



Independent Commissioners appointed by Tasman District Council

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

of an application by CJ Industries Ltd for land use consent RM200488 for gravel extraction and associated site rehabilitation and amenity planting and for land use consent RM200489 to establish and use vehicle access on an unformed legal road and erect associated signage

**EVIDENCE OF TONY MICHAEL PAYNE ON BEHALF OF CJ INDUSTRIES LTD TERRESTRIAL ECOLOGY**

**1. INTRODUCTION**

- 1.1 My full name is Tony Michael Payne. I am employed as a Principal Ecologist by RMA Ecology Limited, a company specialising in ecological effects assessment and management.
- 1.2 The applicant has applied for resource consents authorising the extraction of gravel, stockpiling of topsoil, and reinstatement of quarried land, with associated amenity planting, signage, and access formation at 134 Peach Island Road, Motueka (**‘the site’**):
  - a. RM200488 land use consent for gravel extraction and associated site rehabilitation and amenity planting; and
  - b. RM200489 land use consent to establish and use vehicle access on an unformed legal road and erect associated signage.
- 1.3 My evidence addresses the terrestrial ecology assessment of the activities for which consent is sought.

## Qualifications and Experience

- 1.4 I hold the qualifications of Bachelor of Science (Biological Sciences; 2008), and Bachelor of Science Honours (Environmental Science; 2009) from the University of Canterbury, New Zealand.
- 1.5 I am a Certified Environmental Practitioner with the Environment Institute of Australia and New Zealand (EIANZ). This certification recognises the breadth and depth of my many years of experience in the practice of environmental management, including ecological assessment and effects management under New Zealand legislation.
- 1.6 I have 10 years' experience in environmental research and consulting, with a particular focus on terrestrial and freshwater ecology.
- 1.7 In my employment with RMA Ecology Ltd, I have undertaken ecological assessments throughout New Zealand, including in the Tasman region. I have been involved with both small and large land development projects providing ecological assessments, and have also worked on projects of national significance. I estimate that I have been involved on a professional basis providing advice for at least 50 land development projects. For most of those I was the principal investigator.
- 1.8 My project experience spans land development, infrastructure, power generation, resource extraction, water management, and roading sectors. My involvement in projects ranges from pre-purchase due diligence, preliminary/concept development design, precinct and private plan change assessments, resource consent applications, and construction supervision, implementation, monitoring, and reporting.
- 1.9 I undertook a terrestrial ecology survey of the site on 18 February 2022. This included identifying the location, type, and state of ecological values, including indigenous terrestrial values, wetlands and habitat for indigenous terrestrial fauna with regard to the ecological provisions of the Tasman Resource Management Plan (**TRMP**), and the recently released National Policy Statement on Freshwater Management 2020 (**NPS-FM**), and the National Environmental Standards for Freshwater 2020 (**NES-F**).

### **Purpose and Scope of Evidence**

- 1.10 The purpose of my evidence is to assess the existing terrestrial ecological values of the site, identify potential ecological effects associated with the proposed development and to provide recommendations to avoid, remedy or mitigate adverse effects.
- 1.11 Specifically, my evidence addresses the following matters:
- a. An overview of the ecological values of the site, including sites of ecological significance (Section 3).
  - b. Potential opportunities to address adverse effects on ecological values both on and off-site, should development proceed (Section 4).
  - c. A summary of the matters raised in submissions (Section 5).
  - d. A summary of the matters raised in the Council Officers' section 42A report (Section 6).
  - e. Concluding remarks (Section 7).
  - f. A summary of my evidence is set out in Section 2 below.
- 1.12 For the purposes of preparing this evidence, I have:
- a. Read the Application for Resource Consent prepared by Planscapes NZ Limited for CJ Industries Limited and associated technical reports as relevant to my area of expertise.
  - b. Reviewed the submissions lodged on the Application, as relevant to my area of expertise.
  - c. Reviewed the Council Officers' section 42A report dated 4 March 2022.

### **Code of Conduct**

- 1.13 Whilst not strictly necessary for this hearing, I do confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014 and I agree to comply with it. My evidence is within my area of

expertise; however, where I make statements on issues that are not in my area of expertise, I will state whose evidence I have relied upon. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in my evidence.

## **2. SUMMARY OF EVIDENCE**

- 2.1 My evidence provides a summary of the ecological values of the site and provides comment on the opportunities available to address adverse effects should development proceed. For the purposes of my assessment, the “site” includes the areas where gravel extraction and stockpiling are proposed, and the paper roads and marginal strip that will be used as haul roads by vehicles transiting to and from the gravel extraction areas to Motueka West Bank Valley Road.
- 2.2 An ecological effects assessment of the paper roads and marginal strip that will be used as haul roads by vehicles transiting to and from the gravel extraction areas to Motueka West Bank Valley Road is provided in Appendix A.
- 2.3 The Peach Island site is rural and has been farmed for many decades. The original native vegetation has been completely removed, and there are no watercourses or wetlands within the site.
- 2.4 I note that:
  - a. There is no vegetation within the site that constitutes “indigenous vegetation”.
  - b. No species of conservation significance were recorded within terrestrial environments.
  - c. No species of conservation significance have been recorded utilising the site, and the site does not provide core or important habitat for indigenous wildlife.
  - d. There are no wetlands on the site or within 10 m of the proposed works footprint.

