Resource Consent Application APP-2006012018.02

Planning Report – Karioi Wood Processing

for: Winstone Pulp International Limited

Job No: 60337

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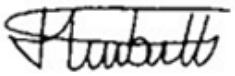
Author(s)	
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1 EXECUTIVE SUMMARY

- In March 2025, Winstone Pulp International Limited ("WPI") applied for the renewal of its wastewater discharge consent to enable the discharge of factory wastewater to the Whangaehu River.
- The Karioi Pulp Mill ceased operations in September 2024, and no discharges have occurred since then (except for small volumes of stormwater).
- WPI's application largely reflected the discharge authorised under the existing consent. WPI's application was publicly notified, and the submission period closed on 4 December 2025 ("Notified Proposal").
- On 17 December 2025, section 123C of the Resource Management Act 1991 ("RMA"), reinstated the existing resource consent and extended its expiry date to 31 December 2027 ("Existing Consent")
- WPI is working with a potential purchaser of the Karioi Pulp Mill site. While the future industrial process will be largely similar to the historical wood processing on the subject site, the new operations will incorporate a "torrefaction" process (as opposed to the "pulp" process used by WPI previously).
- The change in the industrial process used for wood processing has resulted in:
    - Significant reduction in the volume of wastewater produced and sought to be discharged to the Whangaehu River, being 750m3/day (compared to the approved consented discharge limit of 5,200m3/day).
    - The wastewater produced is classified as a "condensate" and is of a significantly cleaner quality than the wastewater stream approved under the existing consent for the pulp process.
- Having considered the submissions received, and in order to incorporate the torrefaction process, WPI is amending the Notified Proposal to significantly reduce the wastewater volume and contaminants that will be discharged from the application site ("Revised Proposal").
- WPI confirmed in a memorandum (dated 13 March 2026) that WPI is no longer relying on sec124 of the RMA to exercise the Existing Consent and requested that Horizons Regional Council ("HRC") continues to process application APP-2006012018.02 on its own right under Section 88 of the RMA.
- In Hearing Panel Minute 2 (dated 20 March 2026), the Hearing Panel directed WPI to file an amended application and updated assessment of effects. The Hearings Panel also directed WPI to include an assessment of the revised application against all relevant statutory instruments, including Te Waiū-o-Te-Ika, Te Mana Tupua and Ngā Toka Tupua.
- The key components of the Revised Proposal are:
    - Maximum discharge volume of 750m3/day of factory wastewater to the Whangaehu River.

  - The wastewater to be discharged is classified as "condensate", produced from a torrefaction wood processing plant.
  - Construction of a wetland system, to ensure that the wastewater is discharged into the wetland system prior to the discharge to the Whangaehu River.

- Under the HRC's One Plan ("One Plan"), the application is for a Discretionary activity overall.
- The Planning Report concludes that the actual and potential effects of the proposed activity will be "less than minor" and will not be contrary to the objectives and policies of the relevant statutory documents. Overall, the Planning Report recommends granting the application.
- This Planning Report is informed by the following technical documents contained in **Appendix A**:
  - Technical Memo 1 Torrefaction Technical Memo, prepared by Babbage
  - Technical Memo 2 Water Quality Assessment Memo, prepared by Babbage
  - Technical Memo 3 Ecology Memo, prepared by Bioresearches
  - Technical Memo 4 Wetland Construction – Erosion and Sediment Control Plan, prepared by Cheal
  - Technical Memo 5 Contaminated Soils – Detailed Site Investigation, prepared by Babbage
  - Technical Memo 6 Contaminated Soils - Remedial Action Plan, prepared by Babbage
  - Technical Memo 7 Air Discharge Memo, prepared by Air Matters Ltd
  - Technical Memo 8 Statutory Assessment - Te Waiū-o-Te-Ika (Whangaehu River) Framework, prepared by Babbage

2 BACKGROUND

2.1 Existing Resource Consent

- WPI has operated an industrial processing facility at the Karioi site for several decades. WPI is authorised to discharge treated pulp mill wastewater, stormwater, and a foam inhibitor to the Whangaehu River under an existing discharge consent, Discharge Permit ATH-2010011593.01 issued by HRC
- Discharge Permit ATH-2010011593.01 expires on 31 December 2027. In brief, this permit:
  - Limits the discharge of treated pulp effluent to the Whangaehu River, not exceeding 5,200 m3/day.
  - Limits the discharge of antifoam inhibitor not exceeding a rate of 125 L/day (at a maximum rate of 3 mL/second).
  - Includes effluent and receiving water monitoring requirements.
- The Karioi Pulp Mill ceased operations in September 2024, and since that time, no process wastewater discharges have occurred from the site, other than small volumes of stormwater.

2.2 Notified Resource Consent and Submissions Received

- Prior to the original expiry date of the discharge consent in July 2025, WPI lodged an application in March 2025, pursuant to sec124 of the RMA, for a new discharge to water consent to authorise ongoing wastewater discharges from the site. The application was publicly notified, with the submissions period closing on 4 December 2025.
- The application received 55 submissions: 35 submissions in support and 20 submissions in opposition.
- The submissions received can be grouped into five principal themes:
  - Cultural values;
  - Water quality effects;
  - Ecological effects;
  - Recreation and amenity effects; and
  - Economic, employment, and site re-use considerations.
- At a high level, **Table 1** summarises the key matters raised within each theme.

Table 1. Key submission themes.

Category	Matters raised in the submissions.
Cultural values	• Tangata whenua submitters oppose the discharge, citing the cultural, spiritual, and ancestral significance of the Whangaehu River (Te Waiū o te Ika). • Key concerns include the effects on the mauri of the river; intergenerational and cumulative effects; the proximity of the discharge to the Tangiwai Memorial; and the observation that the river has visibly improved since discharges ceased.
Water quality and ecological effects	• Submitters raise concerns about water quality, including colour, clarity, odour, foam, and the potential transport of contaminants downstream. • Several note the observed improvement in the river clarity following cessation of discharges, and express concern that renewed discharge would reverse those gains. • Ecological concerns include effects on aquatic life, river systems, and the appropriateness of continuing a point-source discharge as opposed to land-based treatment alternatives.
Recreation and amenity	• Recreation-focused submitters oppose the application due to concerns about contact recreation and immersion risks, particularly for swimming and whitewater paddling. • The Whangaehu River is described as having recreational value for paddling and community use, with submitters noting increased use since the mill closure. • Concerns are raised regarding human health, safety, and loss of amenity, including the change in water colour, if discharges recommence.
Economic, employment, and site re-use (support)	• This group of submitters are supportive of the application. • They emphasise the importance of the discharge consent to enable the sale, re-use, and redevelopment of the site. • Key points include job creation, economic recovery following the 2024 closures, certainty for investment, and social and community wellbeing. • That the proposed discharge volume is lower than previously authorised, and view the consent as an interim step to secure future sustainable use of the site.

2.3 Revised Proposal

- Subsequent to the public notification of the application, WPI has confirmed that it is working with a potential purchaser of the Karioi Pulp Mill site. While the future industrial process will be largely

similar to the historical wood processing on the subject site, the new operations will incorporate a "torrefaction" process (as opposed to the "pulp" process used by WPI previously).

- The Revised Proposal is explained in Section 3 of this Planning Report.

3 SUMMARY OF THE REVISED PROPOSAL

3.1 Overview

WPI is working with a potential purchaser to enable the establishment of a torrefaction processing plant at the now-closed Karioi Pulp Mill site. While the future industrial process will be largely similar to the historical wood processing on the subject site, the new operations will incorporate a "torrefaction" process (as opposed to the "pulp" process used by WPI previously). The key components of the proposal are:

- Maximum discharge volume of 750m3/day of factory wastewater (with a small volume of stormwater) to the Whangaehu River.
- The wastewater to be discharged is classified as "condensate", produced from a torrefaction wood processing plant.
- Construction of a wetland system, to ensure that the wastewater is discharged into the wetland system prior to the discharge to the Whangaehu River.

