297 Te Puna Station Road

Te Puna Business Park

Landscape and Visual Assessment

23 January 2023

MOMENTUM
PLANNING AND DESIGN

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Document Quality Assurance

Status: Version 1

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Prepared by:	Tom Watts Landscape Architect/ Urban Designer MPAD	
Reviewed by:	Vincent Murphy Senior Planner MPAD	

1.0 Applicant and Property Details

The details of the applicant and the site are as follows:

To:	Western Bay of Plenty District Council
Applicant's Name:	Te Puna Industrial Ltd
Site Address:	297 Te Puna Station Road, Te Puna, Tauranga 3176
Legal Description:	Part Lot 3 DP 22158
Site Area:	12.16ha
District Plan Zoning:	Industrial
Designations / Limitations:	Floodable Area Appendix 7 – Te Puna Business Park Structure Plan Tauranga Harbour Coastal Inundation Area Subject to Tauranga Harbour Coastal Inundation (WBOP GIS information)

2.0 Introduction

Momentum Planning and Design has been engaged by Te Puna Industrial Limited, 'the applicant', to assess the potential landscape and visual effects introduced by the development of 297 Te Puna Station Road for industrial purposes pursuant to the underlying Industrial zoning. This report will provide an overview of the existing environment, a description of the landscape change proposed, and identify how such a change will affect landscape and visual amenity.

2.1 Landscape Assessor, Qualifications/ Experience

I (Tom Watts) the assessor and author of this Landscape and Visual Assessment Report, have a degree in Landscape Architecture from Victoria University of Wellington (2009), and been working in the field of landscape architecture, urban design and planning for the past 10 years.

I have experience in landscape and visual impact assessments within rural and urban contexts, which have been prepared to support a number of land use and subdivision resource consent applications.

I have attended workshops on the recently published NZILA guidance related to landscape assessment (Te Tangi a te Manu), and will be drawing on this within the assessment.

3.0 Methodology

Landscape Dimensions

This assessment has been undertaken with consideration of the recently published Aotearoa New Zealand Landscape Assessment Guidelines (Te Tangi a te Manu).

As defined in the guidelines, landscapes have physical, associative and perceptual dimensions. Summarised below;

- ***Physical:*** *Natural and human features, and the action (and interaction) of natural and human processes over time.*
- ***Associative:*** *Intangible elements, such as history, customs and identity. In the New Zealand context, this is strongly linked with the Te Ao Maori perspective.*
- ***Perceptual:*** *Sensory perception, most commonly applied to sight within landscape assessment. This also expands to all senses.*

These dimensions are interconnected, and are illustrated diagrammatically in the extracted figure from Te Tangi a te Manu. See **Figure 1** below:

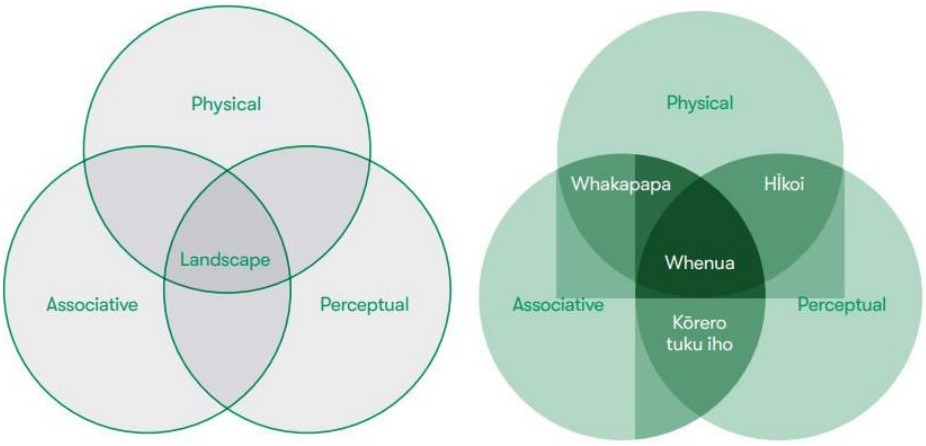


Figure 4. Landscape conceptualised as the intersection of three overlapping dimensions (left). Whenua conceptualised as the intersection of three overlapping dimensions and an overlay that integrates mātauranga (right).[55]

***Figure 1**: Te Tangi a te Manu (Aotearoa/ NZ Landscape Assessment Guidelines).*

Assessment Methodology

The landscape assessment includes the evaluation of the existing landscape values, including identification of the physical, associative, and perceptual attributes on which these values depend and apply to the site-specific context.

Relevant stake holders/ custodians of the land need to be recognised and understood, including tangata whenua (cultural values), and any viewing audiences who appreciate amenity values associated with the landscape (i.e rural aspect and rural amenity values).

The statutory context informs the permitted baseline and illustrates what can be established on site 'as of right' – this could relate to bulk and location of buildings, site coverage, or a particular land use. This establishes a permitted baseline which the proposal can be assessed against, to determine both the level of effects and what degree of landscape mitigation is required to manage this. This relationship is illustrated diagrammatically within **Figure 2** below, extracted from Te Tangi a te Manu.

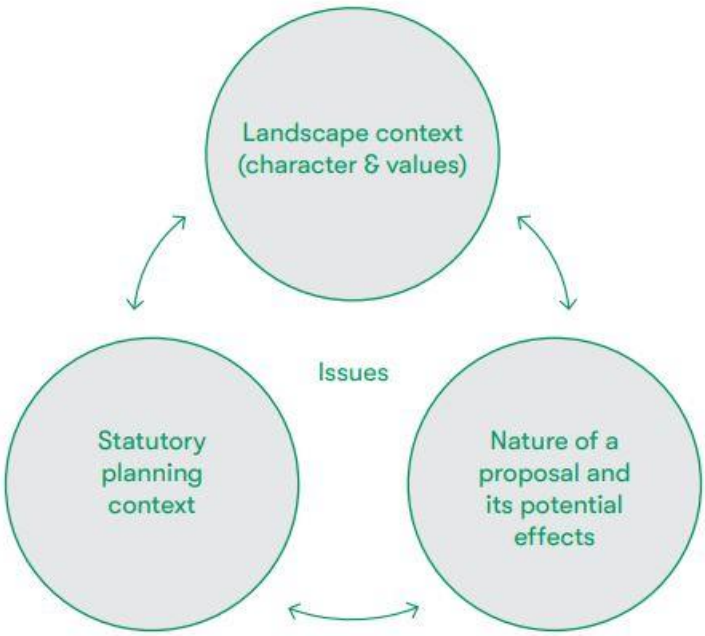


***Figure 2**: Te Tangi a te Manu (Aotearoa/ NZ Landscape Assessment Guidelines). This figure identifies issues by triangulating the landscape context, the statutory planning provisions, and the potential effects of a proposal.*

Associative/ Cultural

Associative and cultural effects are much more nuanced and often require input from other experts, and consultation with relevant custodians of the land (hapū and iwi consultation, to appropriately appreciate the cultural values ascribed).