- e. In my opinion, the existing quality of ecological values of the site is, on the whole, very poor in regard to values for land-based native vegetation and wildlife.
- 2.5 I consider that the proposed gravel extraction and associated site rehabilitation and amenity planting and the proposed vehicle movements within the site will not have adverse effects on terrestrial ecology that are more than negligible. Any effects can be managed through the existing frameworks of TRMP objectives, policies, and rules (for example in Chapters 5, 10 and 12).
- 2.6 Further, in my opinion, there are:
- a. No values that are so significant or so rare or threatened that they should be identified as Significant Natural Area (SNA) (or the like); or
  - b. in respect of which, avoidance should be considered to be the only option in relation to the proposed development of the site.
- 2.7 However, there are values at the site which could be enhanced to create and link ecological corridors and to protect local ecological functions.
- 2.8 I support aspects of the application relating to ecology, including:
- a. The proposed excavations being spatially separated from nearby rivers/streams by a minimum of 20 m.
  - b. Only clean and substantially inorganic material will be used for backfill.
  - c. A minimum of 1 m of unconsolidated (i.e., un-compacted) material will be placed above backfill material, including 300-400 mm of topsoil.
  - d. Topsoil will be stripped, stockpiled and re-spread in a manner that minimises compaction and soil loss.
  - e. Area A will be planted with approximately 1.35 ha of eco-sourced native trees, shrubs, and sedges, suited to the local alluvial terrace environment.
  - f. Amenity plantings will be established along the south and western boundaries of Lot 2 DP 432236.

- 2.9 Considering the absence of indigenous vegetation and wetlands within the site, the low value of habitat for indigenous wildlife, and the approximately 1.35 ha of rehabilitation planting using eco-sourced trees, shrubs, and sedges, it is my opinion that the overall terrestrial ecological effect of the proposed gravel extraction and associated site rehabilitation planting will result in an ecological net benefit over the long-term.
- 2.10 In my opinion, the key policy directions for the purposes of assessing the actual and potential effects of the proposal on terrestrial ecology and the proposal's consistency with the TRMP are:
- a. Protect and enhance indigenous biological diversity.
  - b. Safeguard the life supporting capacity of indigenous ecosystems.
  - c. Avoid, remedy, or mitigate the effects of land disturbance activities on indigenous biodiversity, the intrinsic values of ecosystems, and indigenous habitats.

I consider that the proposal is consistent with these requirements.

### **3. OVERVIEW OF ECOLOGICAL VALUES OF THE SITE**

#### **Location and ecological context**

- 3.1 The ca. 13.5 ha site comprises predominantly flat, agricultural pastureland on an alluvial terrace of the Motueka River (berm land), which flows approximately 170 m east of the site. The site is bounded by agricultural and horticultural land use, and a small tributary of the Motueka River flows from south to north along the western boundary of the site. The foothills of the Arthur Range extend to approximately 1 km west of the site.
- 3.2 The site is located within a typical Tasman rural environment. Aerial photos show that the site has been farmed for many decades, with stop banks constructed along the eastern, southern, and western portions of the site.
- 3.3 The site is located within the Motueka Ecological District which is characterised as containing alluvial flats and terraces which in pre-human times supported

lowland tōtara (*Podocarpus totara*), mataī (*Prumnopitys taxifolia*) and, more locally, kahikatea (*Dacrycarpus dacrydioides*) dominated forests, with black beech (*Fuscospora solandri*) common and some silver beech (*Lophozonia menziesii*) present. In present day, almost all native vegetation cover within the ecological district has been lost, with 0.32 percent indigenous forests remaining. Riparian forest is almost completely lost, with no sites remaining where a watercourse runs through mature forest. Forest of any kind beside a stream is extremely rare. Secondary kānuka forest or treeland is very rare, with lowland tōtara, kōwhai (*Sophora microphylla*) and manatu (*Plagianthus regius* subsp. *regius*) locally present. Forest and treeland dominated by original canopy species total 8.2 ha for the entire Motueka River (North *et al.*, 2014)<sup>1</sup>.

- 3.4 The site occurs on a Threatened Land Environment Classification (TEC) location where less than 10 percent indigenous cover remains within these land environments. This is the highest threatened environment category nationally (Walker 2015)<sup>2</sup>. In these environments, the loss of habitats for indigenous species has been greatest in the past. Little indigenous biodiversity remains in these environments.

### Vegetation

- 3.5 The current ecological state of the site is the result of extensive modification of the original, pre-human natural state. The site predominantly supports exotic pasture grass, consisting of perennial ryegrass (*Lolium perenne*), brown top (*Agrostis capillaris*), cocksfoot (*Dactylis glomerata*), narrow-leaved plantain (*Plantago lanceolata*) and white clover (*Trifolium repens*). There are occasional mature exotic trees on site, including macrocarpa (*Cupressus macrocarpa*), eucalyptus (*Eucalyptus* sp.), poplar (*Populus* sp.), pine (*Pinus* sp.), London plane (*Platanus × acerifolia*), black wattle (*Acacia mearnsii*), Portuguese laurel (*Prunus lusitanica*) and a few weeds such as broom (*Cytisus scoparius*), gorse (*Ulex europaeus*), hawthorn (*Crataegus monogyna*), Chinese windmill palm (*Trachycarpus fortune*), barberry (*Berberis glaucocarpa*), old man's beard (*Clematis vitalba*) and blackberry (*Rubus fruticosus* agg.)