3.2 Torrefaction Process and Wastewater Generation

A detailed description of the torrefaction process, combustion systems, and associated wastewater generation is provided in the Torrefaction Technical Memo (Technical Memo 1):

- The torrefaction operation involves the thermal treatment of wood-based biomass in a controlled, low-oxygen environment at temperatures of around 300 °C. The process converts raw biomass into a stable, energy-dense solid fuel product.
- Inputs to the torrefaction process comprise primarily:
    - wood chips (biomass feedstock); and
    - heat supplied indirectly from the plant's energy systems.
- Outputs from the torrefaction process comprise:
    - a torrefied solid biomass product;
    - combustion gases from the combustion of biomass; and
    - water vapour released from the drying of biomass.
- Heat required for the torrefaction process is supplied by two energy systems:
    - a biomass boiler, which combusts solid biomass and provides start-up and supplementary heat; and
    - a TorrGas burner, which combusts the process gases released during torrefaction and provides the primary source of heat once steady-state operation has been established.

- Process gases released during torrefaction are recovered and conveyed to the TorrGas burner for use within the plant's energy system. Flue gases generated by the combustion systems are subsequently cooled as part of the heat-recovery process. Wastewater is generated as condensate during this flue-gas cooling stage. This condensate wastewater is the sole process wastewater generated by the torrefaction operation and is the wastewater proposed to be discharged to the Whangaehu River under this application.

3.3 STORMWATER

- The proposed wastewater stream will not contain any existing stormwater discharges from the WPI site.
- The site's stormwater is directed to a drain in the southern corner of the site and discharged under approved Discharge Permit 6724.

3.4 Composition of Wastewater Discharge

- The quality of the condensate wastewater generated during a torrefaction process is explained in the Torrefaction Technical Memo.
- The composition of the wastewater discharge is based on analytical results from a comparable torrefaction facility using the same technology. This condensate quality, prior to any wetland polishing, forms the basis of the effects assessment.
- **Table 2** sets out the composition of the condensate wastewater generated by the torrefaction process.

Table 2. Proposed condensate composition.

Parameter	Condensate Water Quality - Average	Parameter	Condensate Water Quality - Average
pH	7.1	Lead (mg/l)	0.016
Temperature (°C) *	48	Cadmium (mg/l)	0.0018
Suspend solids (mg/l)	3.4	Chromium (mg/l)	0.0177
Ammonium and ammonia as N (mg/l).	4.6	Copper (mg/l)	0.0137
Nitrite and nitrate as N (mg/l)	3.5	Mercury (mg/l)	0.00006
Chloride (mg/l)	15.3	Nickel (mg/l)	0.0021
Sulphate (mg/l)	27	Zinc (mg/l)	0.42
Mineral oil (mg/l)	<1	PAHs, sum of detected compounds (mg/l)	<0.00001

3.5 Discharge Outfall Structure

The proposal does not involve any changes to the existing river outfall or discharge location. The wastewater will be discharged to the Whangaehu River via the existing outfall located on the true left bank of the river, approximately 700 metres upstream of the Tangiwai railway bridge. No changes to the outfall structure or point of discharge are proposed.

3.6 Wetland Concept Design

- As requested by Ngāti Rangi, WPI proposes to construct a wetland system to ensure that the wastewater is discharged into the wetland system prior to the discharge to the Whangaehu River.
- Given the composition of the wastewater (i.e. being a condensate), the purpose of the wetland can be described as providing "polishing" of the discharge. The term "polishing" in this context means that the wetland is likely to achieve a reduction in key contaminants present in the wastewater.
- The wetland concept comprises a two-stage treatment system, consisting of a vertical subsurface flow ("**VSSF**") wetland followed by a free water surface flow ("**FWSF**") wetland. The VSSF stage provides high-rate filtration and initial polishing of the wastewater through vertical percolation via engineered media. The downstream FWSF stage provides further polishing and hydraulic buffering prior to discharge. The system is divided into independent cells to enable maintenance without interrupting discharge.
- The applicant supports a condition of consent requiring the preparation of a Wetland Planting Plan in consultation with Ngāti Rangi.
- A summary of wetland design parameters is shown in **Table 3** and the wetland concept design is illustrated in **Figure 1**.

Table 3. Summary of proposed wetland design parameters.

Design parameter	VSSF section	FWSF section
Maximum flow (m^3/day)	750	
Maximum hydraulic loading rate (m/day)	0.25	0.107
Minimum retention time (days)	-	2.8
Water depth (m)	0.2 (flooded) 0.4 (infiltration media)	0.3 (average) 0.1 (shallow) - 0.5 (deep)
Total area (m^2)	3,000	7,000

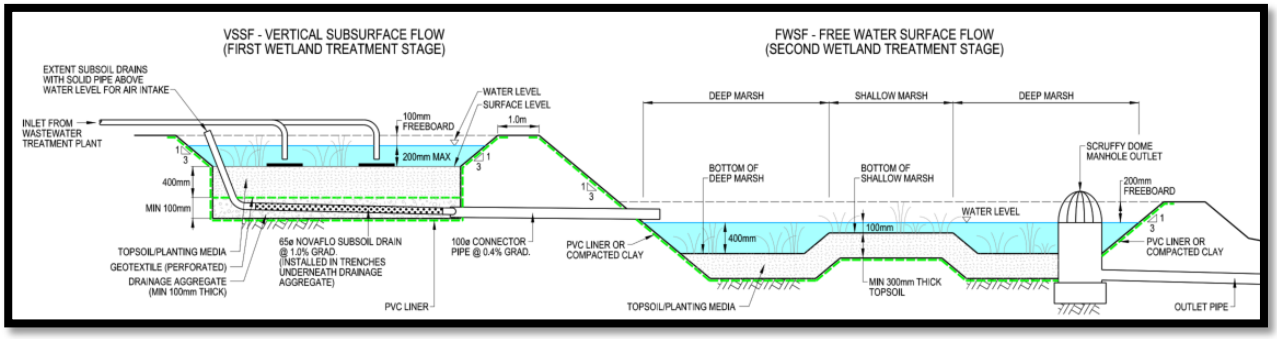

Figure 1. Wetland concept design.

3.7 Earthworks for the Wetland Construction

Earthwork area and volume

- Earthworks are proposed to enable the construction of the wetland system.
- The wetland system will be constructed over the existing formed pond area and surrounding grassed area located on the WPI site. The proposed wetland is located on the southeastern corner of the subject site, adjacent to State Highway 49.
- Earthworks details for the proposed wetland are contained in Technical Memo 4.
- The proposed wetland construction earthworks will involve approximately 22,441 m3 of cut and fill (10,447 m3 cut and 9,994 m3 fill) over an area of 17,146 m2. The maximum depth of cut will be 2.2m, and the maximum depth of fill will be 2.1m. The pond design and cut and fill plans are provided in Technical Report 4. The excess of approximately 453 m³ of material will be reused on site for the construction of a protection bund around the earthwork's extent.
- Works associated with wetland construction include re-profiling within the existing pond area to form wetland cells, installation of inlet and outlet structures, placement of filtration media, and establishment of wetland planting.
- No protected vegetation is proposed to be removed as part of the earthworks, which will be undertaken within an existing grassed area.
- The applicant supports a condition of consent requiring the preparation of a wetland planting plan in consultation with Ngāti Rangi, prior to the wetland becoming operational.

