

BEFORE THE INDEPENDENT HEARINGS PANEL

IN THE MATTER of the Resource Management Act 1991 ("**RMA**")

AND

IN THE MATTER Resource consent applications by Te Puna Industrial
Limited in relation to 297 Te Puna Station Road

**STATEMENT OF EVIDENCE OF HENRY WHYTE OF ECRESTO
ON BEHALF OF TE PUNA INDUSTRIAL LIMITED**

(ECOLOGY)

25 JUNE 2024

1. EXECUTIVE SUMMARY

1.1 My name is Henry Dustin Whyte and I am an Ecologist and Owner and Director of EcoResto, Ecological Restoration Specialists.

1.2 I was engaged by TPIL in December 2023 to assess the potential ecological effects of the Application, respond to submissions which raised concerns regarding ecological effects, and provide recommendations as to necessary further mitigation. In my view there are three separate issues that contribute to the overall ecological impact of the development:

- (a) **Reinstatement of the Wetland.** Approximately 1.8ha of the Site is proposed to be reinstated as a wetland, including two purpose-built storm water treatment facilities, and considerable amounts of wetland planting. In my view, the Landscape Plan and Planting Palette, including the Outline Wetland Establishment Plan is thorough and well considered with appropriately selected plant species for the proposed land use. The reinstatement of the wetland will undoubtedly be a net ecological benefit to the natural environment, subject to adequate on-going maintenance and pest control.
- (b) **Presence of a container yard.** Approximately 4.8ha of the Site is to be dedicated to the use of a container yard. My position is that the location where the container yard is intended to be constructed does not meet the criteria to be considered a wetland and therefore the construction of the yard will not negatively impact the ecological attributes of the site.
- (c) **The container yard and wetland interface.** In my view, the water treatment proposed by WSP in its Section 92 Response Report ("**S92 Response**") appears well engineered and fit for purpose. Therefore it is my position that:
 - (i) the quality of stormwater discharged from the Site and entering the wetland will be of a suitable quality that will not adversely affect the ecology of the wetland; and

- (ii) the quality of the stormwater discharged from the wetland into the Hakao Stream will also be high quality and, in particular, will not in my opinion adversely effect the existing ecological function of the Hakao Stream.

2. INTRODUCTION

2.1 My name is Henry Dustin Whyte. I am an Ecologist and Owner and Director of EcoResto, Ecological Restoration Specialists.

Qualifications and experience

2.2 I have four years' experience in the field of ecological restoration.

2.3 I obtained a Bachelor of Commerce from Otago University in 1998 and Bachelor of Science from Waikato University specialising in biological science in 2020.

2.4 I am a Western Bay of Plenty District Council ("**WBOPDC**") Approved Ecologist. EcoResto is a Tauranga City Council Approved Contractor.

2.5 I have completed approximately 35 ecological assessments and Environmental Management Plans for private landowners for the purpose of supporting resource consent applications. I have written 100+ reports for WBOPDC on the assessment of protected ecological features in the district.

Code of conduct

2.6 I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the Hearings Commissioners. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

3. SCOPE OF EVIDENCE

3.1 My evidence relates to the resource consent applications by Te Puna Industrial Limited ("**TPIL**") in relation to its site at 297 Te Puna Station Road ("**Site**"). The

applications are to authorise the development of the Site for the establishment and operation of industrial activities, with associated earthworks and discharge of water within the Site ("**Project**"). The Project will give effect to the Te Puna Business Park Structure Plan ("**Structure Plan**") provisions that apply to the Site under the Western Bay of Plenty District Plan. ContainerCo will be the anchor tenant of the Site. ContainerCo intends to store, repair, and lease out/sell shipping containers.

- 3.2 Regional resource consents to enable the Project are required from Bay of Plenty Regional Council ("**BOPRC**") and land use consents are required from WBOPDC (together, the "**Application**"). The specific consent requirements are set out in the planning evidence of Mr Vincent Murphy.¹
- 3.3 I was engaged by TPIL in December 2023 to assess the potential ecological effects of the Application, respond to submissions which raised concerns regarding ecological effects, and provide recommendations as to necessary further mitigation. As part of this, I prepared the Appraisal of Net Ecological Benefit - Te Puna Industrial Ltd (dated 7 June 2024) ("**Ecological Report**"). This is attached as **Attachment A**.
- 3.4 I undertook a visit to the Site on 13 December 2023.
- 3.5 In this statement of evidence, I will:
- (a) describe the ecology of the Site and the surrounding area;
 - (b) set out my assessment of potential ecological effects as a result of the Application;
 - (c) respond to the submissions received from submitters including from Pirirākau on the Application and the BOPRC Section 42A Report ("**S42A Report**")²; and
 - (d) comment on the proposed conditions of the consent relating to ecological effects.