<sup>1</sup> North M, Harding M and Smith R. 2014. Ecological Districts Report 01. Biodiversity values of significant native habitats. Motueka Ecological District Report. Tasman District Council.

<sup>2</sup> Walker, S., Cieraad, Barringer., 2015. The Threatened Environment Classification for New Zealand 2012: a guide for users. Landcare Research

- 3.6 A total of 44 plant species were recorded within the site, all of which are exotic, mostly consisting of common pasture grasses and herbs typical of a rural environment.
- 3.7 There are no areas on site or within 10 m of the proposed works footprint that meet the definition of a ‘natural inland wetland’ under the NPS-FM, or a ‘natural wetland’ under the TRMP. That is, there are no areas dominated by hydrophytic vegetation.
- 3.8 There are no SNAs identified within the site in the TRMP.

### **Wildlife**

- 3.9 Twelve (12) species of birds were recorded during the February 2022 site survey, including five (5) native species, one of which, the black shag (*Phalacrocorax carbo*), is listed as ‘At Risk’. The black shag was recorded flying over the Motueka River, approximately 170 m from the site.
- 3.10 The mature trees on site provide suitable roosting and nesting habitat for a range of small native passerines such as grey warbler (*Gerygone igata*) and fantail (*Rhipidura fuliginosa*). It is expected that a wider range of local native birds that occur in the surrounding rural area, which were not recorded during the site visit, would also frequent the site (e.g., morepork - *Ninox novaeseelandiae*).
- 3.11 Additional species of birds listed as either ‘Threatened’ or ‘At Risk’ that may utilise the site include the ‘At Risk’ New Zealand pipit (*Anthus novaeseelandiae*). The closest record of New Zealand pipit is 8 km west of the site within the Arthur Range. There is a small possibility that New Zealand pipit utilise the site on occasion, as a species that feeds in open pasture; however, the site does not provide suitable nesting habitat for New Zealand pipit, which require dense fernland in rough pasture clumps, and partial/full vegetation cover (Beauchamp 2013)<sup>3</sup>.
- 3.12 There are two ‘Threatened’ species of bird of high conservation value that have been recorded within the wider Motueka River catchment (Forest and Bird

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<sup>3</sup> Beauchamp, A.J. 2013 [updated 2017]. New Zealand pipit. In Miskelly, C.M. (ed.) New Zealand Birds Online. [www.nzbirdsonline.org.nz](http://www.nzbirdsonline.org.nz)



2016)<sup>4</sup>. These are black-fronted tern (*Chlidonias albostriatus*) and black-billed gull (*Larus bulleri*).

- 3.13 Black-fronted terns breed only on the braided riverbeds of the eastern and southern South Island, from Marlborough to Southland. They are found on or near braided channels of inland rivers and streams, often at high altitudes, and on nearby farmland, either under pasture or cultivation. Black-fronted tern usually feed solitarily over river channels, but can form flocks when feeding over pasture, in particular when following a plough (Bell 2013)<sup>5</sup>.
- 3.14 Black-billed gulls mostly breed on sparsely-vegetated gravels on inland riverbeds. Occasionally birds resort to nesting on adjacent farmland after major flood events, when riverbed habitat becomes unsuitable. During the breeding season, black-billed gulls feed primarily on invertebrates taken from rivers and adjacent pasture, and birds continue to use agricultural habitats during winter (McClellan & Habraken, 2013)<sup>6</sup>.
- 3.15 The site is not within the ‘important bird areas’ identified by Forest and Bird for these species. While these species can use agricultural land adjacent to braided rivers, such as the Motueka River, the grazed pasture grass within the site does not provide unique or core habitat for feeding for these species, but rather is typical of the wider agricultural dominated landscape within the Motueka River catchment.
- 3.16 When considering the scale of the site within the wider landscape, the degraded pasture environment within the site, and the preference of these species to utilise river braids and coastal areas for the majority of their ecology and behaviour, the likelihood of black-fronted tern or black-billed gull utilising the site, for feeding or even just to transit through, is highly unlikely. In addition, the site does not provide suitable nesting habitat for black-fronted tern or black-billed gull.

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<sup>4</sup> Forest & Bird (2016). New Zealand Seabirds: Sites on Land, Rivers, estuaries, coastal lagoons & harbours. The Royal Forest & Bird Protection Society of New Zealand, Wellington, New Zealand.