Construction Management, Erosion and Sediment Control

- Construction of the wetland will be undertaken in accordance with the site-specific Erosion and Sediment Control Plan (ESCP) detailed in Technical Memo 4. The ESCP identifies erosion and sediment control measures to manage actual and potential effects arising from soil disturbance during construction, particularly in relation to works within the proposed wetland area.

- Final erosion and sediment control measures and their layout will be confirmed through the contractor's construction methodology, consistent with the performance requirements of the approved ESCP.

Contaminated Soils

A Detailed Site Investigation ("**DSI**") has been completed for the proposed wetland area to characterise existing ground conditions and soil contamination associated with historical site use. The findings of the DSI are set out in Technical Memo 5.

- Based on the findings of the DSI, a Remediation Action Plan ("**RAP**") has been prepared and is contained in Technical Memo 6. The RAP has been developed to manage and remediate identified soil contamination within the existing pond area (located within the wetland construction area).
- The RAP sets out appropriate remediation methods, soil handling procedures, and health, safety, and environmental controls to be implemented during earthworks.

4 RESOURCE CONSENT APPROVALS REQUIRED

The applicant has assessed the proposal against the relevant national environmental standards, and regional and district plan provisions to identify the resource consent approvals required.

It is noted that at this stage, WPI is only applying for resource consent triggers captured under the umbrella of regional plan matters:

- WPI is specifically applying for the discharge of wastewater to water, the same trigger of resource consent as the notified application. This is regional plan matter.
- Pursuant to sec91 of the RMA, WPI has identified that the land disturbance activities associated with the construction of the proposed wetland, results in the need for an additional trigger of resource consent. This is also a regional plan matter.

WPI is not applying to vary the approved air discharge consent (a regional plan matter) at this stage for the reasons set out in Section 5 of this Planning Report.

At this stage, WPI is not applying for resource consent approvals captured under the umbrella of district plan matters, for the reasons explained in Section 5 of this Planning Report.

4.1 Horizons Regional Council One Plan

The Revised Proposal is captured under the same triggers of resource consent as the Notified Proposal:

- As the proposed discharge does not meet the permitted activity standards of Rule LF-LW-R34, resource consent is required for the discharge of wastewater to the Whangaehu River as a discretionary activity under Rule LF-LW-R38 of the One Plan.

  The proposed discharge of treated wastewater does not comply with the permitted activity conditions of Rule LF-LW-R34, specifically conditions 1 and 6:

  - The proposed discharge volume will be greater than the permitted 50 m³/day (Condition 1);
  - The discharge is to a reach of the river identified in RP-Sched2 (Condition 6).

New trigger of resource consents

- Under Rule LF-LAND-R6, land disturbance of a total area greater than 2,500m2 per property per 12-month period, and any ancillary diversion of water and discharge of sediment into water, is a **controlled activity**. The proposed land disturbance occurs over a total area of 17,146m2.

4.2 Bundling of Resource Consents

Overall, the application is to be considered as a **discretionary activity**.

5 SECTION 91 CONSIDERATIONS (OTHER APPROVALS)

5.1 Overview

- In Hearing Panel Minute 2 (dated 20 March 2026), the Hearing Panel noted the concern raised by Ms Morton that there is a broader question of whether all consents required for the Revised Proposal will be before the Council.
- WPI has given careful consideration to the overall package of resource consent approvals required for the implementation of the proposed Torrefaction Plant.
- The package of resource consent approvals required fall within two categories (discussed below):
    - Air discharge consent under the One Plan
    - District plan approvals required under the Ruapehu District Plan

5.2 Air Discharge Consent

- Air discharges from the site are currently authorised under existing discharge permit APP-2002010157.06, granted pursuant to Rule RP AIR R15 (Other Discharges) of the Horizons One Plan as a Discretionary Activity. The approved air discharge consent provides for air discharges associated with wood processing and biomass-fuelled combustion activities at the site.
- WPI acknowledges that the approved air discharge consent will require a variation to enable the operation of the Revised Proposal.
- The memorandum filed by WPI on 13 March 2026 included a legal memorandum from Berry Simons responding to a number of legal questions posed by Council staff. Berry Simons, in particular, looked into the question of whether, under sec91 of the RMA, the variation to the approved air discharge permit must be bundled with the Revised Proposal?
- Berry Simons legal advice is that:
    - It is generally accepted that it is good resource management practice to identify all resource consents required from the outset and to make and consider the applications together. However, the Environment Court has also determined that for the purposes of sec91, two parts of an overall project can be considered separately and a detailed knowledge of one is not necessary to assess the effects of the other. Each situation is fact-dependent.
    - In the case of the Revised Proposal, the purpose of varying the air discharge is to update the model to reflect the change to the torrefaction process; any variation would fall within the envelope of effects already consented.

- The air discharge activity and the discharge to water do not interact or overlap in any way that they affect the other, nor is the Revised Proposal affected in any way.
- In the case of the Revised Proposal, the air discharge variation application cannot assist a decision maker to better understand the nature of the proposal, such that a sec91 deferral could be deemed reasonable.
- There is no good reason to bundle the two consents together where they do not overlap and have no consequential or flow-on effects for one another (i.e. consideration of one will not affect the outcome of the other).

- Berry Simons conclusion is that there is no legal basis for Council to defer the consideration of the Revised Proposal under sec91 of the RMA, nor any requirement that a future air discharge consent variation should be bundled with the Revised Proposal.
- In order to provide Council additional comfort that the variation of the air discharge consent does not need to be bundled with the Revised Proposal, **Appendix A** includes an Air Discharge Memo (Technical Memo 7) from Air Matters Limited providing their expert view on the comparable nature and scale of air emissions between the approved air discharge permit and the Revised Proposal.
- The key findings of the Air Discharge Memo are:
  - While the nature of some air discharges would change as a result of the introduction of torrefaction, the emissions from the Revised Proposal will be of comparable nature and scale to those authorised under the approved air discharge permit APP-2002010157.06.
  - The types of emissions anticipated from the torrefaction facility are directly aligned to those authorised under air discharge permit APP-2002010157.06.
  - Emission rates across the site are expected to result in:
    - Significant decrease in VOCs due to their capture and thermal destruction within the energy recovery systems.
    - Decrease in particulate emissions as a result of advanced filtration systems.
    - Minimal change to combustion gas emissions given the modern design and efficiency of the proposed combustion equipment.
  - Confirmation of off-site effects from the Revised Proposal would need to be demonstrated through dispersion modelling of specific discharge points and emission rates. Torrefaction plant configuration (e.g. stack heights and volumetric flow rates) can be adjusted if required to ensure offsite effects remain consistent with the existing consented level of effects.