¹ Evidence of Vincent Murphy dated 26 June 2024.

² Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024).

4. EXISTING ENVIRONMENT

- 4.1 Historically, the area surrounding the Site would have been swamp wetland. As set out in my Ecological Report, within human history the area surrounding the Site would have been wetland dominated by obligate or facultative wetland species such as carex (*Carex virgata*), soft rush (*Juncus effusus*), harakeke (*Phormium tenax*), ti kouka (*Cordyline australis*), manuka (*Leptospermum scoparium*), swamp maire (*Syzygium maire*), and kahikatea (*Dacrycarpus dacrydioides*). Aquatic birds such as pied shag (*Phalacrocorax varius*), australasian bittern (*Botaurus poiciloptilus*) and white-faced heron (*Egretta novaehollandiae*) could have reasonably been observed occupying the habitat. Eels (*Anguilla* spp.) and fish from the Galaxiidae family would likely have been present.
- 4.2 Following European settlement, the wetland including the Site, was cleared of its plants, had its hydrology changed through channelisation and was cultivated in favour of pastural grasses for the purpose of agriculture.
- 4.3 The Site has a total area of approximately 12.17ha. The elevation ranges between about 1m (Above Mean Sea Level ("**AMSL**")) and 4m (AMSL). The Site has flat relief split across a central upland terrace and a lower broad floodable area.
- 4.4 The current use of the Site is primarily agriculture (grazing cattle) with a centrally located industrial yard with industrial buildings and multiple commercial and industrial vehicles observed at the time of the Site visit.
- 4.5 To the north of the Site is Te Puna Station Road which sits 1-2m above the original topographical elevation. Beyond Te Puna Station Road are multiple industrial sites and a railway line. Southern and eastern bordering properties are of a similar agricultural land use to the Site, with the inclusion of commercial / industrial sheds and yards. The properties to the west are somewhat elevated again (10-15m in elevation) and are generally used for horticultural operations in the form of avocado or kiwifruit orcharding.
- 4.6 From a New Zealand native biodiversity perspective relative to its original state (prior to human settlement), the ecological condition of the Site could only be categorised as extremely distressed. The change in hydrology has lowered the water table which has led to the disestablishing of the wetland. The removal of shrubs and trees on the Site has destroyed the habitat for native

fauna and the introduction of pest plants and animals has fundamentally changed the composition of the habitat. The same is essentially the case for all the land immediately surrounding the Site (and, more generally, across the Western Bay of Plenty District as a whole).

- 4.7 The pest plants on or near the Site identified at the time of the visit included arum lily (*Zantedeschia aethiopica*), bindweed (*Convolvulus* sp.), privet (*Ligustrum lucidum* and *Ligustrum sinense*), Taiwan cherry (*Prunus campanulate*), wattle (*Acacia* spp.), and blackberry (*Rubus fruticosus*). All of these pest plants have the potential to dominate the environment to the exclusion of native species. Avifauna present included pukeko (*Porphyrio porphyrio*), shining cuckoo (*Chrysococcyx lucidus*), and mallard ducks (*Anas platyrhynchos*).

5. ASSESSMENT OF ECOLOGICAL EFFECTS

Ecological issues

- 5.1 I have identified three separate issues that contribute to the overall ecological impact of the Application.

Reinstatement of the wetland

- 5.2 Around 90% of New Zealand's valuable wetlands have been destroyed and commonly repurposed for the benefit of agriculture.³ Wetlands perform the role of filtering sediment and nutrients prior to water entering into riverine or estuarine environments. They support a wide range of plants and animals to many of which require the existence of the wetland for their survival.
- 5.3 Approximately 1.8ha of the Site is proposed to be reinstated as a wetland including two purpose-built storm water treatment facilities.⁴ The location of the wetland ties in with pre-existing overland flow paths and egresses to the east to join Hakao Stream and Te Awanui. A raised boardwalk is included in the Application to provide access to the reinstated wetland,⁵ and considerable

³ Department of Conservation: Wetland Forests, <<https://www.doc.govt.nz/nature/native-plants/wetland-forests/>>

⁴ Assessment of Environmental Effects by Momentum Planning and Design (dated September 2023) at [3.6].