It is not the landscape assessor's role to directly evaluate cultural effects, but at minimum they should acknowledge their connection to the landscape, recognise where consultation is required, and highlight where opportunities exist to integrate these values into the design.

Quantifying Effects

Historically, the NZILA guidelines have used a 7-point rating scale to assess landscape and visual effects – described in Table 1 below. Te Tangi a te Manu primarily places the onus on the assessor to prepare a tailored methodology for the site appropriate to the nature of the proposal and location. This is summarised in the extract below.

> *Landscapes do not lend themselves to rigid and prescriptive methods of assessment. Assessing landscapes requires integration of different types of objective and subjective information relating to both the land and people. Landscapes also have different contexts, are valued for a wide range of different reasons.*

In the context of the revised guidelines, much emphasis is given to the site-specific context, existing landscape values, cultural values and statutory context. For 297 Te Puna Station Road, the sought resource consents will facilitate yard based industrial activities to be established on-site along with accompanying earthworks, site-wide landscaping and water management. The entire site is proposed to be developed to accommodate lease areas for future commercial tenants. The site is currently zoned Industrial (with the exception of the portion of old paper road along the southern

boundary zoned Rural which is not proposed to be developed for industrial purposes – only associated stormwater management) and therefore the proposed industrial activities are anticipated in-principle. The landscape and visual effects of this development, with due regard to the permitted baseline, is assessed and considered in relation to the surrounding site-specific context of industrial and rural land use, and with respect to view shafts within the visual catchment of the Hakao Stream valley floor within which the subject site sits.

This assessment has been completed to ensure the change in landscape values are managed appropriately, and rural amenity values are maintained in the surrounding catchment.

The NZILA 7-point rating scale system below is considered a complementary assessment method by the Te Tangi a Te Manu guidelines and is appropriate to utilise in this landscape and visual assessment, being helpful for decision makers to quantify effects. This rating scale is detailed in **Table 1** below.

***Table 1** – 7-point rating scale with associated definitions.*

Rating	Description
Extreme	*Total loss of the existing character, distinctive features or quality of the landscape resulting in a complete change to the landscape outlook*
Very High	*Major change to the existing character, distinctive features or quality of the landscape or a significant reduction in the perceived amenity of the outlook.*
High	*Noticeable change to the existing character or distinctive features of the landscape or reduction in the perceived amenity or the addition of the new but uncharacteristic features and elements.*
Moderate	*Partial change to the existing character or distinctive features of the landscape and a small reduction in the perceived amenity.*
Low	*A slight loss to the existing character, features or landscape quality*
Very Low	*The proposed development barely discernible with little change to the existing character, features or landscape quality*
Negligible	*The proposed development is barely discernible or there are no changes to the existing character, features or landscape quality.*

Prior to conducting this assessment, a desktop study was completed which included a review of the relevant information relating to the landscape and visual aspects of the proposal. This information included:

- Western Bay of Plenty District Plan, including relevant planning maps and the rural objectives and policies.
- Te Puna Business Park Structure Plan, Landscape Requirements.
- Bay of Plenty Natural Resources Plan, including relevant maps.
- Boffa Miskell, 'Western Bay of Plenty Landscape Review' 2008.
- Aerial photography.
- Ground contours.

To understand the existing environment, a site visit took place on Thursday 8th September 2022 and focused on the potential physical impact the proposal would have on the surrounding context, what changes there would be to the landscape character of the site and surrounding area, and the identification of viewing audiences to quantify the change in landscape value that they will

experience. The camera used in the photographic assessment is a Cannon EOSRP (24-105 lens). Drone phone photography, DJI Mini.

Pre-Application Engagement

It is also worth noting that Council Landscape Architect peer reviewer, Dave Mansergh has been consulted regarding the landscape and visual assessment and methodology proposed including regarding viewpoint analysis.

4.0 Existing Environment and Landscape Values

4.1 Site Location and Context

The total site area owned by Te Puna Industrial at 297 Te Puna Station Road is 12.16ha. A total of 11.96ha of the site is proposed to be utilised for industrial purposes, with associated landscape mitigation measures in accordance with the Te Puna Business Park Structure Plan. The site is of an irregular shape and is located to the south of Te Puna Station Road. The site has approximately 445m of frontage to the Te Puna Station Road, and is of a size common to industrial/depot and farming lots north and south of Te Puna Station Road and Teihana Road. The site is accessed from Te Puna Station Road via an established vehicle crossing.

The site is within the territorial authority of WBOPDC, the regional authority of BOPRC, and within the rohe of the hapū Pirirakau and Ngāti Taka, being constituent hapū of the iwi Ngāti Ranginui.

The site is largely comprised of low lying pasture paddocks/ degraded farmland located at RL 1.4-3m elevation (Moturiki Datum). The elevated south-west corner of the site rises in elevation to the location of a three-bay implement shed and surrounding yard spaces (ranging from RL 3.67-4.66m), and a dwelling (RL 12-14m) surrounded by open space and overall is shrouded in trees. The dwelling and surrounding landscaping reflects the semi-rural existing character of the wider area. The site history, topography and natural features are expanded on further within the following sections.

The subject site and notable features are detailed within **Figure 3** below and in the drawings attached at **Appendix 3**.

Figure 3: Subject site and existing features. The application site is bounded red. The existing dwelling is circled dashed orange and shed and associated yard spaces bounded in dashed yellow. Access is via a driveway in from the southern side of Te Puna Station Road, with secondary access routes across the site stemming from this driveway.

4.2 Site History and Heritage Features

A review of aerial photography, and property file information obtained from both WBOPDC and BOPRC indicates that the site has either been bush-covered or used for grazing/pastoral purposes and some horticultural/orchard activities from the 1970's through to the 1990's, at which point it appears that development of the dwelling and rural contractor uses that exist today occurred.

