Waiapu Catchment Technical Advisory Group

Hui 3 – Report 1: Gravel Management in Ngā Wai o Waiapu

Questions for the Advisory Group

- ***Do you have feedback on the proposed approach for gravel management?***
- ***Are there issues/impacts from gravel management that we have missed?***
- ***Are the draft objectives for the gravel management plan appropriate? What is missing or should be changed?***
- ***What considerations should there be for incentivising gravel extraction in highly aggrading areas?***

1.0 Introduction

This paper introduces the issues with the management of gravel in riverbeds within the Ngā Wai o Waiapu Catchment. It outlines the proposed region-wide approach for improving gravel management and introduces the framework for developing a Gravel Management Plan for the Waiapu Catchment.

1.1 Background and Context

Over the past 5-10 years there has been growing concern from the community and hapū about the rates and methods of gravel extraction from some of Tairāwhiti's rivers – particularly in the Waiapu and Northern catchments. Prior to this, the extraction of gravel was generally viewed as a positive activity due the level of aggradation of riverbeds that occurred across Tairāwhiti, particularly following Cyclone Bola. The demand for gravel has increased in recent years due to use in the construction of forestry roads to enable forestry harvest. While future gravel demand is uncertain, recent trends raise questions as to whether the ongoing extraction is sustainable. The locations of extraction are those areas where it is most convenient for the users and where it provides sufficient quality material. These are not necessarily the areas where there may be a threat arising from aggradation.

1.2 Proposed regional approach to improving gravel management

Policies and rules for gravel extraction in the TRMP have been reviewed as part of the overall review of the regional plan provisions. Recommendations for improvements have been taken to the TRMP Committee who have agreed that an improved approach to gravel management will be included in the updated TRMP. This improved approach includes:

- Recognising the benefits of gravel extraction for protecting infrastructure and managing natural hazards in addition to supporting social and economic wellbeing.
- Providing for extraction where there is reasonable demand demonstrated, and extraction is sustainable.
- Preparing Gravel Management Plans in areas where there is higher demand for gravel extraction
- Ensuring the Gravel Management Plans set out areas where gravel can and can't be extracted and what the sustainable extraction limits are.

In line with this approach, we are developing a Gravel Management Plan for the Ngā Wai o Waiapu Catchment area.

2.0 Ngā Wai o Waiapu Gravel Management Plan Approach

2.1 Why gravel management matters – impacts on Ngā Wai o Waiapu Catchment Plan Values

In preparing a gravel management plan for ngā wai o Waiapu, the Values and Environmental Outcomes set in the Ngā Wai o Waiapu Catchment Plan will be a critical component.

The following table sets out where the current management of gravel extraction is positively and negatively impacting on the draft Values developed.

Draft Values	**Impact of Gravel Extraction on Environmental Outcome**
Ecosystem Health, Mahinga Kai and Threatened Species	• Mobilisation of sediment through poor gravel extraction practice can smother fish and aquatic insect species and destroy their habitats. • Reduction in water quality and potentially disrupted fish passage due to mobilisation of fine sediment. • The types of quality of habitat for fish, birds, insects, lizards, frogs and threatened plants in and around the river can be degraded. • Direct destruction of specific riverine species and their habitats where the gravel is their main habitat, such as the banded dotterel.
Mauri	• Degradation of mauri through unsustainable extractive processes.

Mana motuhake	• Current consent processes do not adequately support kaitieki role of mana whenua or give sufficient weight to management concerns in their takiwa.
Ahi kaa	• Gravel resource is used for local roads and construction, supporting ahi kaa remaining in and moving around the catchment. Scalping material could be used by marae and hapu for domestic use e.g. driveways. • Gravel extraction could be a useful tool in the right locations as a flood mitigation method. • Current management approach has exacerbated air quality (dust) problems for local communities – i.e. heavy vehicle traffic over the floodplains, excavation of new material, stockpiling and the screening process exacerbate the issue. • Poor gravel extraction processes may contribute to bank erosion downstream of extraction sites. If carried out appropriately, extraction may be able to reduce bank erosion in certain circumstances. • Gravel extraction could also have positive or negative impacts on critical infrastructure e.g. bridges, depending on whether good practice is carried out.
Waahi tapu	• Waahi tapu within the river may have not been identified or have appropriate buffer zones from extraction activities. • Waahi tapu adjacent to the river may be at risk to bank erosion if gravel extraction is not managed appropriately.
Natural form and character	• Development of few large-scale extraction sites has degraded natural form and character in those locations and led to simplification of river form.
Commercial & industrial use	• Gravel extraction is an economic activity supporting the livelihoods of some residents of the catchment.
Farming & food production	• Poor gravel extraction processes may contribute to bank erosion and loss of farmland downstream of extraction sites. If carried out appropriately, extraction may reduce bank erosion in certain circumstances. Gravel extraction may also be a useful method to mitigate flood risk to farmland if carefully managed. • Gravel extraction could also have positive or negative impacts on critical infrastructure that sector rely on e.g. bridges, depending on whether good practice is carried out.