⁵ Assessment of Environmental Effects by Momentum Planning and Design (dated September 2023) at [3.5].

amounts of wetland planting (native species) has been proposed to hasten the re-establishment of habitat.⁶

- 5.4 In my view, the Landscape Plan and Planting Palette including Outline Wetland Establishment Plan is thorough and well considered with appropriately selected native plant species for the proposed land use.⁷ The wetland and planting proposed will attract birdlife, fish life and provides a stable environment for the recruitment of plant life. With adequate on-going maintenance this will become a valuable ecological asset to the area.
- 5.5 In my view, the reinstatement of the wetland is undoubtedly to the net ecological benefit of the natural environment. This subject to ongoing pest plant monitoring and control of the area given that a number of the pest plant species noted at [4.7] above are well suited to growing in wetland environments and will readily colonise the area to the detriment of the overall ecological health of the wetland.
- 5.6 An exemplary analogy for a successful and highly valuable reinstated wetland is the Te Rere/Maniatutu wetland on the Baygold site at 1374 State Highway 2, Pongakawa.⁸ This is a client of EcoResto who has done an excellent job of reinstating a wetland on a site with similar characteristics. It is my opinion that this is the outcome that can be achieved on the Site.

The presence of a container yard

- 5.7 Approximately 4.8ha of the Site is to be used as a container yard which is proposed to be positioned on the upland plateau. This area has been previously cleared of all indigenous vegetation and contoured to provide a site suitable for development.
- 5.8 In my view, the location where the container yard is proposed to be constructed does not meet the criteria to be considered a wetland as defined in the Resource Management Act 1991,⁹ the Resource Management (National

⁶ Assessment of Environmental Effects by Momentum Planning and Design (dated September 2023) at [3.7].

⁷ Momentum Planning and Design, Landscape Plan and Planting Palette Including Outline Wetland Establishment Plan (dated 23 January 2023).

⁸ Te Puke Times (18 June 2024) <https://www.nzherald.co.nz/bay-of-plenty-times/te-puke-times/pongakawa-wetland-extension-work-starts/LZD2Z2CRMREMZPOMTIXVHZ4IKI/#google_vignette>

⁹ Resource Management Act 1991, s2.

Environmental Standards for Freshwater) Regulations 2020,¹⁰ or the Western Bay of Plenty District Plan. The definition used in each of these sources for a natural inland wetland is defined as:

permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.

5.9 Of significance are the exclusions that are applied to this definition which add clarity to the discussion. Taken from the Amendments to the National Policy Statement for Freshwater Management 2020 ("**NPS-FM**") that were adopted in December 2022, the exclusions from the definition of 'natural inland wetland' apply to features that are¹¹

- a) in the coastal marine area; or
- b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or
- c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or
- d) a geothermal wetland; or
- e) a wetland that:
 - i. is within an area of pasture used for grazing; and
 - ii. has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless
 - iii. the wetland is a location of a habitat of a threatened species identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply (Ministry for the Environment, 2020).

5.10 In my view, exclusions e(i) through e(iii) speak directly to the determination that the Site does not contain a wetland. The Site is dominated by pasture grasses

¹⁰ Resource Management (National Environmental Standards for Freshwater) Regulations 2020, s3. "natural inland wetland" has the meaning given by the National Policy Statement for Freshwater Management.

¹¹ National Policy Statement for Freshwater Management 2020 at [1.4].

and I was unable to identify any area that appeared to provide habitat for threatened species.

- 5.11 Moreover, the BOPRC, who has a responsibility under the NPS-FM, does not identify the Site as wetland in the reporting planners' S42A Report for the Application:¹²

Following a review of the application, information held by BOPRC, Ms Heather McKenzie (BOPRC, Support Environmental Scientist) comments that the proposed site falls within an area of improved pasture and is not dominated by wetland species. Given this, the site does not meet the definition of a natural inland wetland as defined by the National Policy Statement for Freshwater 2020.

- 5.12 My opinion is consistent with the BOPRC's position.
- 5.13 It is therefore my view that the construction of the yard as proposed will not negatively impact the ecological attributes of the Site.

The container yard and proposed wetland interface

- 5.14 Policy 5 of the NPS-FM requires that:

Policy 5: Freshwater is managed (including through a National Objectives Framework) to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.

- 5.15 The S92 Response prepared by WSP states that rain / storm water will be captured and treated prior to egressing the Site.¹³ The stages of treatment appear well engineered and fit for purpose. Therefore, in my view, the quality of stormwater that is discharged from the Site and enters the wetland is at a suitable level of quality.
- 5.16 Moreover, the wetland is a biological water treatment device in and of itself. As per the Department of Conservation:¹⁴

Wetlands act like the kidneys of the earth, cleaning the water that flows into them. They trap sediment and soils, filter out nutrients and remove contaminants; can reduce flooding and protect coastal land from storm surge; are important for maintaining water tables; they also return nitrogen to the atmosphere.

¹² Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [3.9].

¹³ Te Puna Industrial Limited s92 Response Report: 297 Te Puna Station Road by WSP dated 17 August 2023 at [3.3].

¹⁴ Department of Conservation, Wetlands. <<https://www.doc.govt.nz/nature/habitats/wetlands/>>

5.17 In this regard, the quality of the stormwater discharged from the wetland into the Hakao Stream will also be high quality and, in particular, will not in my opinion adversely effect the existing ecological function of the Hakao Stream.