<sup>5</sup> Bell, M. 2013 [updated 2019]. Black-fronted tern. In Miskelly, C.M. (ed.) New Zealand Birds Online. [www.nzbirdsonline.org.nz](http://www.nzbirdsonline.org.nz)

<sup>6</sup> McClellan, R.K.; Habraken, A. 2013 [updated 2019]. Black-billed gull. In Miskelly, C.M. (ed.) New Zealand Birds Online. [www.nzbirdsonline.org.nz](http://www.nzbirdsonline.org.nz)

- 3.17 During the February 2022 site survey, no lizards or lizard signs (e.g., scat, slough) were observed. Lizards have not been recorded from the site, or from nearby habitats (within 5 km). The grazed pasture on-site does not provide the dense, complex habitat required for native skinks that could be present in the area, such as the ‘Not-Threatened’ Northern grass skink (*Oligosoma polychroma*). Habitat for native skinks is limited to a small area of farm debris on-site which was thoroughly searched during the site survey. In addition, there is no suitable habitat for native arboreal (tree dwelling) geckos such as forest gecko (*Mokopirirakau granulatus*) or ground-dwelling geckos such as Raukawa gecko (*Woodworthia maculatus*).
- 3.18 Long-tailed bats/ pekapeka (*Chalinolobus tuberculatus*), classified as ‘Threatened’, require large trees (including standing dead trees) with cavities (e.g., deep knot holes), epiphytes or loose bark for roosting; and typically use linear landscape features such as bush edges, gullies, water courses and roadways to transit between roosting and feeding sites. Long-tailed bats are not known to occur within the Motueka Ecological District, with the closest record approximately 20 km within the Kahurangi National Park. There is a single poplar tree adjacent to the stop bank on site that is of a stature (> 20 m high), and may have holes, required for a long-tailed bat maternal roost, and therefore could provide suitable habitat for long-tailed bats. This tree will be retained. Other trees on site do not provide suitable habitat for long-tailed bat as they are relatively small in stature and do not appear to have deep holes required for a long-tailed bat maternal roost.

### **Assessment methodology**

- 3.19 Ecological values of the site were assessed by the following methods:
- a. Desktop analysis of listed Significant Natural Area (SNA) layers in the TRMP. I understand that Tasman District Council has taken the decision to not begin work<sup>7</sup> on desktop assessments of potential Significant Natural Areas (SNA) as they await the new National Policy Statement for Indigenous Biodiversity.

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<sup>7</sup> Tasman District Council website. Communication dated 8 July 2021.

- b. Review of indigenous flora and fauna listed in national public databases (Bioweb Herpetofauna, NZ Plant Conservation Network, DOC bat records, LENZ, iNaturalist) to determine previous site records for rare, threatened or protected species.
- c. Site walkover survey to record birds (visual or by sound), lizards (opportunistic habitat searching), and plant communities (walkthrough identification of plant species) in February 2022. Terrestrial vegetation and habitats were assessed against the ecological significance criteria listed in the TRMP Schedule 10B and 10C.
- d. Native lizards were surveyed over 1 search hour, and involved general visual observations of potential lizard habitats, and inspecting beneath debris (e.g. farm debris, rocks) within the site; however, did not constitute a comprehensive survey using a range of methods (e.g. the use of artificial cover objects, pitfall traps etc.). The lizard survey method and effort expended are appropriate to determine the likelihood of lizards based on the scale and type of available habitat at this site.
- e. Birds were surveyed throughout the entire site, and a reach of Motueka River adjacent to the site during fine, calm weather conditions following the standard 5-minute bird count (5mbc) methodology (Dawson and Bull 1975) whereby an observer records the number and species of all birds seen and heard over a 5-minute period. 5mbcs were undertaken at three locations.
- f. Assessment of wetlands in accordance with the methodology prescribed in the National Policy Statement for Freshwater Management 2020 (NPS-FM). This included a site survey in February 2022 to identify areas that could support wetland communities ('Rapid Test').

#### **4. POTENTIAL ECOLOGICAL EFFECTS AS INDICATED BY THE APPLICATION**

- 4.1 I have assessed actual and potential terrestrial ecological effects in general accordance with the Environment Institute of Australia and New Zealand

(EIANZ) Ecological Impact Assessment guidelines (EIANZ 2018)<sup>8</sup>. This considers the ecological values of the site and assesses the level of effects the proposed development is likely to have on the ecological features and values.

- 4.2 In my opinion, there are no ecological values on the site that are so significant or so rare<sup>9</sup> or threatened that avoidance is likely to be the only option that could be considered in relation to the development of the site. However, there are values at the site that would be beneficial to enhance from an ecological perspective.
- 4.3 Rehabilitation needs to be actively managed to ensure the soil can be used for rehabilitation planting and other purposes. When quarrying operations end, sites are generally deprived of topsoil, vegetation is scarce, and sites can – without appropriate rehabilitation – become sterile and prone to erosion. Re-establishment of topsoil is therefore the most important pre-requisite for any post quarry land use.
- 4.4 A draft soil management plan has been developed for the site<sup>10</sup>. Fill is proposed to be placed up to 1 m of the final land surface. This is to ensure the final re-established soil profile comprises predominantly fine matrix soil materials. Topsoil is proposed for the upper 300-400mm of the final re-established soil profile. This is to ensure the final re-established soil profile has a topsoil that has organic matter, nutrients, and fine matrix soil materials similar to the original soil profile. Topsoil will include the topsoil removed from the extraction site as a priority, or where required, other clean topsoil sourced from offsite.
- 4.5 Based on Mr Hill's evidence, I understand that if the soils are re-established over the area by following the guidance provided in the draft soil management plan, then:

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<sup>8</sup> Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

<sup>9</sup> That is, the irreplaceability and vulnerability of the species, habitats and ecosystems in these places is not so great as to restrict options only to avoidance of adverse effects.