5.3 Ruapehu District Plan

- At this stage of the process, WPI is not applying for resource consent approvals required under the Ruapehu District Plan. However, for completeness, an overview of the consenting requirements under the Ruapehu District Plan for the key activities associated with the Revised Proposal is set out below.
- Construction of the torrefaction plant will involve the installation of new processing and energy infrastructure required to support the torrefaction operation. This includes construction activities associated with plant foundations, placement of processing equipment, installation of associated mechanical and electrical systems, and establishment of internal access and service connections.
- The site layout and plant design are currently in the early stages of project planning. Resource consent application approvals required under the Ruapehu District Plan will be lodged after the detailed design process has been completed.
- Under the Ruapehu District Plan, the Karioi Pulp Mill is scheduled as a "Special Activity", in recognition of its significant contribution to the district.
- The Revised Proposal is not deemed to be a "pulp and paper processing activity" and therefore, must rely on the Rural Zone provisions (instead of the Special Activity provisions).
- Under the Rural Zone, the Revised Proposal would be treated as an "industrial activity" in the Rural Zone. Industrial activities are a permitted activity in the Rural Zone, subject to compliance with the conditions of the zone. The Revised Proposal will generally be able to comply with the building, bulk and location conditions.
- Where compliance is not able to be met with Rural Zone permitted activity standards, then triggers of consent would be restricted discretionary activities, assessed against matters including rural character and amenity, noise, and functional relationship to the Rural Zone.
- Earthworks associated with the Revised Proposal will involve land disturbance and will not be able to comply with Rule RU3.4.10(c)(i) of the Ruapehu District Plan, which limits earthworks to 1,000 m^3 in the Rural Zone. Under Rule RU3.2.2, resource consent is required as a restricted discretionary activity.
- The matters of discretion for the district earthworks consent relate to construction-related effects such as erosion and sediment control, construction noise and dust, amenity effects, and the functional relationship of the activity to the Rural Zone. Accordingly, this consent is not considered high risk and does not affect the Council's ability to properly consider the regional consents before it, nor compromise an integrated understanding of the proposal and its effects.
- Noting that the site already contains an established built industrial character, and the proposal maintains a clear functional relationship to the Rural Zone through the processing of plantation

forestry resources, these resource consent approvals are not deemed to be "high-risk" consents but rather are highly likely to be granted.

5.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS)

Disturbance of contaminated soil is proposed as part of the site works, and the site is identified as having been subject to historical HAIL activities, as confirmed by the DSI prepared in support of the Revised application. The proposed disturbance exceeds the permitted activity thresholds in regulation 8 of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS). As a result, resource consent is required under regulation 9(1)(b) of the NES-CS as a controlled activity.

The matters of control specified in regulation 9(2) NES-CS relate to the adequacy of site investigation, the management, handling and disposal of contaminated soil, transport and tracking of material, and verification requirements to ensure protection of human health and the environment. These matters substantially overlap with the regional discharge consent framework, as both are concerned with the mobilisation and management of contaminants during land disturbance. While contamination remediation is not itself a trigger for the regional earthworks consent, contamination-related effects will be considered under the matters of discretion in accordance with policies HAZ-WC-P7 and HAZ-WC-P8 of the One Plan, as outlined in the DSI.

Accordingly, appropriate controls for contamination effects can be imposed through the regional consenting framework, and the NES-CS consent is not required at this stage to understand or assess the discharge proposal. Given its controlled activity status, the clarity of the assessment framework, and the confirmed understanding of site conditions, this consent is not considered high risk and can be progressed separately without affecting the Council's ability to properly consider the regional consents before it or compromising an integrated understanding of the proposal and its effects.

6 SITE AND SURROUNDING ENVIRONMENT

6.1 Overview

- The site is legally described as Section 3, Block XI, Karioi Survey District and is located on State Highway 49 at Karioi, approximately 8 km west of Waiouru. The site comprises the land associated with the former Karioi pulp mill and is situated within the upper Whangaehu River catchment.
- The site and its surrounding environment are unchanged from that described in the Notified Proposal AEE (prepared by Viridis Limited and Mitchell Daysh). The Notified AEE provides a comprehensive description of the site location, the Whangaehu River and catchment, the surrounding environment, mana whenua values, and the baseline ecological and water quality context. Those descriptions are adopted for the purposes of this application and are not repeated in detail here.
- The Notified AEE was informed by ecological surveys and river water quality monitoring undertaken up to 2024. Given the time elapsed since earlier ecological investigations, and to ensure the assessment reflects current ecological conditions, additional site-specific ecological work has been undertaken. The existing aquatic ecology conditions in the Whangaehu River are described below.

6.2 Aquatic Ecology

In response to the concerns raised by the submitters on the notified Proposal, WPI has completed an instream ecological survey of aquatic life in the Whangaehu River and two adjacent tributaries (for comparison). The findings of the survey are detailed in the Ecology Memo (Technical Memo 3) and summarised below:

- Spot water quality measurements collected at upstream and downstream sites indicate that the Whangaehu River is characterised by very low pH (approximately 3.2) and high electrical conductivity (approximately 1,676–1,732 µS/cm). These physicochemical conditions are identified as a defining and ecologically limiting feature of the river.
- Macroinvertebrate communities within the Whangaehu River were found to be very low in both abundance and taxonomic diversity, with five to six taxa and six to seven individuals recorded at the upstream and downstream sites. Despite this low abundance and diversity, the macroinvertebrates recorded were dominated by high-scoring EPT taxa, resulting in “Excellent” MCI and SQMCI scores.
- These results are unexpected given the extreme acidity of the river and suggest that the presence of sensitive taxa may be attributable to drift from upstream tributaries or possibly developed in a microrefuge such as a groundwater seep.
- No fish were captured in the Whangaehu River during the targeted fish surveys. A review of the New Zealand Freshwater Fish Database over approximately 30 km of the river (15 km upstream and

downstream of the site) similarly identified no records of native fish, with only isolated records of rainbow trout occurring well downstream of the site.

- Based on the findings of the ecological survey, the Whangaehu River at and near the discharge site supports an aquatic ecosystem with low ecological fauna values.

6.3 Wetland Area Description

- The proposed wetland area is located within an existing pond and adjacent grassed area on the site. The physical characteristics, extent, and layout of this area are described in the Technical Report 4 - ESCP. The ESCP reflects that this area has been previously modified in association with historic site activities. The Ecological Assessment confirmed that no natural inland wetlands were observed on the site or in the immediate vicinity of the proposed works area.
- Groundwater conditions within the proposed wetland area have been considered based on the DSI and previous site observations. The DSI identified the presence of groundwater within the existing pond, and shallow groundwater (approximately 0.8–1.0 m below ground level) in parts of the adjacent grassed area. The presence of groundwater in these locations is considered to be influenced by localised site conditions, including water pooling at the base of the existing pond and historical site modification.
- Information from bore logs, pump testing, and geotechnical investigations undertaken in the wider area indicates that any shallow groundwater present is most likely perched groundwater, rather than part of a regionally significant or laterally extensive aquifer system. Groundwater levels recorded in nearby investigation and production bores are generally deeper (approximately 4.5–7 m below ground level).
- The proposed earthworks, including in areas where shallow groundwater has been identified, are expected to extend to depths of approximately 0.7–1.0 m, and works are planned to be undertaken during summer conditions. On this basis, there is a low likelihood of encountering groundwater during construction. No dewatering or groundwater take is proposed. Should groundwater be encountered, excavation would cease, and work would proceed in accordance with standard construction practices and the ESCP.

6.4 Land Contamination

The DSI describes the contamination conditions within the proposed wetland area and is summarised as follows:

- Site history review and site inspection confirm that the area has been subject to activities listed on the Hazardous Activities and Industries List (HAIL), including HAIL category G3 (landfill and waste disposal) and G6 (industrial or trade premises) associated with historical site use.
- The DSI included targeted soil sampling within areas relevant to the proposed works, including sampling within and adjacent to the existing pond area.
- Soil samples were analysed for a range of contaminants, with polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), and polycyclic aromatic hydrocarbons (PAHs) reported at concentrations below the NES-CS commercial/industrial land-use soil contaminant standards.
- Elevated zinc concentrations were identified at location WA18, at approximately 1.5 m below ground level beneath the pond base, with concentrations exceeding ecological soil guideline values (ECO-SGVs). These concentrations have been identified as having the potential to leach into the surrounding environment.
- The DSI assesses these findings in the context of proposed land disturbance activities and identifies the need for appropriate management measures where disturbance of contaminated soil may occur.