6. RESPONSE TO ISSUES RAISED IN SUBMISSIONS

6.1 I have reviewed relevant submissions on the Application that raise matters relating to ecology.

6.2 I note that submissions filed by 50 of the submitters on this Application are identical in form and substance.¹⁵ I acknowledge that these submissions were made by individual submitters, however for ease of reference and given the likeness of these submissions, I will refer to these submitters as "Submitter Group 1", rather than by referring to their individual submitter number.

6.3 Pirirākau has expressed concerns with respect to potential impacts on mahinga kai and on the health of the Hakao Stream.¹⁶

6.4 In addition, the general concerns expressed by submitters that raise matters relevant to ecology are:

- (a) the proximity of the site to the Wairoa River which contains nationally significant and at-risk freshwater species;¹⁷
- (b) concerns over fish life and wildlife and concerns that mahinga kai will be impacted; and¹⁸
- (c) concerns over the potential for pollution of waterways.¹⁹

6.5 I address these submissions below:

Pirirākau concerns

6.6 In my view, the stormwater detention device, and the reinstatement of the wetland, as described in the S92 Response by WSP, will mitigate any risks

¹⁵ Submitters #3, #4, #6, #8, #9, #10, #11, #12, #14, #15, #16, #17, #19, #20, #21, #22, #23, #24, #27, #28, #29, #31, #32, #33, #37, #40, #41, #42, #45, #47, #48, #51, #52, #57, #58, #61, #62, #63, #64, #66, #71, #72, #100, #105, #111, #112, #127, #187, #194 and #195 ("**Submitter Group 1**").

¹⁶ Submitter #50. Pirirākau Assessment of Cultural Effects (Julie Shepherd) at p. 7, 9, and [8]-[10].

¹⁷ Submitters #56, #60 and #121 and Submitter Group 1.

¹⁸ Submitters #81, #82, #110, #131, #167, #174, #124, #201, #246, #250, #251, #252 and #257 and Submitter Group 1.

¹⁹ Submitters #140, #143, #146, #147, #184, #200, #202 and #255.

from sedimentation or run-off on the Hakao Stream.

- 6.7 Storm water and washdown water is captured in a detainment device (Hynds 2-Stage Enviro Valve/Fox Valve or similar, as described in the S42A Report).²⁰ I defer to the expertise of the Stormwater Engineer on the ultimate efficacy of this device but, as I understand it, this device acts as a 'first-flush diverter' or akin to a septic tank to extract any trade waste from the storm water. Additional settlement will occur in the permanent storm water treatment pond followed by tertiary treatment in the wetland itself. It appears that these devices are fit for purpose.
- 6.8 As I have set out in my evidence above, quality of stormwater that is discharged from the Site and enters the wetland is at a suitable level of quality. The wetland itself will act as a biological water treatment device, ensuring the stormwater ultimately discharged from the Site to the Hakao Stream will not adversely impact the Stream.
- 6.9 The Consent Conditions proposed by BOPRC attached to the S42A Report relate to the permanent discharge of stormwater and treated washdown water to land where it enters water (being the Hakao Stream and Wairoa River).²¹ I consider these conditions to be thorough and the Discharge Quality and Maintenance to be practicable.
- 6.10 Pirirākau have also raised concerns regarding impacts on longfin and shortfin tuna. The Pirirākau Assessment of Cultural Effects ("**PACE**") sets out that long-finned tuna prefer flowing water and are extensively found in flows of rivers, and short-finned tuna generally found in lowland areas and prefer environments such as drains.²² It is my opinion that Pirirākau's assessment of the preferred habitat of the two eel species is accurate. I believe that the quality of the faster flowing water of the Hakao Stream and Wairoa River will not be adversely affected by the Project. I believe the reinstatement of the wetland on the Site will create additional habitat for a wide range of plants and animals, including eels. In combination, this will generate a net-ecological benefit.

²⁰ Hynds 2-Stage Enviro Valve/Fox Valve or similar. Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [7.31].

²¹ Bay of Plenty Regional Council Recommended Consent Conditions, Attachment to S42A Report, Draft Condition 1.1.

²² Julie Shepherd, Pirirākau Assessment of Cultural Effects (October 2023) at p. 29.

Proximity of the Site to the Wairoa River

- 6.11 As set out above, it is my opinion that the stormwater detention device and the reinstatement of the wetland will mitigate any risks to the health of freshwater species, which occupy the Hakao Stream (which is the immediate receiving environment), from sedimentation or run-off. It follows that there will be no discernible impact on the wider receiving environment, including the Wairoa River.