Relevant consent history pertaining to the historical development and use of the site which has lead to its current landscape composition includes:

- Resource consent for groundwater take for irrigation at a rate of up to 200m^3/day was granted in 1977 (BOPRC reference 20311);
- Horticultural/Orchard activities from 1960's/1970's to early 90's
- Building consent for the existing three-bay implement shed was granted in the late 1990's (WBOPDC reference BC 57883);
- Building consent for the existing dwelling at the site was granted in February 2000 (WBOPDC refence BC 62934). Specified within this building consent was an exemption to the relevant District Plan yards rules at the time, as the dwelling is site 5m from a property boundary;
- Resource consent to establish a rural contractors depot utilising the three-bay shed and surrounding areas was granted in February 2000 (WBOPDC reference RC 401306L) (no longer operative);

- Resource consent 69251 was granted by BOPRC in March 2005 to carry out large-scale earthworks (depositing of cleanfill only) and discharge sediment-laden water to land where it may enter a drain to the Wairoa River. This consent was given effect to, as observed by a discernible rise in paddock level to the front paddocks of the site (as well as signage at the front of the site as required by conditions of the consent). This consent was surrendered in December 2013, preceding a stipulated expiry date of June 2014.
- Environment Court decision RMA 608/03 approves Te Puna Business Park Structure Plan provisions within the WBOPDC District Plan (resolved June 2005);

4.3 Topography, Watercourses, Natural and Ecological Features

The topography of the site is mildly undulating or close to flat across the majority of the site (except for south-western corner), with a gradual reduction in elevation from (generally) RL 3m at the western end of the site to as low as RL 1.4m at the eastern end of the site. The shed and house sites (south-west corner) are the high points of the site. There are artificial farm drains at the edges of paddocks across the site, and to both sides of an east-west farm race through the site. There is also a road drain at the northern boundary between the subject site and Te Puna Station Road.

Beyond the site, to the north, east and south-east, the surrounding land is close to flat as proximity to the estuary at the Wairoa River mouth into the Tauranga harbour increases. The land rises conspicuously to properties at 110, 112, and 118-138 Te Puna Road to the south-west.

Trees surround the dwelling at the site, and line the northern side of a secondary vehicle access route running east-west across the site. There are no other features of conspicuous terrestrial vegetation of ecological or natural-character value within the site. There are no wetlands within the site.

In terms of natural watercourses, the Hakao Stream lies to the east of the site – a 20m segment of the stream passes at the very eastern edge of the site owned by Te Puna Industrial Ltd. This area of land is not zoned within the Te Puna Business Park. The Wairoa River, a reasonably large river of local and cultural significance (to which the Hakao Stream runs to) is located some 1.3km east of the site.

The composition of the natural soil underlying the site is classified in terms of Land Use Capability as largely 3w1, being Mesic Organic soil.

4.4 Surrounding Environment

Immediately surrounding the site are mixed land-uses of varying proportions containing grazing/pastoral land and industrial/commercial uses. Commercial activities and yards have been established directly north of the site on the opposite side of Te Puna Station Road (250 Te Puna Station Road) and at the adjoining property to the east (245 Te Puna Station). Both these sites are within the Te Puna Business Park.

South of the site is grazing/pastoral land. South-west of the site is land in horticultural use (avocados and kiwifruit), being orchard properties accessed from Te Puna Road, whilst directly west (elevated above the site) land is covered in bush.

Directly west of the site is a property (148-158 Te Puna Road) containing dwellings and bush to a significant proportion of the site.

The site and locality generally can be characterised as semi-rural. Grazing/pastoral and horticultural activities and their open space characteristics are prevalent in the surrounding area. However, Te Puna Station Road is subject to reasonable traffic volumes owing to it being a route between the main road of Te Puna (Te Puna Road) and State Highway 2 (SH2). This road serves, and the catchment contains, a number of smaller 'lifestyle' properties which result in a density of dwellings in the general area higher than that of a typical rural environment. The area is very proximate to physical urban limit of Tauranga City and the commercial centre of Te Puna (intersection of Te Puna Rd/Minden Rd and SH2). There are also a number of yard-based commercial and/or industrial uses near the site, and the East Coast Main Trunk Railway running east-west directly north of the site on the northern side of Te Puna Station Road.

4.5 Conclusion – Existing Landscape Values

Historically the property would have formed part of a larger low lying wetland system, extending south up the Hakao valley floor, with a large variety of native species, providing habitats for bird life, fresh water fauna and a variety of insects. Post European settlement, the land has been modified drained and converted to agricultural land, while natural water flows have been redirected through farm drains. Resultingly the land has become degraded overtime, and has lost many of its original landscape values. Culturally, Te Puna has a rich cultural history, which is recognised through consultation with Pirirakau. The importance of this landscape, the freshwater qualities and flora and fauna indigenous to it, have been indicated as being fundamental to their relationship with the land, particularly as it relates to the neighbouring Hakao Stream. The existing and landscape values and cultural context are taken into consideration within this landscape and visual assessment.

In summary, the existing landscape values can be summarised as follows:

- **Physical:** Low lying Open pastural landscape with farm drains to periphery of site, noticeable sign of degradation of through the paddocks, including invasive species and boggy features throughout the eastern paddocks. Large mature trees define the southern and western bodies, with pockets of industrial land uses within the centrally and within the south-eastern portion of the site, as well an elevated residential property shrouded in trees**.**
- **Associative:** The larger landscape within the Hakao Valley which the site forms a part of has strong cultural links to Pirirakau, who have mana whenua of the land.
- **Perceptual:** This relates to the open space, rural character which can be appreciated through views from vehicles travelling along Te Puna Station Road, and the surrounding lifestyle properties, particularly those with an elevated position along the Hako Valley top the south.

5.0 Statutory Context

5.1 Resource Management Act

Part 2 of the Resource Management Act (RMA) sets its purpose and principles. Part 2, Section 5 states that the purpose of the RMA is to promote the sustainable management of natural and physical resources. Section 6 sets out the matters of national importance that must be recognised and provided for in achieving the purpose of the RMA. The protection of outstanding natural

features and landscapes from inappropriate subdivision, use and development is also identified as a matter of national importance in section 6(b).

Section 7 contains other matters that must be given particular regard to which include;

> *7(c) the maintenance and enhancement of amenity values;*
>
> *7(f) maintenance and enhancement of the quality of the environment.*

Section 8 requires decision makers to take into account the principles of the Treaty of Waitangi in managing the use and development of natural and physical resources.

Regarding the sections of the RMA, this landscape and visual assessment, assesses amenity and landscape values important to the site and context, while also taking into consideration the cultural relationship to the land.

5.2 Western Bay of Plenty District Plan

The site is largely zoned Industrial (11.1ha), with two narrow parcels at the southern boundary of the site (1.06ha in total) zoned Rural. The land that is zoned Industrial is within the Te Puna Business Park Structure Plan area. The business park comprises approximately 23ha of land on the southern side of Te Puna Station Road, and 7.2ha of land on the northern side. Surrounding land beyond the business park is zoned Rural.