<sup>10</sup> Draft Soil Management Plan and assessment of soil related effects 134 Peach Island Road, Motueka

- a. Plant roots will be able to extend themselves through the total volume of the restored materials to seek nutrients and moisture.
  - b. The amount of plant available moisture that can be held within the soil profile should at least approximate, or even increase, compared with the original soils on the site.
- 4.6 In my opinion, the proposed Application remedies potential ecological effects to the soil, where practicable, by rehabilitating the site with 1 m of unconsolidated material and 300-400mm of topsoil following excavation activities.
- 4.7 The site does not currently provide suitable habitat for native lizards, and it is highly unlikely that native lizards are present on site. I have assessed the actual and potential adverse ecological effects to lizards associated with the proposed Application as nil.
- 4.8 Due to a lack of records in the area, and small scale of trees to be removed, it is highly unlikely that the few smaller trees and other vegetation to be removed within the proposed works footprint support a long-tailed bat roost. I have assessed the actual and potential adverse ecological effects to long-tailed bats associated with the proposed Application as negligible.
- 4.9 Habitat for indigenous birds within the site is limited to poor feeding grounds for common indigenous birds (e.g. pūkeko and spur-winged plover). Nesting habitat is limited to common indigenous passerines (e.g. fantail) within exotic trees. These habitats within the site will be temporarily affected during works until the site is rehabilitated. There is sufficient replacement feeding and nesting habitat for the common indigenous bird species that utilise the site within the wider rural environment.
- 4.10 Noise and dust associated with resource extraction can have potential adverse effects to wildlife. However, I recognise the potential adverse effects of noise, dust, and disturbance generally on wildlife are difficult to assess. Even when there are obvious noise effects on wildlife, such as changes in behaviour, it is not possible to state that the observed responses are detrimental to the

population, without being able to link changes to long-term changes in breeding success, mortality, population size or fitness

- 4.11 The closest ecologically sensitive environment to potential adverse effects associated with noise and dust is the Motueka River and vegetation within the riparian margins. The Motueka River is considered an important ecological feature within the landscape for indigenous wildlife, in particular indigenous birds, which use the river as an 'ecological corridor' for feeding, transit and nesting. The Motueka River is approximately 117 m away from the closest proposed gravel extraction area (Stage 3). An approximately 2-3 m high stop bank bisects the proposed gravel extraction area within Stage 2 and Stage 3 and the Motueka River, and the land use between the site and Motueka River is agriculture.
- 4.12 I understand that no more than 1,600 m<sup>2</sup> of excavation will be exposed at a given time (20m x 80 m), and backfilling will be undertaken at every possible opportunity even when no new excavation is occurring. In addition, a Dust Management Plan will apply and includes using sealed accessways, sprinklers on stockpiles, and roadways (where needed), stopping work in winds over 27 km/h, covering or wetting down trailers during transport, regular road sweeping and restricting vehicle speeds to 15 k/h on site.
- 4.13 Section 9.6 of the Assessment of Air Quality Effects (PDP 2022) assessed a 'Negligible Effect' for the proposed operation of Peach Island Quarry on the surrounding sensitive receptors. I understand the extent of potential dust effects on the surrounding flora and fauna values, including those within the Motueka River corridor, would be below measurable background detection levels. This is largely due to the relatively small extent of the active earthworks area (max. 30 m x 100 m), the predominant wind directions (infrequent westerlies), low frequency of high intensity winds, natural sources of dust from the Motueka River; and the proposed meteorological triggers in place to control and minimise dust effects (e.g. wetting surfaces at >5 m/s and stopping works in wind >7 m/s).
- 4.14 Therefore, I consider the actual and potential adverse ecological effects associated with dust effects (e.g. disturbance to roosting birds, cumulative

effects on vegetation, discrete events of large plumes of fine dust) on the surrounding flora and fauna values, including those within the Motueka River corridor, will be negligible.

- 4.15 With regards to noise effects, I assume that the sensitivity of fauna to construction noise is low based on previous exposure to noise disturbance from the wider rural environment. I understand that the permitted rural noise disturbance context in this location includes:
- a. mobile horticultural and agricultural equipment (tractors etc.);
  - b. forest and tree harvesting activities; and
  - c. bird scarers and hail cannons.
- 4.16 Section 2.1 of Mr Hegley's Acoustic Analysis states that the operational noise from the proposal will be below the levels that the TRMP considers appropriate for a rural environment. A comparison to the ambient sound shows that noise from the proposal will be apparent, but at levels that are comparable to the existing sound environment.
- 4.17 Therefore, I consider the actual and potential adverse ecological effects associated with noise effects (e.g. disturbance to nesting/roosting birds) on the surrounding fauna values, including those within the Motueka River corridor, will be negligible.
- 4.18 Overall, I have assessed the potential adverse ecological effects to flora and fauna associated with an increase in noise, dust and general disturbance from the proposed Application as low.
- 4.19 For this site, a change of land use offers the opportunity to undertake ecological enhancement of a highly modified and degraded ecosystem that may otherwise not be undertaken should pastoral use continue, including planting of eco-sourced native trees and shrubs suited to alluvial terraces within the Stage 1 area. Doing so will create approximately 1.35 ha of native forest. To ensure plantings establish successfully, the areas should have ongoing maintenance and environmental weed management and pest animal control until canopy closure is achieved, or a minimum of 5 years, whichever comes first. Revegetation

planting should be undertaken in general accordance with the species listed in the Lower Moutere Stony Plains Ecosystems native plant restoration list (Courtney 2008)<sup>11</sup>, and include native species eco-sourced from the Motueka Ecological District. A concept revegetation plan and recommended species list is provided by Canopy Ltd. Overall, I consider this to constitute a positive ecological effect.