Impacts on fish life, wildlife and mahinga kai

- 6.12 It is my opinion that the stormwater detention device and the reinstatement of the wetland will mitigate any risks from sedimentation or run-off. The reinstatement of the wetland will provide habitat that has been degraded and destroyed on account of previous work in the area. This will be a net ecological benefit for the wildlife on the surrounding area, including surrounding waterways.

Potential for pollution of waterways

- 6.13 As set out above, it is my opinion that the proposed stormwater detention device and the reinstatement of the wetland will mitigate any risks from sedimentation or run-off from the Site. This therefore means, in my view, that there will be no adverse effects on surrounding waterways through the implementation of this Application.

7. RESPONSE TO MATTERS RAISED IN THE SECTION 42A REPORT

- 7.1 I have reviewed the BOPRC's S42A Report and recommendation dated 17 June 2024. The S42A Report for the WBOPDC does not interrogate ecological issues and defers this to the BOPRC.²³ Matters relating to ecological effects are addressed primarily in BOPRC's S42A Report at [7.30] – [7.40].²⁴
- 7.2 Ms Heather McKenzie considered the species listed, and the proposed planting areas within the Wetland Plan, are appropriate.²⁵ Although Ms McKenzie considered that the Plan was lacking in some details, overall Ms McKenzie was comfortable that these details could be provided through

²³ Western Bay of Plenty District Council Section 42A Report (dated 17 June 2024) at [176].
²⁴ Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [7.30] – [7.40].
²⁵ Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [7.37].

conditions of consent.²⁶ The reporting planner (Ms Christian) therefore considered that there should be conditions in the BOPRC consent requiring certification of a Wetland Planting Plan that has been prepared by a suitable ecologist.²⁷ I agree with this recommendation.

- 7.3 From the perspective of the holistic ecological well-being of the Site in general and the wetland in particular, it is my opinion that annual monitoring for pest plant and animals be undertaken by a suitably qualified ecologist. Moreover, if detrimental pest plants or animals are identified as present a management plan, also designed by a suitably qualified ecologist, should be adopted as a means of mitigating the adverse impacts of the invasive species, ideally though excluding them from the Site.

8. COMMENTS ON PROPOSED CONDITIONS

- 8.1 I have reviewed the proposed conditions for consent for the Application, as proposed by the BOPRC in the S42A Report and comment as follows.

- 8.2 Condition 10.1 of the BOPRC recommended consent conditions require the consent holder to provide a Wetland Planting Plan, prepared in collaboration with Pirirākau (where possible) and with input from a suitably qualified Ecologist, to the BOPRC for certification, 20 working days prior to commencement of construction of the wetland.²⁸ This Wetland Planting Plan must detail:

- (a) a clear description of the timing and location of the planting;
- (b) use of site appropriate, indigenous eco-sourced species;
- (c) the intended planting densities; and
- (d) details on the wetland management and maintenance (including pest plant control, infill planting, pest animal control etc.) for a minimum of five years.

- 8.3 Condition 10.2 requires progressive planting of the wetland as soon as reasonably practicable following construction of the wetland, in accordance

²⁶ Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [7.37].

²⁷ Bay of Plenty Regional Council Section 42A Report (dated 17 June 2024) at [7.38].

²⁸ Bay of Plenty Regional Council Recommended Consent Conditions, Attachment to Section 42A Report, Draft Condition 10.1.

with the Wetland Planting Plan.²⁹ Within 20 working days following the completion of the wetland planting, the consent holder must provide the BOPRC with the producer statement, signed by a suitably qualified and experienced Ecologist, that works have been undertaken in accordance with the certified Wetland Planting Plan and best practice (condition 10.3).³⁰

8.4 Wetland Maintenance must be undertaken in accordance with the Wetland Planting Plan (condition 10.4).³¹

8.5 I consider that these conditions are appropriate and align with my view that maintenance of the wetland (including pest plan and animal control) is vital to ensure that the wetland will support a range of native species.

9. CONCLUSION

9.1 On the basis of the above, it is my position that there will be a net ecological benefit as a result of the Application.

Henry Whyte

25 June 2024

²⁹ Bay of Plenty Regional Council Recommended Consent Conditions, Attachment to S42A Report, Draft Condition 10.2.

³⁰ Bay of Plenty Regional Council Recommended Consent Conditions, Attachment to S42A Report, Draft Condition 10.3.

³¹ Bay of Plenty Regional Council Recommended Consent Conditions, Attachment to S42A Report, Draft Condition 10.4.

