schemes, to conflicts between current flood management activities and the values associated with the rivers, to conflicts between different values associated with the rivers, to the understanding and relationships between groups who care for, manage or protect different aspects of the river systems.

These issues are of critical importance to this project in relation to holistic river management, and the upcoming resource consent expiration which enables river management activities to be carried out for the primary purpose of tackling flood and erosion risk.

#### 3.4.5 Relationships

Good working relationships between communities, groups and individuals who care for or about rivers are an essential part of river management. GWRC and representatives of Ngāti Kahungunu ki Wairarapa and Rangitāne o Wairarapa have concerns about the partnership relationship between GWRC and tangata whenua, particularly in respect to the responsibilities of tangata whenua as kaitiaki and the incorporation of matauranga Mauri as a part of holistic river management.

GWRC has established good working relationships with landowners who are part of river management schemes, but would like to explore opportunities to broaden the involvement of these groups and those landowners outside of these groups who have an interest in river management.

GWRC would like to facilitate improvements in the relationships between the communities, groups and individuals involved with river management to enable better outcomes and methods of river management.

#### 3.4.6 Rating and Governance

There has been an ongoing concern and call for review of the methods by which current scheme management is funded, and the complexity of the rating scheme for the targeted river rates across these schemes. Current rates are made up of a component drawn from a regional rate, a targeted rate and in some instances a local rate associated with infrastructure owned and maintained by Masterton or Carterton District Councils.

This, coupled with changed understanding of and expectations related to the maintenance and enhancement of values, is a critical issue strongly linked to the governance structure which will oversee future river management, and ensuring that the methods used to fund agreed management outcomes are fair.

## 4. Phase 2

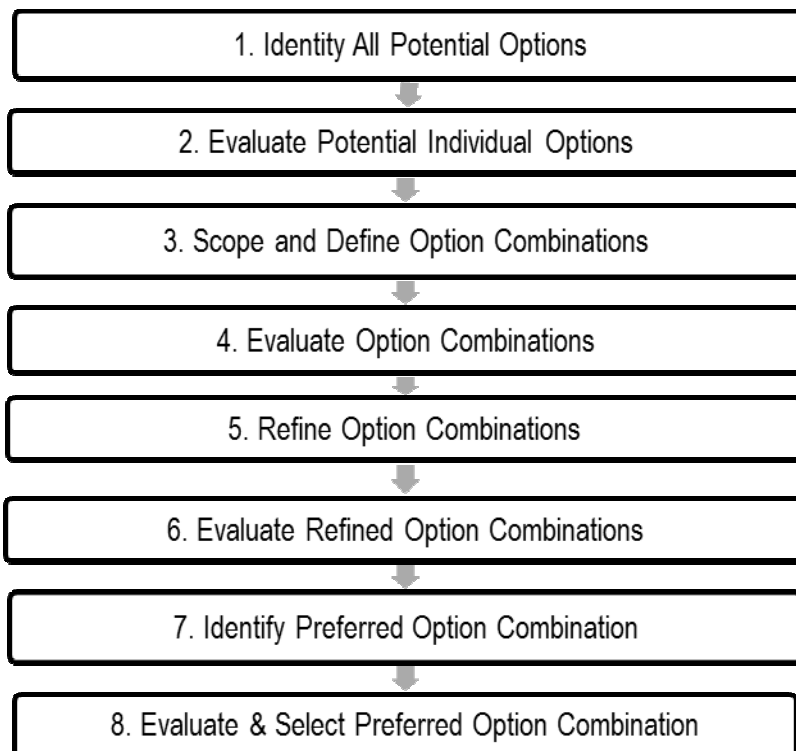
The second phase of floodplain management is described as identify, assess and select management options which include exploration of opportunities for enhancement of floodplain values.

This phase brings together the results of the flood study and data collection from Phase 1, and indicates the information and tools required to assess the impact of existing, future and continuing flood risk management options on flood behaviour (i.e. location and depth) and hazards. It will also assess the social, economic, environmental and cultural impacts and benefits of the options.

Phase 2 of the FMP process is focused on ensuring that decision making is transparent, robust, informed by various stakeholder/community views and technical advice, and that this is well documented. It is also directed towards achieving (or balancing) multiple objectives.

Ultimately, the combination of preferred options identified at the end of this phase will inform the preparation of the FMP in Phase 3.

It is by nature an iterative and collaborative process involving several key steps, which may be repeated until an agreed or accepted outcome is established. The simplified flow chart below illustrates how this staging may occur.



## 5. Communication

An upcoming communications plan has been prepared. The activities include:

- Mail out to flood hazard affected landowners during the first week of August.
- Open and information day to be held at the Frank Cody Lounge, Masterton Town Hall, on 23 August.
- Call centre and enquiry management related to flood hazard information release.

## 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 matters requiring decision in this report have 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 policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance.

The decisions being made in this report are considered procedural in nature and therefore officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

## 7. Recommendations

*That the Te Kāuru Upper Ruamahanga River Floodplain Management Plan Subcommittee:*

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Receives the “Te Kāuru Upper Ruamāhanga Floodplain Management Phase 1 summary report”*



4. *Approves the release of the “Te Kāuru Upper Ruamāhanga Floodplain Management Phase 1 summary report” to the wider community.*
5. *Approves the commencement of Phase 2 investigation of options for flood risk management, noting that formal acceptance of the Phase 1 outcomes will not be sought until a future meeting of this Subcommittee.*

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#### **Attachments**

1. **Te Kāuru Upper Ruamāhanga Floodplain Management Plan for the Upper Ruamāhanga Valley Phase 1 Summary: Volume 1 – Report; Volume 2 – Maps.**