#### **Matters raised in submissions**

- 4.20 I have been provided with 146 submissions, 28 of which relate to terrestrial ecology including general environmental concerns. Table 4-1 summarises the terrestrial ecology concerns raised in submissions and provides my response to these submissions.

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<sup>11</sup> Prepared by Shannel Courtney for Tasman District Council, updated July 2008.



| <b>SUBMITTER NAME (S)</b>   | <b>CONCERNS</b>   | <b>RESPONSE</b>   |
|---|---|---|
| <p>Jane Hobday, Graham John Peacock, France Theresa Harris, Helen J Webb, Wakatu Incorporated, Sebastien Den Doncker, Alison Kay, Fay Linda Stoker, Peter William Hartley, Jeffery Arnold Foote, Hannah Mae, Charles Martin, Harald Eduard Laarakker, Pete Taia, Te Runanga o Ngati Rarua</p> | <p>General environmental degradation, including effects to topsoil and soil productivity, conservation of the natural environment, environmental protection, general ecological damage.</p> | <p>The existing state of the environment in the proposed works footprint is highly modified and degraded from its pre-human state.</p> <p>Fill is proposed to be placed up to 1 m of the final land surface and topsoil is proposed for the upper 300-400mm of the final re-established soil profile. This is to ensure the final re-established soil profile has a topsoil that has organic matter, nutrients, and fine matrix soil materials similar to the original soil profile, and an adequate depth of fine-matrix material to enable the establishment of native forest trees.</p> <p>The proposal includes approximately 1.35 ha of rehabilitation planting using eco-sourced trees and shrubs and sedges suited to alluvial terraces.</p> |

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|--|---|---|
|  |   | This will result in a net-benefit to the environment over the long-term.  |
| Alison Kay, Margaret Ann Bushell, Melissa Dunnick, David and Susan Kellogg, Paul Dixon-Didier, Adrienne Croft, Chris Hager, Ronald Jeffery Frater, Helen Pauline Webster, Amy Massey, Diane Joy Harris | Effects on wildlife including deterring existing wildlife, decreasing the chances of new wildlife in the environment and bird nesting | <p>Habitat for indigenous wildlife within the site is limited to poor feeding grounds for common indigenous birds (e.g. pūkeko and spur-winged plover). Nesting habitat is limited to common indigenous passerines (e.g. fantail) within exotic trees. These habitats within the site will be temporarily affected during work until the site has been rehabilitated; however, there is sufficient replacement habitat for these species within the wider rural environment.</p> <p>Potential adverse effects associated with dust, noise and general disturbance is expected to be low based on the magnitude of dust and noise disturbance, and the approximately 117 m spatial buffer between the site and the Motueka</p> |

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|-------------------------|--|---|
|                         |  | <p>River, which is the closest sensitive ecological habitat.</p> <p>The proposal includes approximately 1.35 ha of rehabilitation planting using eco-sourced trees and shrubs and sedges suited to alluvial terraces, which will have a benefit to wildlife, in particular indigenous forest birds, creating a 'steppingstone' within the wider landscape.</p>                        |
| David And Susan Kellogg | Effects on flora                                 | <p>The existing environment consists of exotic pasture grass and exotic trees.</p> <p>There will be negligible adverse effects on flora.</p> <p>The proposal includes approximately 1.35 ha of rehabilitation planting using eco-sourced trees and shrubs and sedges suited to alluvial terraces.</p> <p>This will result in a net-benefit to the environment over the long-term.</p> |
| Jacob Francis Lucas     | Habitat creation into a wetland post-development | <p>The pre-human state of the site is an alluvial terrace forest. It is more ecologically appropriate to</p>  |

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|------------|---|--|
|            |   | <p>rehabilitate the site back towards an environment consistent with the landform and pre-human state – which is forest rather than wetland. While wetlands are a rare ecosystem, forest ecosystem types are also extremely rare in this ecological district.</p> <p>This will result in a net-benefit to the environment over the long-term.</p>  |
| Peter Taia | Planting will not be able to establish due to flooding. | <p>There are numerous plantings along Peach Island Road, Motueka River West Bank Road and Motueka Valley Highway associated with horticulture, agriculture, and dwelling amenity plantings in areas potentially exposed to large periodic floods, similar to those on site proposed for planting.</p> <p>Mr Taia’s assertion that plants will not establish in this area due to flooding is unfounded.</p> |

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|  |  | In the event a flood results in mortalities of plants within the first 5 years of planting (after which plants are expected to be well established), these plants will be replaced as part of maintenance. |
|--|--|--|

Table 4-1. Summary of terrestrial ecology concerns in submissions and responses.

### **Matters raised in s 42A report**

4.21 There are no relevant matters raised in the Tasman District Council Section 42A report directly relating to terrestrial ecology effects.

### **5. CONCLUSION**

5.1 The 13.5 ha site consists of a highly modified and degraded berm land of the Motueka River, dominated by exotic pasture grass with few exotic trees.

5.2 Habitat for terrestrial fauna within the site is poor, and the site offers no unique or core habitat for any 'At Risk' or 'Threatened' species.