In terms of policy overlays, the site is partially subject to a Floodable Area hazard overlay. There are no other policy overlays (i.e. no Outstanding Landscape Feature, Significant Ecological Feature, listed heritage features) identifying distinctive values, risks or other factors or matters requiring specific management and consideration at the site.

The northern side of Te Puna Station Road is subject to Designation No. D208, being a designation for railway purposes with the New Zealand Railways Corporation as Requiring Authority. This designation corresponds to the railway line and ancillary areas running east-west north of Te Puna Station Road. There are no other designations in the vicinity of the site.

These zone and overlay features are demonstrated within **Figure 4** below.

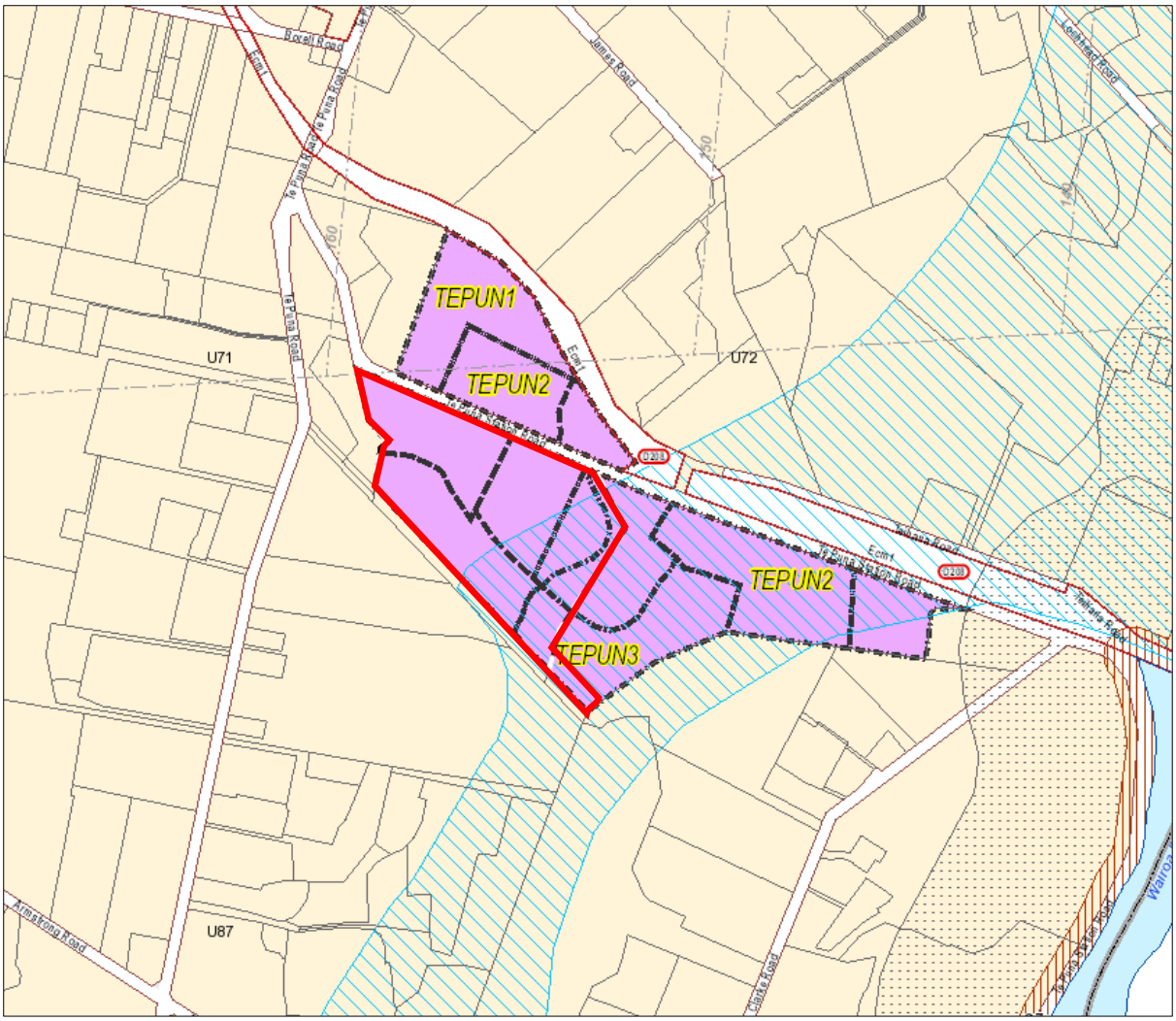


Figure 4: District Plan zoning and policy overlays. The subject site (bounded red) and sites adjacent to the north and east are zoned Industrial (purple), these sites being the extent of the Te Puna Business Park. The blue dashed line is the Floodable Area hazard overlay.

Beyond the Structure Plan (section 5.3 below), the following are distinct District Plan landscape and visual amenity, objectives and policies and rules applying to this Industrial site and activity:

Objectives and Policies

Section 12 – Subdivision and Development

12.2.1 Objectives

1. Subdivision and development that provides for and reinforces the existing built form and local charter of an area.

12.2.2 Policies

2. The design of subdivision is in accordance with structure plans.

Section 21 – Industrial

21.2.1 Objectives

2. Industrial areas which maintain amenity values from key roads within the zones, from surrounding road networks, and at the interface with other areas.

21.2.2 Policies

2. Industrial activities should establish and operate so as to protect the environment in other zones from noise, odour, visual impact or traffic generation.

3. Require industry locating in close proximity to Residential and Rural Zones and reserves to incorporate buffering, screening and landscaping to minimise the adverse visual impact of the activity.

4. Require the provision of onsite landscaping and screening in industrial areas and to have design controls for buildings/structures *fronting identified key roads to enhance street appearance.*

Rules

Rule 4C.5.3.1 and 4C.5.3.2 – Screening in Industrial and Commercial Zones

General – Discretionary and Non-Complying Activities

The following performance standards shall be used as a guide for all Discretionary and Non-Complying Activities.

a. Screening shall be by either:

i. A solid wall of not less than 2m in height, or
ii. Landscape planting to a minimum depth of 3m and a minimum height of not less than 2m (the screen must be a minimum of 1.2m high at time of planting, but must have achieved a height of 2m within 2 years), or
iii. A permeable fence (i.e. trellis or chain mesh) in conjunction with planting (i.e. vines and creepers) which will fully screen the site.