7 ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

7.1 Introduction

This section provides an assessment of actual and potential effects of the proposal on the environment, informed by the Technical Reports and the Notified Proposal application package. This section also outlines the measures proposed by the applicant to avoid, remedy or mitigate any actual or potential effects on the environment.

The key effects discussed below are:

- Land Stability and Erosion Effects
- Surface Water Quality Effects
- Aquatic Ecology Effects
- Recreation and Amenity Effects
- Construction Effects
- Effects on Mana Whenua Values
- Positive effects

7.2 Land Stability and Erosion Effects

- The effects of the proposed discharge on river flows, hydrology, land stability, and erosion processes have been assessed as part of the Water Quality Assessment, and a summary of that assessment is provided below.
- The 7-day mean annual low flow (MALF) of the Whangaehu River at the State Highway 49 bridge is approximately 2,313 L/s. The proposal provides for the discharge of up to 750 m^3/day of condensate wastewater, which equates to an equivalent continuous discharge rate of approximately 8.7 L/s at maximum capacity. When compared with the 7-day MALF, the proposed discharge represents less than 0.4 percent of the river flow under low-flow conditions.
- Historic wastewater discharges from the site occurred at substantially higher volumes than those now proposed, without evidence of riverbank instability, erosion, scouring, or adverse effects on channel form attributable to those discharges. The current proposal represents a significant reduction from previously consented discharge volumes.
- Given the Revised Proposal's wastewater discharge's minor contribution to river flow and the absence of erosion or instability associated with higher historic discharges, no measurable change to river hydrology, bank stability, or erosion processes is expected, and effects are assessed as less than minor.

7.3 Surface Water Quality Effects

Discharges of wastewater to surface water have the potential to affect water quality through the introduction of suspended solids, nutrients, metals, and other contaminants, which may in turn influence visual clarity, chemical characteristics, ecological values, and recreational suitability. The potential effects of the proposed condensate discharge on the Whangaehu River have been assessed in detail in the Water Quality Assessment. A summary of that assessment is provided below.

The Water Quality Assessment adopts a conservative, worst-case approach, assessing effects under low-flow conditions of the Whangaehu River, and using condensate quality prior to passage through the proposed wetland. For completeness, the assessment notes that literature indicates constructed wetlands can achieve meaningful reductions in contaminants, commonly in the order of 50–80 percent for parameters such as suspended solids and nutrients.

Nature of the Proposed Discharge and Dilution

The proposal provides for the discharge of up to 750 m^3/day of condensate wastewater, equivalent to an average maximum flow rate of approximately 0.0087 m^3/s (8.7 L/s). When assessed against the Whangaehu River 7-day MALF of approximately 2.313 m^3/s, the proposed discharge represents less than 0.4 percent of the river flow.

Effects on Suspended Solids, Colour, and Clarity

Monitoring data indicate that total suspended solids (TSS) concentrations in the Whangaehu River already exceed ANZG guideline values upstream of the discharge location, and that clarity is naturally variable. The condensate wastewater has low suspended solids concentrations, and modelling indicates that downstream TSS concentrations are not materially different from upstream conditions. Accordingly, the proposed discharge is not expected to contribute to any additional exceedance of guideline values or result in a measurable adverse change in water clarity or visual appearance.

Effects on pH

The Whangaehu River is naturally acidic, with low pH values recorded upstream of the discharge location as a result of volcanic influences. Although the condensate has a pH close to neutral, the Water Quality Assessment demonstrates that the relatively small discharge volume means that downstream pH remains effectively unchanged from upstream conditions.

Effects on Nutrients

While ammoniacal nitrogen and nitrate concentrations already exceed ANZG guideline values upstream of the discharge location, the predicted increases attributable to the proposed discharge are small relative to baseline concentrations. The modelling indicates downstream increases of approximately 23 percent for ammoniacal nitrogen and 29 percent for nitrate under worst-case conditions. These increases do not

result in any change to the applicable NPS-FM attribute bands, which remain Band B for ammoniacal nitrogen and Band A for nitrate.

Effects on Metals

The Water Quality Assessment identifies that cadmium, lead, and zinc are the only metals for which modelled downstream concentrations show a small increase following discharge and mixing, with concentrations of these metals already exceeding applicable ANZG guideline values upstream of the discharge location. Modelling indicates that, under worst-case low-flow conditions, downstream concentrations increase only marginally (generally by less than 2 percent) relative to upstream conditions and remain within the range of natural variability observed in the Whangaehu River. On this basis, the effects of the proposed discharge on metal concentrations are assessed as minor.

Effects on Microbiological Water Quality

The Water Quality Assessment indicates that E. coli concentrations in the Whangaehu River are low and often below detection limits, both upstream and downstream of the discharge location, and that the condensate does not contain faecal contaminants. Modelling and monitoring show that the proposed discharge does not materially alter microbiological water quality conditions.

Conclusion on Water Quality Effects

Overall, the Water Quality Assessment indicates that the proposed discharge results in only small and conservative-case changes in water quality, with nitrogen being the primary parameter for which a discernible increase is modelled. While nitrogen concentrations already exceed ANZG guideline values in the receiving environment, the assessment demonstrates that the proposed discharge does not result in any change to NPS-FM attribute bands, and the modelling does not account for additional contaminant reductions expected from the proposed wetland polishing.

For all other contaminants assessed, including suspended solids, pH, metals, and microbiological indicators, the modelling shows no material difference between upstream and downstream conditions, or only very small changes that are within natural variability.

On this basis and having regard to the conservative assumptions adopted in the Water Quality Assessment, the effects of the proposed discharge on water quality from all contaminants assessed above are considered to be less than minor.

7.4 Aquatic Ecology Effects

The Ecological Assessment concludes that the proposed discharge is highly unlikely to result in adverse effects on aquatic ecology within the Whangaehu River.

With respect to macroinvertebrates, the assessment concludes that the discharge would not result in measurable changes to macroinvertebrate communities relative to existing conditions. Applying the EIANZ Ecological Impact Assessment Guidelines, the magnitude of effect on macroinvertebrates is assessed as negligible, resulting in an overall very low level of ecological effect.

In terms of fish, no resident or migratory native fish populations were identified within the affected reach of the Whangaehu River. On this basis, the assessment concludes that the discharge is not expected to result in adverse effects on fish, and the ecological effect on fish is also assessed as negligible.

Overall, the proposed discharge would result in a very low level of adverse ecological effect relative to existing baseline conditions.

7.5 Recreation and Amenity Effects

Amenity values relate to the qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, visual coherence, cultural context, and recreational use. Recreational use of rivers, including activities involving contact with water such as swimming and rafting, is influenced by both actual water quality and visual amenity.

The Water Quality Assessment evaluates the effects of this discharge on parameters relevant to visual amenity and contact recreation, including water colour, clarity, suspended solids, and microbiological indicators, and assesses whether the discharge results in observable changes following mixing in the river.

The Whangaehu River is characterised by naturally variable water colour and clarity, strongly influenced by volcanic inputs from Mt Ruapehu. Monitoring data show that water colour can range from glacial blue to yellow-brown hues, and that clarity is frequently low both upstream and downstream of the discharge location. These characteristics form part of the existing receiving environment and are not attributable to the proposed discharge.

The Water Quality Assessment indicates that, following reasonable mixing, the proposed discharge is not expected to result in visible discolouration or a discernible plume. The condensate is characterised by low suspended solids concentrations, and hydrocarbons and mineral oils were not detected. As a result, the discharge is not expected to introduce additional turbidity or surface films, or to materially alter water clarity after mixing in the river.

With respect to contact recreation, including swimming and rafting, the Water Quality Assessment shows that E. coli concentrations are low and often below detection limits, indicating a low risk to human health. These conditions occur upstream of the discharge location and are not materially altered by the proposed activity. The low pH is already well below the environmental guidelines (ANZG2018) and also outside levels considered suitable for recreational use, and this will be unchanged from the discharge. The

discharge does not introduce contaminants that would change the existing suitability of the river for contact recreation.