5.3 There are no natural wetlands within the site, or within 10 m of the site.

5.4 The results of the analysis of values, potential effects, and ecological significance of potential effects under the proposed Application demonstrates that actual and potential adverse effects on ecological values will be very low.

5.5 I am confident that any unavoidable adverse effects on terrestrial ecology values are small in scale and are not on species or ecosystems of conservation significance. The proposal to plant 1.35 ha of indigenous vegetation will greatly outweigh any terrestrial ecological effects associated with the development such

that the overall net terrestrial ecological effect of the proposed Application will be positive in the long-term.

Tony Payne

15 July 2022

# Memo

|                 |  |                |                    |
|-----------------|--|----------------|--------------------|
| <b>To:</b>      | <b>Hayden Taylor; Planscapes Ltd</b>                                 | <b>Job No:</b> | <b>2207</b>        |
| <b>From:</b>    | <b>Tony Payne; RMA Ecology Ltd</b>                                   | <b>Date:</b>   | <b>20 May 2022</b> |
| <b>cc:</b>      |  |                |                    |
| <b>Subject:</b> | <b>Peach Island, Motueka: Terrestrial ecology effects assessment</b> |                |                    |

Dear Hayden,

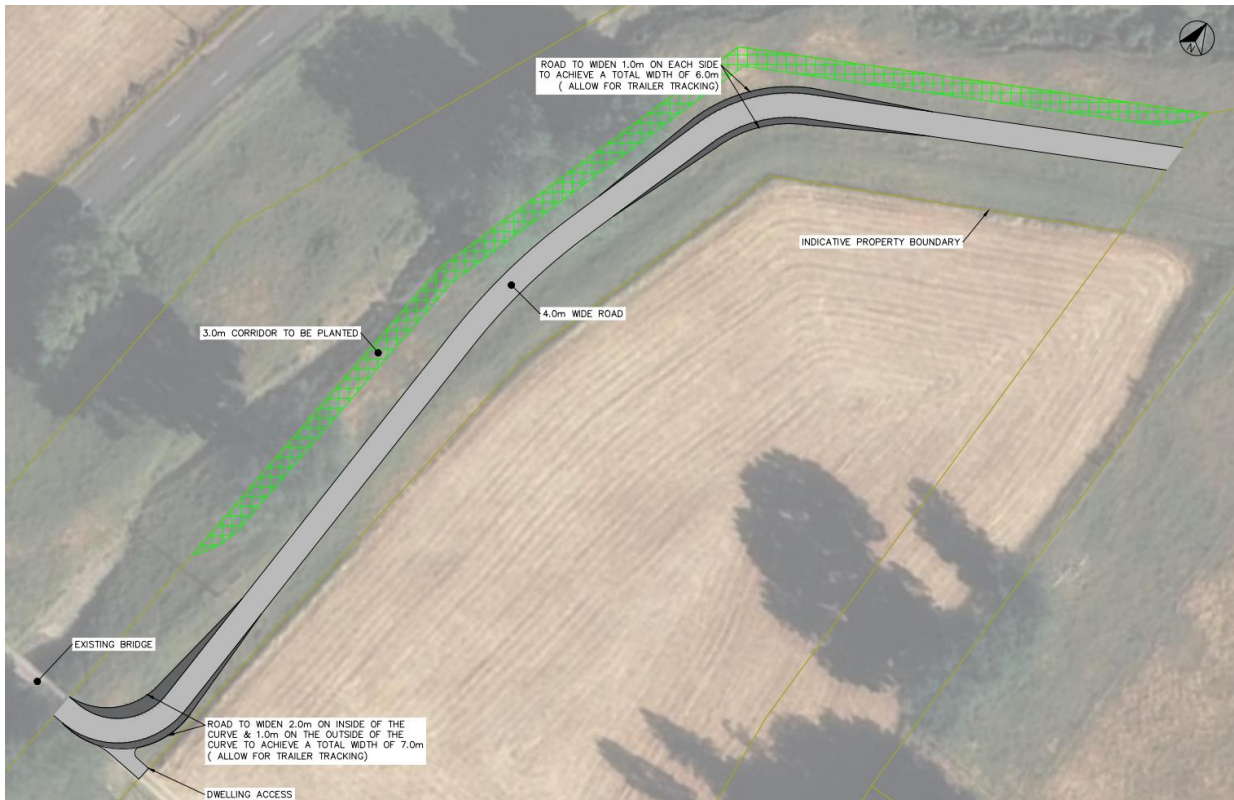
This report details the results of an assessment of the terrestrial ecological values at a portion of the property at 134 Peach Island Road, Motueka ('the site'). We understand that CJ Industries Ltd is seeking to construct a temporary access track and plant a 3 m wide corridor through land owned by the Department of Conservation (DOC), and therefore requires a concession from the DOC (**Figure 1**).

This memorandum has been prepared with regard to the ecological provisions of the Tasman Resource Management Plan ('TRMP'), and the recently released National Policy Statement on Freshwater Management 2020 ('NPS-FM'), and the National Environmental Standards for Freshwater 2020 ('NES-F').

The purpose of this report is to describe the existing terrestrial ecological values of the site, identify potential ecological effects associated with the proposed development and to provide recommendations to avoid, remedy or mitigate adverse effects.