Attachment A

Appraisal of Net Ecological Impact of Te Puna Industrial Ltd. development at 297 Te Puna Station Rd



Report Author: Henry Whyte, BCom, BSci
Dir. EcoResto, Ecological Restoration Services

Signed: *Henry Whyte*

Credentials: Approved Ecologist -Western Bay of Plenty District Council
Approved Ecologist -Waipa District Council
Approved Contractor -Tauranga City Council

Date: 07/June/2024

Report No. 031

Title No.: 33275

Resource Consent: BOPRC (RM22-0010)
WBOPDC (RC13360L)

Introduction

Henry Whyte (Dir. EcoResto, Ecological Restoration Services) has been commissioned to provide ecological advice with respect to the net ecological impact of the above noted Resource Consent applications. Resource Consent applications have been lodged by Te Puna Industrial Ltd. with Bay of Plenty Regional Council (BOPRC) (RM22-0010) and Western Bay District Council (WBOPDC) (RC13360L). The consent is for the temporary discharge of sediment contaminated stormwater to land associated with earthworks and permanent discharge of stormwater to land where it will enter surface water. Te Puna Industrial Ltd. is looking to develop the subject property to use as a shipping container yard while concurrently installing a stormwater management system and reinstating a wetland.

A literature review of material associated with the project was undertaken including the **Te Puna Industrial Limited s92 Response Report** created by WSP and the **Landscape Plan and Planting Palette Including Outline Wetland Establishment Plan** created by Momentum Planning and Design. A desktop analysis was conducted using Geographic Information Software (QGIS) with assorted supporting files downloaded from Land Information New Zealand (LINZ). These files included property boundaries, contour shapefiles, and topographical maps. Against a Google aerial image base-layer, additional shapefiles were created as a means of determining subject property attributes, extents and any salient features relevant to the intent of the report. The subject property was visited for the purpose of assessment on 16th December, 2023. On-site, comparative ground-truthing was undertaken at the time of the visit. Biological surveying was undertaken to identify native and exotic flora and fauna. An additional assessment of immediate and adjacent property infrastructure was undertaken to provide context. Images were exported to be presented as maps with key elements itemized in the legend. Photos were taken with images included in the text of the report.

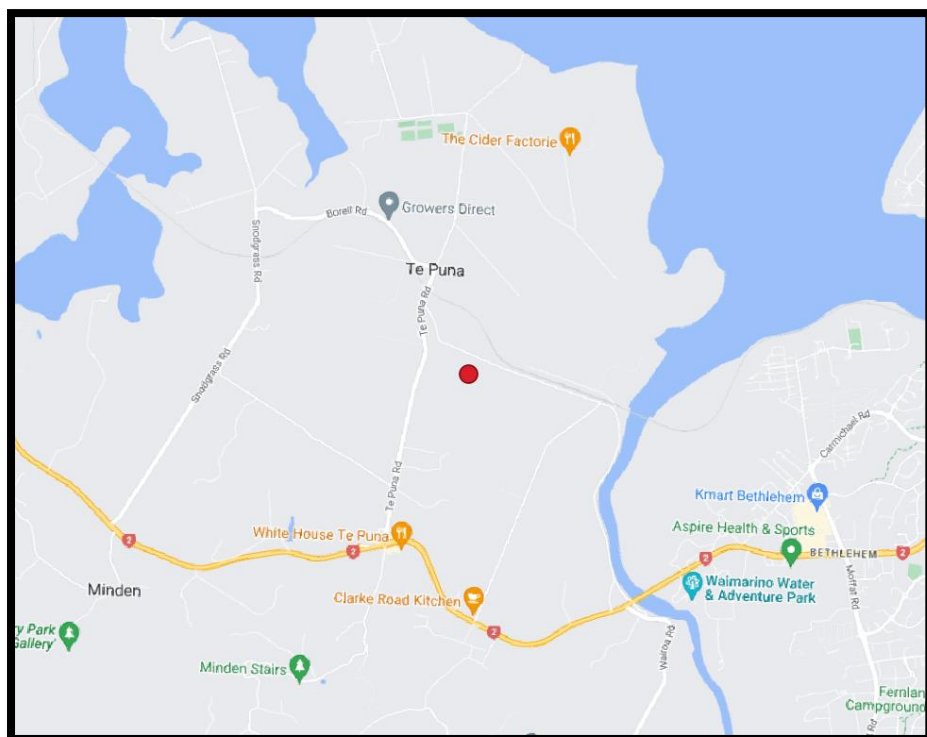


Figure 1. 297 Te Puna Station Rd property location

Context

National Policy Statement for Indigenous Biodiversity 2023

The National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) serves to underpin the topics for discussion within this report. The NPS...

“prioritises the mauri and intrinsic value of indigenous biodiversity and recognises people’s connections and relationships with indigenous biodiversity.” and...

“recognises that the health and wellbeing of people and communities are dependent on the health and wellbeing of indigenous biodiversity and that in return people have a responsibility to care for and nurture it. It acknowledges the web of interconnectedness between indigenous species, ecosystems, the wider environment, and the community, at both a physical and metaphysical level.” (NPS-IB, 2023)

National Policy Statement for Freshwater Management 2020

The National Policy Statement for Freshwater Management 2020 (NPS-FM) identifies the fundamental concept of ‘Te Mana o te Wai’.

“Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.” (NPS-FM, 2020)

Requirements include to manage freshwater in a way that ‘gives effect’ to Te Mana o te Wai:

- through involving tangata whenua
- working with tangata whenua and communities to set out long-term visions in the regional policy statement
- prioritising the health and wellbeing of water bodies, then the essential needs of people, followed by other uses.
- Improve degraded water bodies, and maintain or improve all others using bottom lines defined in the Freshwater NPS.

It flows that activities that create a net positive outcome for indigenous biodiversity and freshwater quality are to be considered as positive.

Site Overview

Historically, the area surrounding the subject property would have been swamp wetland (FENZ, 2024). Within human history the area would have been wetland dominated by obligate or facultative wetland species such as carex (*Carex virgata*), soft rush (*Juncus effusus*), harakeke (*Phormium tenax*), ti kouka (*Cordyline australis*), manuka (*Leptospermum scoparium*), swamp maire (*Syzygium maire*), and kahikatea (*Dacrycarpus dacrydioides*). Aquatic birds such as pied shag (*Phalacrocorax varius*), Australasian bittern (*Botaurus poiciloptilus*) and white-faced heron (*Egretta novaehollandiae*) could have reasonably been observed occupying the habitat. Eels (*Anguilla spp.*) and fish from the Galaxiidae family would likely have been present. Following European settlement, the wetland including the subject property, was cleared of its plants, had

its hydrology changed through channelisation and been cultivated in favour of pastoral grasses for the purpose of agriculture.

The subject property at 297 Te Puna Station Road (Part Lot 3 Deposited Plan 22158 and Section 2-3 Survey Office Plan 61751) has a total area of ca. 12.17 hectares. The elevation ranges between ca. 1m (amsl) and 4m (amsl). The property has flat relief split across a central upland terrace and a lower broad floodable area. The property has a foremost dedication to small holding agriculture (grazing cattle) with a centrally located industrial yard with industrial buildings and with multiple commercial/industrial vehicles observed at the time of the site visit. The property is flanked to the north by Te Puna Station Rd which has been constructed and sits 1-2 meters above the original topographical elevation. Beyond the road to the north are multiple industrial sites and a railway line. Southern and eastern bordering properties are of a similar agricultural land use to the subject property with the inclusion of commercial/industrial sheds and yards. The properties to the west are somewhat elevated again (10-15m in elevation) and are committed to horticultural operations in the form of avocado or kiwifruit orcharding.



Figure 2. Subject property with adjacent land-use types for the purpose of context



Photo A. Upland plateau of subject property



Photo B. Lower wetter areas intended for wetland restoration

Flora and fauna

From a NZ native biodiversity perspective relative to its original state, the ecological condition of the subject property could only be categorized as extremely distressed. The change in hydrology has lowered the water table disestablishing the wetland. The removal of shrubs and trees has destroyed the habitat for native fauna and the introduction of pest plants and animals has changed the composition of the habitat. The pest plants on or near the property identified at the time of the visit included arum lily (*Zantedeschia aethiopica*), bindweed (*Convolvulus sp.*), privet (*Ligustrum lucidum* and *Ligustrum sinense*), Taiwan cherry (*Prunus campanulate*), wattle (*Acacia spp.*), and blackberry (*Rubus fruticosus*). All of these pest plants have the potential to dominate the environment to the exclusion of native species. Avifauna present included pukeko (*Porphyrio porphyrio*), shining cuckoo (*Chrysococcyx lucidus*), and mallard ducks (*Anas platyrhynchos*).

Wetland

For the sake of clarity, the definition of the term 'wetland' is that outlined in the National Policy Statement for Freshwater Management 2020 (Ministry for the Environment and Ministry for Primary Industries, 2023), and remains consistent with the definition used in the Resource Management Act 1991. A wetland has...

"permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions"

Importantly, as noted in the NPS-FM (2020), as published in January 2024, a **natural inland wetland** means a wetland that is not:

- (a) in the coastal marine area; or
- (b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or
- (c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or
- (d) a geothermal wetland; or
- (e) a wetland that:
 - (i) is within an area of pasture used for grazing; and
 - (ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless
 - (iii) the wetland is a location of a habitat of a threatened species identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply (Ministry for the Environment, 2020).

This is consistent with subordinate jurisdictions, including Western Bay of Plenty, where the definition is...

“includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.