Overall, taking into account the existing visual characteristics of the Whangaehu River and the assessed downstream water quality following mixing, the proposed discharge is not expected to materially alter water appearance, clarity, or conditions relevant to contact recreation. Any effects on recreation and amenity values are therefore assessed as no more than minor.

7.6 Construction Effects

The proposed earthworks are confined to the subject site and relate to the construction of a wetland. The land disturbance will occur over a total area of approximately 17,146 m², exceeding the 2,500 m² permitted activity threshold and therefore requiring consent as a controlled activity under Rule LF-LAND-R6 of the One Plan.

The matters of control under Rule LF-LAND-R6 include the location, scale and timing of the earthworks, the content and implementation of the ESCP, and the potential effects of sediment run-off on soil conservation, surface water quality and aquatic ecology. The following assessment addresses the actual and potential effects associated with the land disturbance activity, relevant to these matters.

- The DSI included a conceptual site model to assess the potential risks to the environment arising from soil disturbance. The DSI identified elevated concentrations of zinc at depth beneath an area of the existing pond, which is not proposed to be excavated as part of the wetland construction works.
- A RAP has been prepared to manage the identified zinc exceedance and to control potential pathways for contaminant mobilisation during earthworks. The RAP sets out standard soil handling, containment, and erosion and sediment control measures, which are expected to prevent the mobilisation or off-site discharge of contaminated material.
- The ESCP identifies that the earthworks will occur on flat to gently undulating land, with no defined overland flow paths through the works area. The ESCP confirms that there are no nearby streams, wetlands, or other sensitive downstream receiving environments adjacent to the earthworks area, and an ecological assessment did not identify any sensitive ecological receptors that would be adversely affected by sediment runoff or soil disturbance.
- To manage erosion and sediment effects, the ESCP provides for the installation of a temporary perimeter earth bund, which will prevent clean water inflows and retain sediment-laden water within the site. Earthworks are proposed to be undertaken, where practicable, during a favourable weather window, and all exposed surfaces will be re-topsoiled and grassed following completion of works to stabilise the site.

Based on the findings of the DSI, RAP and ESCP, and the implementation of the proposed mitigation measures, the actual and potential adverse effects of the land disturbance activity on soil conservation, surface water quality and aquatic ecology are expected to be less than minor.

7.7 Effects on Mana Whenua Values

Refer to Technical Memo 8 – Statutory Assessment - Te Waiū-o-Te-Ika (Whangaehu River) Framework.

7.8 Positive Effects

- The proposal will result in a number of positive environmental, economic and social effects. The revised activity involves a substantial reduction in both the volume of wastewater discharged to the Whangaehu River and the concentrations of key contaminants, representing a clear improvement on the current approved consent and the Notified Proposal discharge scenario. The inclusion of a constructed wetland provides an additional treatment and polishing step prior to discharge, reducing reliance on dilution in the receiving environment and delivering longer-term benefits through improved contaminant management and potential habitat values.
- The Revised Proposal discharge design also addresses matters raised in the submissions. While the Notified Proposal identified the potential for some localised discolouration effects, these effects are not expected under the Revised Proposal due to the reduced discharge volume, improved wastewater quality, and incorporation of wetland treatment.
- The Revised Proposal enables the continued use and redevelopment of an existing industrial site and supports the ongoing operation of wood-processing activities at the WPI site. As outlined in the economic assessment contained within the Notified AEE, the continuation of operations delivers significant economic benefits, including employment retention and creation, support for downstream and associated industries, and contribution to regional economic activity. A substantial number of submissions in support of the application reinforced these findings, highlighting the importance of the proposal for local employment, economic resilience, and the wider community. Overall, the proposal delivers positive outcomes by improving environmental performance while providing meaningful economic and social benefits.

8 ASSESSMENT OF STATUTORY DOCUMENTS

Section 104(1)(b) of the RMA states that, subject to Part 2, regard must be had to the provisions of the relevant statutory documents. This section assesses the relevant statutory documents and is informed by the information presented earlier in this Planning Report and the accompanying Technical Reports.

8.1 Part 2 of the RMA

Part 2 of the RMA sets out the Act's purpose and principles. Under section 104(1) of the RMA, any consideration of a resource consent application is subject to Part 2.

The Court of Appeal in *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 held that, in considering a resource consent application, the statutory language under section 104 plainly contemplates direct consideration of Part 2 matters, when it is appropriate to do so. Furthermore, the Court considered that, where a plan has been competently prepared, it may be that, in many cases, there will be no need for the Council to refer to Part 2. However, if there is doubt that a plan has been "competently prepared", then it will be appropriate and necessary to have regard to Part 2. That is the implication of the words "subject to Part 2" under section 104(1).

In the context of this application, where the objectives and policies of the relevant statutory documents were prepared having regard to Part 2, they capture all relevant planning considerations, contain a coherent set of policies designed to achieve clear environmental outcomes, and provide a clear framework for assessing all relevant potential effects. As such, in the context of this resource consent application, it is considered that there is no need for the Council to refer to Part 2.

8.1.1 Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (NES-DW)

The purpose of this regulation is to protect drinking water sources, and an assessment is required for activities with the potential to affect drinking water supplies. There are no known drinking water sources in the vicinity of the proposed discharge outfall.

Having regard to the conservative assumptions adopted in the Water Quality Assessment, the effects of the Revised Proposal on water quality are considered to be less than minor.

8.1.2 Resource Management (National Environmental Standards for Freshwater) Regulations 2020

The NES-F regulates activities that pose risks to the health of freshwater and freshwater ecosystems through the setting of requirements for carrying out these activities that must be complied with. The purpose of the NES-F is to:

- Protect existing inland and coastal wetlands;
- Protect urban and rural streams from in-filling;
- Ensure connectivity of fish habitat (fish passage);
- Set minimum requirements for feedlots and other stockholding areas;
- Improve poor practice intensive winter grazing of forage crops;
- Restrict further agricultural intensification until the end of 2024; and
- Limit the discharge of synthetic nitrogen fertiliser to land and require reporting of fertiliser use.

A review of the NES-F indicates that it does not apply to the proposed discharge of wastewater to surface water, as the discharge is to be through an existing outfall structure, and therefore, none of the standards is relevant.

8.2 National Policy Statement Freshwater Management 2020

The NPS-FM sets the national direction for managing freshwater and requires that activities give effect to Te Mana o te Wai, protect the health and wellbeing of freshwater bodies, and manage land use in an integrated, catchment-wide manner. The proposal is consistent with the relevant provisions of the NPS-FM for the following reasons:

- *Policy 1 – Te Mana o te Wai*

  The proposal has been assessed with primary regard to the health and well-being of the Whangaehu River. As detailed in Section 5.5, the proposed discharge represents a very small proportion of river flow and results in only minor changes to downstream water quality. The Water Quality Assessment demonstrates that the discharge does not result in any change to NPS-FM attribute bands for the contaminants assessed. Ecological effects are assessed as negligible, with no measurable effects on aquatic communities identified. Construction-related earthworks effects are temporary and localised and will be appropriately managed through the implementation of the ESCP to avoid sediment discharges to water bodies. Overall, the proposal appropriately provides for the health and well-being of the freshwater body and is consistent with this policy.