Such screening is to be maintained in good order at all times and maintenance planting shall be undertaken in the current or next planting season to achieve this.

b. Where an activity proposes landscape planting as a form of screening a landscape plan shall be submitted for Council's consideration. In considering an application Council shall have regard to the following:

i. Landscaping must have a minimum width of 3m exclusive of site access for pedestrians and vehicles at the frontage including provision for sight lines;

ii. There must be a variety of vegetation both in size and character having considered:

- *The character of the building/structure or activity on site;*
- *The character of adjacent properties;*
- *The scale of any parking areas to be screened;*
- *Potential shadowing in winter of adjacent residential or rural properties or public reserves;*
- *Underground and overground services;*
- *Suitability of the species to the location;*

- *Suitability of the species to the maintenance and watering plan;*
- *Effects on the safety and efficiency of the roading network.*

Comment

This calls for consideration of dimension requirements, range of vegetation, and consideration of development constraints as they may affect landscaping outcomes (as well as maintenance). This is reflected in this assessment and proposed Landscape Plan, Planting Palette, Outline Wetland Establishment Guide and Outline Maintenance Plan appended to this report.

iii. The proposed landscape plan is to be certified by an appropriately qualified person as being an appropriate screening and one that will be hardy;

Comment

See section 11 below for certification following explanation of proposed landscaping.

iv. Council shall apply a bond for three years to ensure the establishment and maintenance of the landscaping. The bond shall be directly related to the actual capital and labour costs of the work.

Comment

This is addressed in the AEE for the application.

f. Te Puna Industrial Zone

i. Any subdivision or development of land within the zone shall be designed, approved and developed to incorporate and illustrate amenity screen landscaping, acoustics earth bunds/fences and a stormwater collection system in accordance with the Te Puna Rural Business Park Structure Plan in Appendix 7;

Comment

As it relates to landscaping, this Rule reinforces the intent of the Structure plan, which requires amenity screening planting to the boundaries of the site and between leases.

*ii. The area of the planted land around the zone boundary, the area of land subject to the Te Puna Station Road roadscape planting, and the stormwater ponds and overland flow path/*wetland *as shown in the Te Puna Rural Business Park Structure Plan shall all be established and vested in* Council *prior to commencement of any industrial or business activity within the zone.*

*The plantings and the stormwater ponds and the overland flow path/*wetland *shall be maintained for a period of three years with maintenance secured by way of an appropriate legal mechanism to* Council's *satisfaction;*

Comment

As it relates to landscaping, this Rule calls for a wetland establishment guideline and outline maintenance plan to be prepared.

iii. Secondary planting shall be provided on boundaries between land parcels in accordance with the Structure Plan*.*

Comment

This Rule calls for landscaping to be provided along boundaries and between leases in accordance with the Structure Plan.

*iv. Landscape plans for the zone boundary, Te Puna road roadscape, and stormwater ponds and overland flowpath/*wetland *shall be prepared by a qualified landscape designer and approved by* Council*. The plan for the overland flowpath/*wetland *shall be prepared in consultation with Pirirakau.*

Comment

This Rule requires the landscape design and specifications to be prepared by a suitably qualified person, and in consultation with Pirirakau, who have mana whenua of the land.

v. Except to the extent already provided, additional amenity screen planting shall be provided to the satisfaction of Council *for each new* building *over 100m2. To that end, a landscape plan by a qualified landscape designer shall be submitted with the application. The plan shall specifically identify the plant species. The plan shall also include a landscape maintenance programme for three years.*

Comment

This Rule has been taken into consideration within this landscape and visual assessment, particularly as it relates to the proposed workshop building. An overall landscape plan, planting palette /establishment guide and supporting outline maintenance plan has been completed for the site. Refer to Attachment A.

21.4.1.d – Visual Amenity Reflectivity

i. Te Puna Business Park - All external surfaces of buildings/structures (excluding glazing) shall comply with the following reflectivity standards:

- *Walls no greater than 35%;*
- *Roofs no greater than 25%*

Comment

The above reflectivity standards have been considered within this assessment, particularly as it relates to the workshop which is the only building applied for under this application. All other future buildings will also be required to meet these standards.

21.5.1 – Buildings exceeding 100m^2 (workshop enclosure)

b. Landscaping (including securing the maintenance thereof), in addition to that required by Permitted Activity standards.

Comment

This Rule is requiring additional landscaping/screening, above what is required under the Structure Plan, in order to screen and integrate buildings better into the landscape.

The above Rules are all taken into consideration within this landscape and visual assessment and proposed mitigation planting.

5.3 Te Puna Business Park Structure Plan – Landscape Requirements

The structure plan also requires the delivery of a prescribed landscaping and stormwater management strategy and integrated acoustic mitigation measures (as governed by Rule 12.4.16.3). This rule specifies a range of landscape outcomes to be delivered.

The intent of the Structure Plan, as supported by the resolution of the Environment Court appeal process which created the Te Puna Business Park Industrial Zoning, is interpreted as seeking to deliver the following landscape outcomes:

- Native tree and shrub planting atop of a bund a minimum of 1.5m high along Te Puna Station Road
- Secondary planting along internal roads (mix of natives and exotics)
- Secondary planting on boundaries between land parcels or leases (mix of natives and exotics)
- Shelter planting at business park perimeter (southern and western boundaries of the subject site), including mix of fast growing exotics and native species
- Wetland planting within structure plan overland flow path to convey water from 297 Te Puna Station Road through 245 Te Puna Station Road to a roadside drain to the north of 245 Te Puna Station Road
- Relocation of roadside drain to north of the site to inside the site boundary at 297 Te Puna Station Road, with native planting in a naturalised swale system (also applies to 245 Te Puna Station Road).

The Te Puna Business Park structure plan staging and prescribed landscaping, acoustic and stormwater measures are shown within **Figure 5** below (included at larger size at **Attachment C**).