2.2 Draft Gravel Management Plan Objectives

Based on the environmental outcomes and what the background studies have shown, some preliminary draft objectives for the gravel management plan have been prepared as follows:

Objective 1: Protection of people and property

1.1 To implement river – based gravel management as one tool to enhance resilient river systems, safeguarding people, infrastructure, property, and connected communities now and into the future.

1.2 To achieve sustainable gravel extraction by preventing over-extraction, maintaining stable bed levels and managing undesirable aggradation.

1.3 To ensure that decisions around gravel management are informed by evidence – based flood and erosion resilience requirements.

Objective 2: Protecting the extent and natural character of Ngā Wai o Waiapu braided rivers

2.1 Recognise, restore and protect the diverse and connected habitats of Ngā Wai o Waiapu's braided rivers to support biodiversity, and protect indigenous species

2.2 Prioritise protection of undisturbed areas and habitats of threatened indigenous species

2.3 Manage gravel extraction to ensure that people can continue to access and enjoy Ngā wai o Waiapu's braided rivers

Objective 3: Mana whenua exercise rangatiratanga

3.1 Tikanga and place based knowledge of each hapū directs and informs gravel management within their respective takiwa

3.2 Gravel management is centred around the health and well-being of rivers first, then the health and erosion/flood protection needs of people, and finally the ability of communities to provide for their social, economic, and cultural well-being, now and in the future

3.3 Gravel extraction practices that maintain the natural character, mana and mauri of the rivers

3.4 Partnership with Ngā hapū o Waiapu on gravel management.

Objective 4: Community demand is supported through efficient consenting process to extract available gravel

4.1 Gravel demand is supported by enabling extraction where gravel removal is required to deliver flood and river resilience

4.2 Wider economic benefits are realised through effective allocation of gravel and efficient processes

2.3 Making the Gravel Management Plan Work

The gravel management plan will identify areas where gravel extraction is appropriate and locations where it is not, as well as setting out evidence-based gravel allocation limits and good management practices for gravel operations. This would be implemented through the resource consent process.

Some options around how to support good practice include:

- Setting evidence-based gravel allocation limits to prevent overextraction
- Identifying key locations where gravel extraction is desirable (eg Tapuaeroa River, Raparapaririki River, Makarika River)
- Incentive gravel extraction in locations where there is gravel build up through having an easier (eg Controlled Activity) consent process for gravel takes in those locations
- Having shorter duration resource consents (e.g. 5 years) supported by more intensive science studies/LIDAR assessment to ensure that gravel is only taken in areas where it is building up
- Including good practices as standard resource consent conditions.

2.4 Next Steps

Research is underway or being planned to inform the development of a Ngā Wai o Waiapu Gravel Management Plan and engagement with the sector.

This includes:

- Sediment sizing information to quantify the amount of gravel resource available at different locations in the catchment.
- Development of gravel "budgets" to identify a sustainable amount of gravel that can be removed in particular locations without creating riverbank and bed erosion problems as a result of overextraction.
- Identification of cultural values and sites and where gravel extraction is inappropriate due to cultural values
- Identification of important sites for threatened native plants.
- Development of options to reduce flood risk for the Makarika and Tikitiki communities and whether there is any benefit to gravel extraction to improve channel capacity in these locations.

Attachment: *Summary of Ecological Values and Natural Character Assessment of Waiapu Catchment (SLR, 2025)*