- *Policy 2 – Tangata Whenua Involvement*

  Tangata whenua values associated with the Whangaehu River have been considered as part of the assessment, with specific regard to effects on water quality, ecological health, and the mauri of the receiving environment. The assessment of effects demonstrates that the discharge will not result in material changes to river water quality or ecological function. The proposed wetland treatment system further responds to concerns raised by tangata whenua by providing an additional safeguard prior to

discharge. Overall, the proposal has been developed and assessed in a manner that recognises and responds to tangata whenua interests in freshwater.

- *Policy 3 – Integrated Management*

  The proposal has been assessed using an integrated approach that considers hydrology, water quality, ecological values, and land-based effects. The assessment of the Revised Proposal draws together discharge volume, dilution, existing receiving environment conditions, and ecological sensitivity to determine the scale and significance of effects. This integrated assessment framework is consistent with this policy.

- *Policy 4 – National Objectives Framework*

  The Whangaehu River is within a proposed Freshwater Management Unit for which the full National Objectives Framework process has not yet been completed. There are no operative freshwater objectives, limits, or attribute states applicable to the receiving environment. The proposed discharge does not result in deterioration of existing water quality conditions and would not undermine future freshwater outcomes for the FMU. The proposal is therefore consistent with this policy.

- *Policy 7 – River extent and values*

  The proposal appropriately responds to the sensitivity of the receiving environment and the relevant freshwater values to the extent practicable. The Whangaehu River at and near the discharge location supports limited aquatic ecological values. Potential effects on broader values, including recreation and amenity, are also limited, with no material change to water clarity, appearance, or contact recreation conditions anticipated. Earthworks will be undertaken with effective erosion and sediment controls in place. Overall, the effects of the proposal are commensurate with the values present and do not give rise to significant adverse effects, consistent with this policy.

- *Policy 8 – Significant water body values*

  The receiving environment does not support significant freshwater values, and the assessment of effects demonstrates that the scale of the proposed discharge results in only minor adverse effects. Earthworks effects are localised and temporary and will not give rise to effects on the receiving environment due to the implementation of the ESCP. Given the limited values present and the minor nature of the effects identified, the proposal does not result in any significant adverse effects on freshwater and is consistent with this policy.

- *Policies 9 and 10 – Habitat of indigenous freshwater species, trout and salmon*

  The assessment of effects demonstrates that the proposed discharge will not adversely affect habitat for indigenous freshwater species, trout, or salmon. Aquatic ecological values within the affected reach are limited, with no fish species recorded and no identified habitat features that would be sensitive to

the nature or scale of the discharge. Given the minor nature of the effects identified and the absence of significant habitat values at the discharge location, the proposal avoids adverse effects on fish habitat and is consistent with these policies.

- *Policy 12 - National target for primary contact*

  The assessment of effects confirms that the proposed discharge does not introduce faecal contaminants and does not result in any worsening of E. coli concentrations in the receiving environment. E. coli levels upstream and downstream are low and often below detection limits, and the nature of the discharge does not give rise to any increase in human health risk. On this basis, the proposal is consistent with this policy.

Overall, the proposal gives effect to the NPS-FM by protecting freshwater values, appropriately managing both operational and construction-related effects through design and erosion and sediment controls, and avoiding adverse effects on water quality, ecology, and human health.

8.3 Horizons One Plan

The Horizons One Plan is the operative regional planning document for the Manawatū–Whanganui Region and integrates the Regional Policy Statement, Regional Plan, and Coastal Plan into a single statutory framework.

8.3.1 Regional Policy Statement

Part 2 of the One Plan comprises the Regional Policy Statement, which sets out the region-wide objectives and policies relating to matters of national and regional significance. The following chapters are relevant to the proposal.

Resource Management Overview Chapter

The Resource Management Overview Chapter sits at the front of the policy framework and identifies the key environmental issues for the region. It also identifies the resource management issues of significance to hapū and iwi and sets out the objectives, policies and methods to address these issues (Resource Management Issues of Significance to iwi Authorities (RMIA) section).

The Notified AEE identifies the relevant objectives and policies applicable to the proposal. That identification is adopted for the purposes of this assessment and is not repeated here. The proposal is considered to be aligned with the relevant objectives and policies framework of the RMIA section for the following reasons:

- *RMIA-O1*

  The proposal has been assessed with regard to the mauri of the Whangaehu River and the relationship of Ngāti Rangi with their ancestral waters. The discharge location is in proximity to areas of long-standing cultural association. The assessment of effects demonstrates that the proposed discharge will not materially alter the existing state of the river. The incorporation of wetland treatment prior to discharge provides an additional mechanism to manage contaminants and supports the protection of the mauri of the awa.

- *RMIA-P1*

  The proposal acknowledges that potential effects on ancestral relationships warrant direct hapū involvement. Engagement with Ngāti Rangi, including through submissions, has informed refinement of the proposal, with the incorporation of a wetland treatment system responding to both cultural considerations and water quality management. The wetland supports the protection of the mauri of the Whangaehu River while improving contaminant treatment prior to discharge, demonstrating an appropriate response to kaitiakitanga consistent with this policy.

- *RMIA-P2*

  While the upper Whangaehu River is an area of cultural importance, the assessment of effects demonstrates that the proposed discharge will not materially alter the existing state of the river. The incorporation of wetland treatment prior to discharge further reduces the potential for adverse effects, ensuring contaminants are appropriately managed before entering the receiving environment. On this basis, the proposal is not expected to adversely affect wāhi tapu or other sites of significance and is consistent with this policy.

- *RMIA-P4*

  The proposal has been assessed with regard to the need to maintain the mauri of the Whangaehu River. The assessment of effects demonstrates that the quality of the proposed discharge will result will not materially alter the existing state of the river. The incorporation of wetland treatment prior to discharge provides additional assurance that contaminants are appropriately managed before entering the receiving environment, supporting the ongoing health of the awa. On this basis, the proposal avoids degradation of freshwater values and is consistent with the intent of this policy to protect and uphold mauri.

Land and Freshwater Chapter

Within the Regional Policy Statement, the Land and Freshwater (LF) chapter establishes objectives and policies that guide the management of freshwater resources, including surface water quality, discharges to water, aquatic ecosystems, and the relationship of land use activities with freshwater bodies. These

provisions give effect to national direction and reflect region-specific freshwater values and management priorities.

The Notified AEE identifies the relevant objectives and policies of the LF chapter applicable to the proposal. That identification is adopted for the purposes of this assessment, and the objectives and policies themselves are not repeated here. The proposal is considered to be aligned with the relevant objectives and policies framework of the LF section for the following reasons:

- *RPS-LF-FW-O3*

  The Whangaehu River is identified in Schedule 2 as having ecological, cultural, and recreation values. The proposed discharge represents a small proportion of the river flow. The assessment demonstrates that water quality parameters relevant to Schedule 2 values, including clarity, colour, nutrients, metals, and microbiological indicators, remain within existing ranges following treatment and mixing. While acknowledging that recreational and amenity values are limited at the discharge location, the proposal has been assessed with regard to downstream values, and no degradation of those values is anticipated. The inclusion of wetland treatment prior to discharge provides an additional layer of protection that supports the maintenance of Schedule 2 values, consistent with this objective.

- *RPS-LF-FW-O4*

  This objective seeks to maintain freshwater quality where Schedule 2 freshwater values are being provided for, and to enhance freshwater quality where those values are not provided for. As outlined in the Notified AEE, baseline water quality in the Whangaehu River already exceeds guideline values for certain parameters due to natural geological influences within the catchment. Notwithstanding these existing conditions, the assessment demonstrates that the Revised Proposal will not materially worsen existing exceedances or further constrain the provision of Schedule 2 values. The proposed discharge regime, including wetland treatment prior to discharge, maintains water quality at a level that continues to support the relevant values and does not give rise to a requirement for enhancement beyond existing conditions. On this basis, the proposal is consistent with this objective.