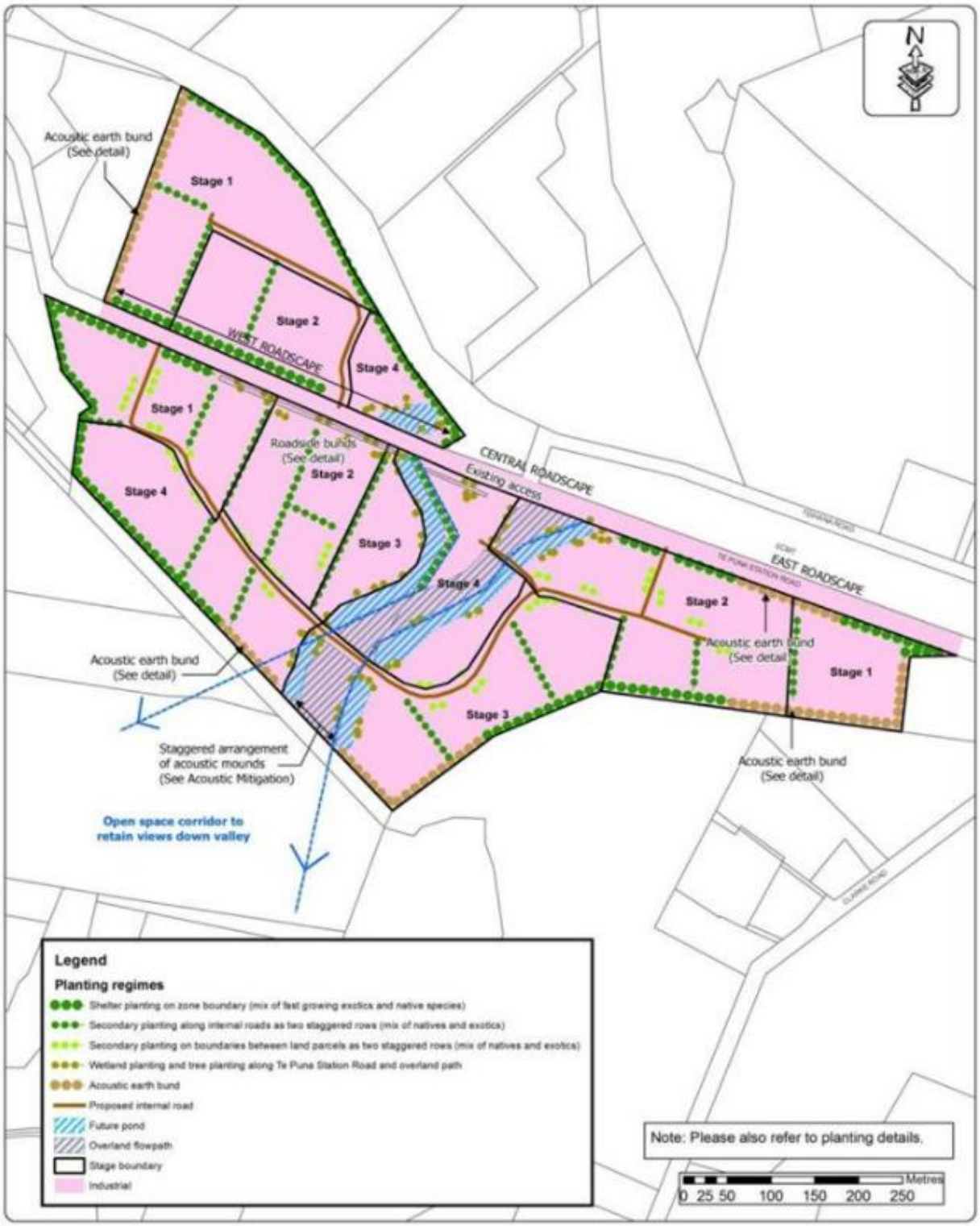


Figure 5: Te Puna Business Park Structure Plan, excerpt from the WBOPDC District Plan.

6.0 The Proposal

The proposed development is to give effect to the Te Puna Business Park Structure Plan provisions that apply to the subject site. The layout of the site includes a cul-de-sac internal road, which services a number of potential industrial yard spaces, which will accommodate yard-based industrial activities. Including one confirmed anchor occupation by ContainerCo as noted on the proposed landscape plan in Attachment A.

This anchor use comprises the storage, repair, and distribution on a hire and selling basis of shipping containers. Containers will be stacked a maximum of three high. Other future lease areas are proposed to accommodate yard-based industrial activities. No leases are proposed to industrial activities generating unusual air emissions.

Incidental to the establishment of industrial uses at the lease areas are the following development activities:

- Earthworks and construction of an internal road and vehicle access crossing to Te Puna Station Road;
- Earthworks, including the import of fill material, to achieve appropriate ground conditions and heights to accommodate the proposed industrial sites;
- Earthworks to establish necessary landscape planting and screening, drainage swales, two stormwater treatment ponds, and a shallow naturalised wetland; and
- Signage associated with the industrial activities.

The above activities constitute the future industrial development at the subject site, and are proposed in a manner generally consistent with the landscaping provisions and expected outcomes of the structure plan. The particulars of the proposed development and industrial uses are explained further below.

5.1 Mitigation Landscaping

The structure plan has requirements for boundary landscaping and internal landscaping. The purpose of the landscaping is to maintain the amenity values associated with the surrounding rural character of the area. Structure Plan landscape requirements are included in **Attachment B** for reference.

The proposed landscaping includes, a landscaped bund at the northern boundary and a perimeter landscaping strip to the southern boundary (to be planted in accordance with the 'Perimeter Planting' requirements of the Structure Plan) are proposed to be established. The internal roadside would also be landscaped with trees, and internal pockets of vegetation retained at the edge of industrial activity areas, between lease areas, in accordance with the landscaping direction of the Structure Plan.

As per the proposed landscape plan, included within **Appendix 1**, and extracted in **Figure 6** below. A naturalised wetland area is proposed to accommodate stormwater (following treatment in stormwater ponds) and overland flow paths within the low-lying eastern portion of the site in accordance with the Te Puna Business Park Structure Plan. Planting within this area will be comprised of a combination of native suburbs, and wetland appropriate species, including; flax's, grasses, reeds, and sedges, which will help to further treat/ extract sediment from the stormwater.

Where the wetland batters up to the proposed ContainerCo yard, a row of wetland appropriate trees will be included along this edge (Manuka, Kanuka), refer to planting palette. A pedestrian pathway will also follow this edge and provide public access along the wetland interface, and link down through into the south-eastern corner of the site, providing public access to the Hako Stream as illustrated.

Figure 6: Landscape Mitigation Plan, refer to appendix 1.

The landscaping design has been specifically prepared to address the aforementioned intent of the structure plan landscaping outcomes, including incorporation of a native planted bund to Te Puna Station Road, naturalised wetland for stormwater management, and a mix of exotic and native trees to the southern and western boundaries, and trees along the internal road. The landscaping design also responds to the viewpoint analysis of landscape and visual effects explained at sections 8 and 9 of this report below.