We understand that CJ Industries Ltd intends to use this memorandum to inform Tasman District Council (TDC) of the status of terrestrial ecological values and potential and actual adverse effects associated with the development proposal at the site<sup>1</sup>.

<sup>1</sup> This report has been prepared in accordance with our contract dated 17 May 2022 with CJ Industries Ltd.



**Figure 1.** The proposed accessway location and associated corridor planting. Courtesy of Planscapes.



**Plate 1.** The accessway footprint. Photograph taken facing north from the existing bridge.



## 1 Assessment method

A site survey was undertaken by Principal Ecologist Tony Payne on 18 February 2022. The site survey included identifying the location, type and state of terrestrial ecological values, including indigenous terrestrial values, wetlands and habitat for indigenous terrestrial fauna.

During the site survey, native and exotic plant species and communities were recorded, and a qualitative assessment of vegetation habitats for herpetofauna (frogs and lizards), birds and bats was conducted. The assessment included, but was not limited to, areas of vegetation on site most likely to be impacted or removed by the access road, focusing on the botanical and ecological value of identified plant communities.

Bird populations on site were surveyed through incidental observations during the site survey. Lizard populations were surveyed by way of targeted habitat searches during the site survey. Habitat searches for ground dwelling lizards involved inspecting areas of the site likely to be utilised by native lizards as shelter. Examples of lizard retreats include beneath dense vegetation, logs and rock.

## 2 Results summary

The site is located within the Motueka Ecological District. The site is rural and has been farmed for many decades comprising predominantly flat, agricultural pasture land on an alluvial terrace of the Motueka River (berm land).

The site is bounded by agricultural and horticultural land use, and a small tributary of the Motueka River flows from south to north along the western boundary of the site.

The current ecological state of the site is the result of extensive modification of the original, pre-human natural state. The site predominantly supports exotic pasture grass, consisting of perennial ryegrass (*Lolium perenne*), brown top (*Agrostis capillaris*), cocksfoot (*Dactylis glomerata*), narrow-leaved plantain (*Plantago lanceolata*) and white clover (*Trifolium repens*). There are occasional mature exotic trees in the surrounding area on site, including macrocarpa (*Cupressus macrocarpa*), eucalyptus (*Eucalyptus* sp.), poplar (*Populus* sp.), pine (*Pinus* sp.), London plane (*Platanus x acerifolia*), black wattle (*Acacia mearnsii*), Portugese laurel (*Prunus lusitanica*) and a few weeds such as broom (*Cytisus scoparius*), gorse (*Ulex europaeus*), hawthorn (*Crataegus monogyna*), Chinese windmill palm (*Trachycarpus fortune*), barberry (*Berberis glaucocarpa*), old man's beard (*Clematis vitalba*) and blackberry (*Rubus fruticosus* agg.)

A total of 44 plant species were recorded within the site, all of which are exotic, mostly consisting of common pasture grasses and herbs typical of a rural environment.

There are no areas on site or within 10 m of the proposed works footprint that meet the definition of a 'natural inland wetland' under the NPS-FM, or a 'natural wetland' under the TRMP. That is, there are no areas dominated by hydrophytic vegetation.

There are no SNAs identified within the site in the TRMP.

No lizards or lizard signs (e.g. scat, slough) were observed. Lizards have not been recorded from the site, or from nearby habitats (within 5 km). The grazed pasture on site does not provide the dense, complex habitat required for native skinks that could be present in the area, such as the 'Not - Threatened' Northern grass skink (*Oligosoma polychroma*). Habitat for native skinks is limited to a small areas of farm debris on site which was thoroughly searched during the site survey. In addition, there is no suitable habitat for native arboreal (tree dwelling) geckos such as forest gecko (*Mokopirirakau granulatus*) or ground-dwelling geckos such as Raukawa gecko (*Woodworthia maculatus*).

Twelve (12) species of birds were recorded during the February 2022 site survey, including five (5) native species, one of which, none of which are listed as 'At Risk' or 'Threatened'.

A summary of results are as follows:

1. There is no vegetation within the site that constitutes “indigenous vegetation”.
2. No species of conservation significance were recorded within terrestrial environments.
3. No species of conservation significance have been recorded utilizing the site, and the site does not provide core or important habitat for indigenous wildlife.
4. There are no wetlands on the site or within 10 m of the proposed works footprint.
5. The existing state of the terrestrial ecological values at the site is, on the whole, very poor quality in regard to values for land-based native vegetation and wildlife.


### 3 Ecological effects assessment

The proposed accessway and associated site rehabilitation and amenity planting will not have adverse effects on terrestrial ecology that could not be managed through the existing frameworks of TRMP objectives, policies and rules in, for example, Chapters 5, 10 and 12.

Considering the absence of indigenous vegetation and wetlands within the site, the low value of habitat for indigenous wildlife, and the proposed screening planting we have assessed the overall terrestrial ecological effect as a net-benefit over the long-term.

If you have any further questions, please contact Tony Payne at [tony.payne@rmaecology.co.nz](mailto:tony.payne@rmaecology.co.nz).

Yours sincerely,



Tony Payne  
Principal Ecologist<sup>2</sup>  
RMA Ecology Ltd

20-May-22

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<sup>2</sup> This report has been prepared for the benefit of our Client with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by RMA Ecology Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.