- *RPS-LF-FW-P7*

  This policy seeks to enhance freshwater quality where it does not meet the water quality targets in Schedule 5, in order to support the freshwater values identified in Schedule 2. As identified in the Water Quality Assessment, baseline water quality in the Whangaehu River already exceeds several Schedule 5 targets, including for nitrogen. The modelling demonstrates that the Revised Proposal will result in a modest increase in nitrogen concentrations. However, these increases do not result in a change to existing NPS-FM attribute bands. The Ecology Assessment concludes that the magnitude of change associated with the discharge is insufficient to give rise to measurable ecological effects, and that the limited ecological values present will not be adversely affected. In addition, the proposed

wetland treatment is expected to further attenuate nitrogen concentrations prior to discharge, although this has not been relied upon in the conservative water quality modelling. On this basis, while the proposal does not deliver an enhancement sufficient to remedy existing Schedule 5 exceedances, it does not materially worsen freshwater quality or further constrain Schedule 2 values, and is therefore broadly consistent with the intent of this policy.

- *RPS-LF-FW-P12*

  This policy requires that discharges to freshwater are appropriately managed where water quality is already constrained, so that freshwater values are not further diminished. As outlined in the Water Quality Assessment, baseline water quality in the Whangaehu River already exceeds Schedule 5 targets for a number of parameters, including nutrients. The proposed discharge will result in a modest increase in nitrogen concentrations; however, these changes do not result in a shift in NPS-FM attribute bands and are small relative to existing baseline conditions. The Ecology Assessment confirms that the receiving reach supports low ecological values and that the scale of change associated with the discharge will not give rise to measurable ecological effects. The incorporation of wetland treatment prior to discharge further assists in managing effects at source. On this basis, the proposal does not materially worsen existing freshwater quality or compromise Schedule 2 values and is broadly consistent with this policy.

8.3.2 Regional Plan

Part 3 of the Horizons One Plan forms the Regional Plan and specifies the regulatory framework for the use and development of natural and physical resources within the region. It contains objectives, policies and rules that manage the effects of activities, including discharges to land and water, to achieve integrated and sustainable resource management outcomes.

Land and Freshwater Chapter

The Land and Freshwater (LF) chapter of the Regional Plan provides the policy framework for managing discharges to freshwater bodies in a manner that protects water quality and supports identified freshwater values. The Notified AEE identifies the relevant objectives and policies of the Land and Freshwater chapter applicable to the proposal. That identification is adopted for the purposes of this assessment, and the objectives and policies themselves are not repeated here. The assessment below instead focuses on the proposal's consistency with those provisions.

- *LF-LAND-O1, LF-LAND-P1 and LF-LAND-P2 - Accelerated erosion and sediment management*

  The proposal involves limited and localised land disturbance associated with the construction of the proposed wetland treatment system. Potential risks of accelerated erosion and sediment discharge during construction will be managed through the implementation of an ESCP, incorporating appropriate staging, stabilisation and sediment control measures. With these controls in place,

accelerated erosion and sediment discharge into water will be avoided as far as reasonably practicable, or otherwise appropriately mitigated. The proposal, therefore, manages land disturbance effects in a manner that protects downstream waterbodies and is consistent with the intent of these provisions.

- *LF-LAND-P1 – Avoidance and management of erosion and sediment discharge*

  The proposal involves limited land disturbance associated with the construction of the proposed wetland treatment system. Earthworks will be localised and temporary. Construction activities will be managed through an ESCP, ensuring that accelerated erosion and sediment discharge to the area are avoided. With these controls in place, the proposal will not give rise to increased sedimentation effects or damage to downstream waterbodies and is consistent with the intent of this objective.

- *LW-O2*

  This objective seeks to maintain or improve freshwater quality so that identified freshwater values are supported. The proposed discharge represents a small proportion of the river flow and results in only minor changes to water quality. While baseline water quality in the Whangaehu River already exceeds guideline values for some parameters, the assessment demonstrates that the proposal will not materially worsen existing conditions or further constrain the ability of the river to support its identified values. The incorporation of wetland treatment prior to discharge provides an additional level of management that supports the maintenance of freshwater quality, consistent with this objective.

- *LW-P4*

  This policy sets out matters that must be considered when assessing discharges to water, including consistency with the Regional Policy Statement framework, the avoidance of persistent contaminants, and the adoption of best practicable options to manage adverse effects. These matters have been addressed through the assessment against the relevant higher-order objectives and policies earlier in this report, together with the supporting water quality and ecological assessments. That assessment demonstrates that the proposed discharge is appropriately managed, does not introduce contaminants likely to accumulate in the receiving environment, and applies a best practicable option having regard to the scale of effects and characteristics of the Whangaehu River. Accordingly, the proposal has been assessed in a manner consistent with the requirements of this policy.

- *LW-P7*

  This policy requires consideration of alternative discharge options or regimes to mitigate adverse effects. As outlined in the Notified AEE, alternative discharge and treatment options were considered, including land-based treatment and enhanced treatment prior to discharge. In response, and informed by engagement with Ngāti Rangi, the proposal has been refined to incorporate a constructed wetland to provide additional treatment and polishing prior to discharge to the Whangaehu River. The wetland represents a practicable alternative treatment measure within the constraints of the site and receiving

environment. Further treatment refinement or alternative discharge regimes can continue to be explored over time through consent conditions and operational management as appropriate. On this basis, the policy requirement to consider alternative discharge options has been met.

8.4 Section 105 – Matters Relevant to Certain Applications

Section 105(1) of the Act states that where an application is for a discharge permit to do something that would otherwise contravene Section 15 or Section 15B of the Act, *"the consent authority must, in addition to the matters in section 104(1), have regard to –*

a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

b) The applicant's reasons for the proposed choice; and

c) Any alternative methods of discharge, including discharge into any other receiving environment"

The proposed discharge involves treated wastewater associated with a revised wood-processing activity, with a substantial reduction in discharge volume and improved discharge quality compared to the previously consented activity. The receiving environment is the Whangaehu River, which has naturally constrained water quality and low ecological values in the vicinity of the discharge.

Alternative discharge methods have been considered and are documented in the Notified AEE. The proposal has been refined to include a constructed wetland, providing additional treatment and polishing prior to discharge, as a practicable alternative measure to further mitigate effects.

The applicant acknowledges that with the reduced volume of wastewater sought to be discharged, in principle, the future viability of a land discharge option can be investigated. However, at the present stage, a land discharge option presents the following challenges and risks to the project:

- Suitable land discharge area investigations require significant time to complete. This requires a comprehensive soil absorption capability study and a comprehensive assessment of effects.
- Discharge to land in the winter season can present challenges and result in adverse environmental effects.
- Finding a suitable site, with a willing property owner to lease the property to enable the discharge, is challenging (as the owner may need to reduce their own operations to facilitate the discharge).
- The cost of any land acquisition is significant.

8.5 Section 107 Restriction on Granting of Certain Discharge Permits

Section 107 of the RMA restricts the granting of discharge permits where, after reasonable mixing, a discharge is likely to cause specified adverse effects such as conspicuous changes in colour or clarity, objectionable odour, or significant adverse effects on aquatic life.

As demonstrated in the AEE, the revised discharge is not expected to give rise to any of the effects listed in section 107. While the notified application identified the potential for some localised discolouration effects associated with the former discharge regime, these effects are not anticipated under the Revised Proposal, given the reduced discharge volume, improved wastewater quality, and inclusion of wetland treatment.

The Ecology Assessment confirms that the proposal will not result in significant adverse effects on aquatic life. On this basis, there is no restriction under section 107 on the granting of the discharge permit.

End.

Appendix A

Technical Memorandums

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