7.0 Photographic Assessment of Site and Surrounds

To understand the existing landscape values of the site and surrounding context a photographic assessment has been undertaken, refer to photos below. This is to be read in conjunction with the subsequent landscape and visual assessment within this report.

The following photographic assessment includes a combination of drone photography and onsite photographs, to show the context of the site in relation to the surrounding area.

Drone Photography

Photo 1: Drone photo taken inside of the site looking east to 245 Te Puna Station Road.

Photo 2: Drone image taken within the site looking north to adjacent 264 Te Puna Station Road (part of the Te Puna industrial park). Red line showing the Site boundary with Te Puna Station Road.

Photo 3: Drone shot looking south to the work sheds and private residence onsite.

Photo 4: Drone shot looking south-east over the site. View further afield to Hakao valley floor.

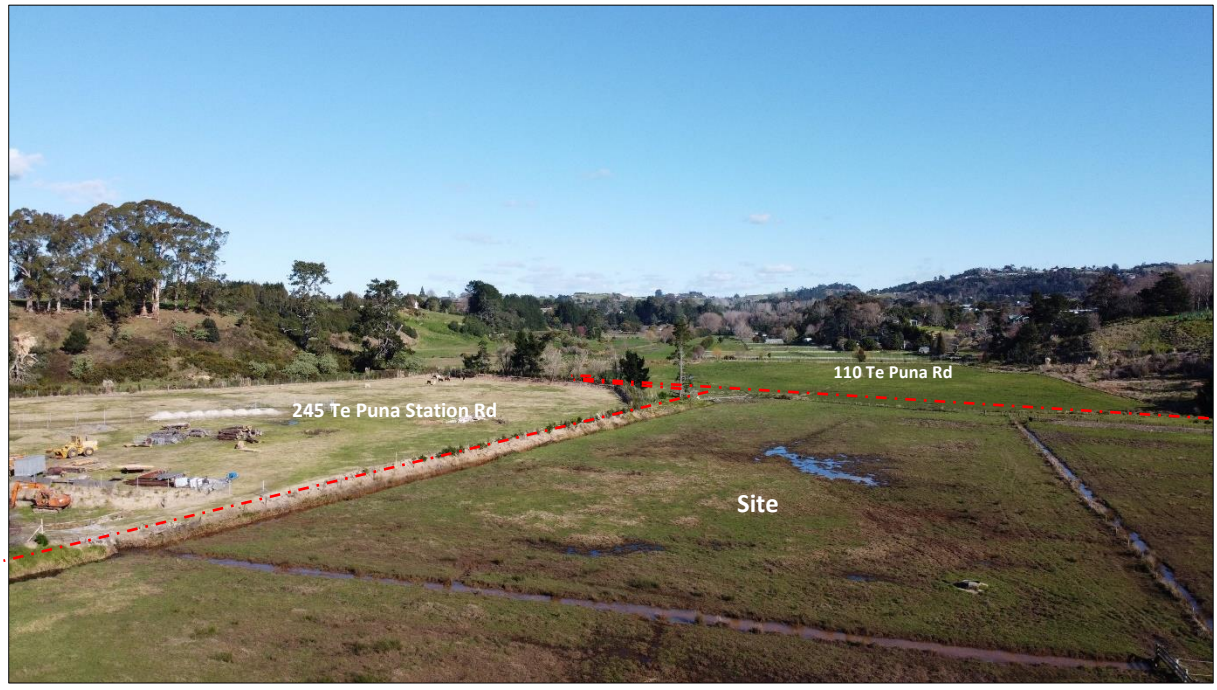


Photo 5: Drone shot from east of the site. Looking south down the Hakao valley floor.

Photo 6: Drone shot looking north west over the site. Drone image taken from the south-eastern corner of site.

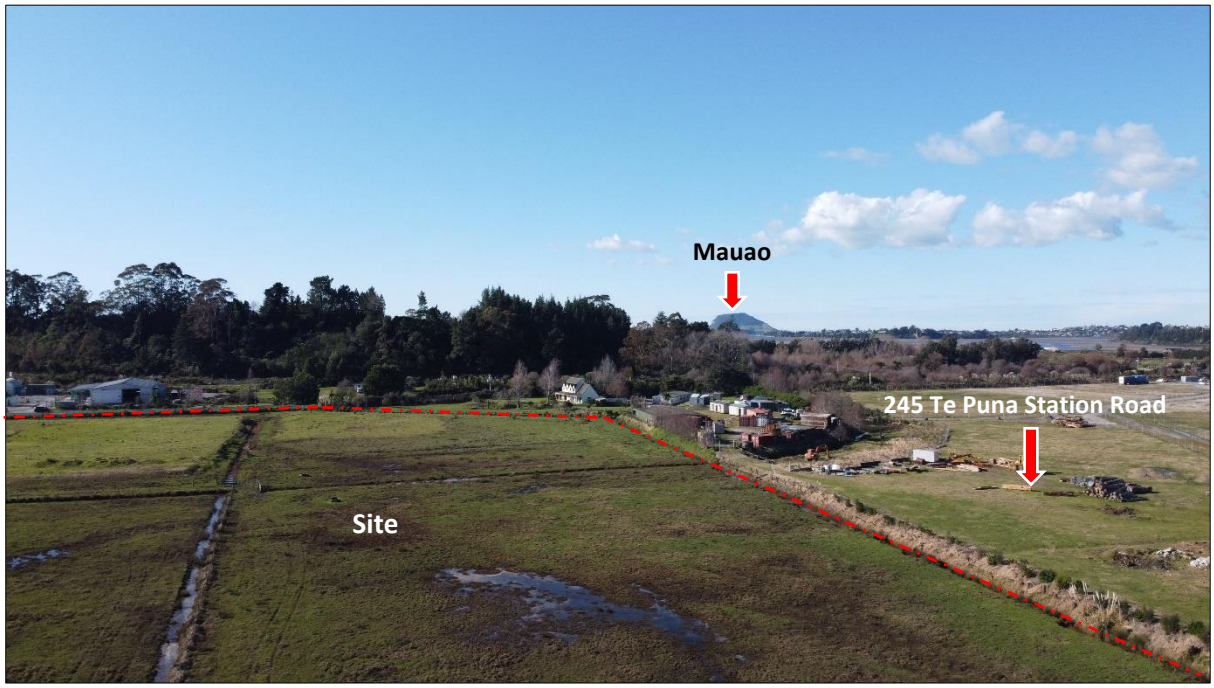


Photo 7: Drone shot taken from south-eastern corner of Site, looking north towards Mauao in distance

Photo 8: Drone shot from southern boundary of the site looking to elevated neighbouring properties to the south-east

Photo 9: Drone shot from southern boundary of site, looking towards the elevated neighbouring sites to the west, south-west.