For the avoidance of doubt, the term ‘wetland’ applies to both water bodies and intermittently wet areas. The term does not apply to dry land that does not support a natural ecosystem of plants and animals that are adapted to wet conditions, and that occurs within an area commonly referred to in its entirety as a wetland. For the purposes of this District Plan, ‘wetland’ excludes wetted pasture and pasture with patches of rushes.” (Section 3. Western Bay of Plenty Operative District Plan, “Definitions”).

It is the author’s position that, based on the definitions outlined in the RMA, NES FW (2020) and the WBOPDC District Plan, the subject property does not meet the criteria of a wetland. This is consistent with the position of BOPRC’s Ms Heather MacKenzie (BOPRC, Support Environmental Scientist) as per the Section 42a response. The upland plateau where the container yard is proposed to be situated does not contain any areas of standing water and no obligate wetland plant or animal species were identified. Ostensibly, the upland plateau was effectively 100% pasture grasses. The lower areas contain flow paths, canals and pasture with rushes, such as carex. It is the author’s opinion, within the context of the wetland definitions, that the hydrology has been modified to such a degree that these areas are not ‘wetland’ as it *“excludes wetted pasture and pasture with patches of rushes”*. Moreover, this lower terrace is the area intended to be reinstated as a wetland which would be an ecologically positive outcome.

In brief, wetlands are valuable as they help stop flooding, purify water, remove sediment, stop erosion and provide habitat for many plants and animals that are not able to live in non-wetland environments (DOC, n.d.). These attributes speak directly to a number of the concerns raised around this development.

Ecological issues

Within the context of the requirements of this report, the author has established three separate issues that are contributing to the overall ecological impact of the development.

1. Reinstatement of the wetland

Ca. 90% of New Zealand’s valuable wetlands have been destroyed, commonly repurposed for the benefit of agriculture. Wetlands perform the role of filtering sediment and nutrients prior to the water entering into riverine or estuarine environments. They support a wide range of plants and animals to many of which require the existence of the wetland for their survival.

Ca. 1.8ha of the subject property is being reinstated as a wetland, including two purpose-built storm water treatment devices. The location of the wetland ties in with pre-existing overland flow paths and egresses to the south and then east to join Hakao Stream and Te Awanui. A raised boardwalk is included to provide access and considerable amounts of wetland planting has been proposed to hasten the reestablishment of habitat. The *Landscape Plan and Planting Palette Including Outline Wetland Establishment Plan* is thorough and well considered with appropriately selected plant species for the proposed land use. It will attract birdlife, fish life and provides a stable environment for the recruitment of plant life. With adequate on-going

maintenance this will become a valuable ecological asset to the area. It is the author's opinion that the reinstatement of the wetland is undoubtedly to the net ecological benefit of the natural environment.

An appropriate analogous project that provides an indication of what a successful wetland remediation project may look like is that of the Te Rere I Maniatutu project. The similarities between the projects are numerous and the potential for positive ecological outcomes equally plausible (NIWA, 2024).

Aside from this, it is the author's position that ongoing pest plant control will be required. Of the pest plant species noted above as present in the area, a number are well suited to growing in wetland environments and will readily colonise the area to the detriment of the overall ecological health of the wetland.

2. The Presence of a Container Yard

Ca. 4.8ha of the subject is to be dedicated to the use of a container yard. Within the scope of this report the question is positioned as to the ecological impact of the presence of a container yard. The yard is to be positioned on the upland plateaux. As discussed, the wetland definition is land that *"includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions"*. This area has been previously cleared of all indigenous vegetation and contoured to provide a site suitable for development. As discussed, it is the author's position that the location where the container yard is intended to be constructed does not meet the criteria of a wetland. The construction of the yard itself will do little to additionally negatively impact the ecological attributes of the site.

3. The container yard and wetland interface.

The interface between the yard and the intended wetland is materially important. The context of this is captured in the NPS-FM (2020) with the expressed management requirement to *"Improve degraded water bodies, and maintain or improve all others using bottom lines defined in the Freshwater NPS."* A review of the *Te Puna Industrial Limited s92 Response Report* generated by WSP indicates that rain/storm water is captured and treated prior to egressing the site. The stages of treatment appear well engineered and fit for purpose. It is the author's position that the quality of stormwater discharged from the site and entering the wetland is at a suitable level of quality.

Summary

Te Puna Industrial Ltd. is looking to develop the subject property to use as a shipping container yard while concurrently installing a stormwater management system and reinstating a wetland. The author has been commissioned to provide ecological advice with respect to the net ecological impact of the development. After a site visit and the review of *Te Puna Industrial Limited s92 Response Report* designed by WSP, the *Landscape Plan and Planting Palette Including Outline Wetland Establishment Plan* designed by Momentum Planning and Design and the *Updated WSP Site Plans* designed by WSP, it is the author's position that there will be a net

ecological benefit as a result of the proposed development and that the project is broadly supportable.

Reference

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