8.0 Visual Catchment and Viewing Audiences

Based upon the site visit undertaken and an analysis of the proposal in relation to the surrounding topography and land uses, it is considered that the primary public and private viewing audiences comprise:

Public viewing audiences:

- Views from the Te Puna Station Road when travelling from the east. This view is representative of cars and pedestrians/cyclists who will be travelling along Te Puna Station Road.
- Views from the Te Puna Station Road when travelling from the west. This view is representative of cars and pedestrians/cyclists who will be travelling along Te Puna Station Road.

Private viewing audiences:

- Adjoining industrial and rural properties along Te Puna Station Road.
- Rural private properties with outlook to the Hakao Stream valley floor and/or Tauranga Harbour, where this site is in the foreground. Being properties in all directions, specified and assessed below.

The location of these viewing audiences is illustrated in the context plan within **Figure 7** below, which is included at larger size at **Attachment C**. The reasons for selecting these viewpoints is detailed within **Table 2** below.

Note, as the neighbouring properties are in private ownership, access into these properties was impractical. However, the boundaries edges and contour of land was assessed to understand the viewshafts into site. This is done through site photography looking back up to the visual catchment, as well as drone photography to show the relationship between the site and the viewing audience.

Viewpoint Location Plan

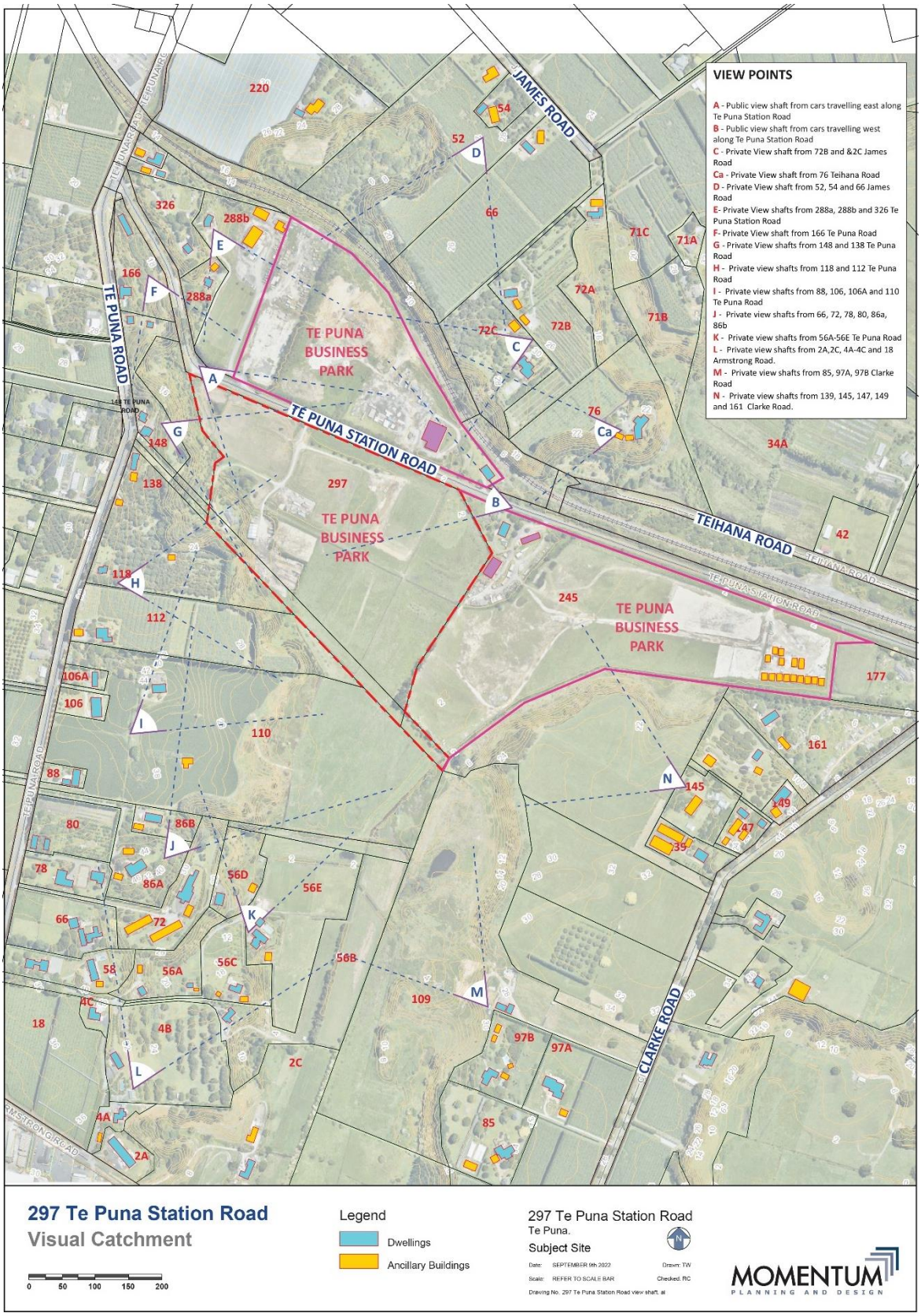


Figure 7: Context plan illustrating identified viewing audience, refer to detailed and larger version at **Appendix 2**.

Table 2 Assessment Viewpoints

View Point No	Location	Direction of View	Proximity to Site	Degree of visibility	Reason for Selection
A	Public views from vehicles travelling East along Te Puna Station Road	Temporary views south and south – east into the site when travelling along Te Puna Station Road.	Te Puna Station Road adjoins the site along the northern boundary of the site for 450m.	High degree of visibility into site as there is currently limited vegetation along Te Puna Station Road.	Effect on public view shaft from Te Puna Station Road.
B	Public views from vehicles travelling west along Te Puna Station Road	Temporary views looking south over the site when traveling along Te Puna Station Road.	Adjoins western boundary of dairy farm subject to Plan Change. Approx. 400m to western boundary of Plan Change Site.	High degree of visibility into site as there is currently limited vegetation along Te Puna Station Road.	Effect on public view shaft from Te Puna Station Road.
C	Private dwellings located to the north of the site. Properties include; 72B and 72C James Road.	View looking south, south-west towards site.	The private dwelling located at 72B and C James Road is approx. 200m to the north of the site at an elevation of 30m (Motoriki Datum)	Low – negligible degree of visibility to the subject site due to the extensive boundary planting along south western boundary of 72C, and mature trees within adjacent rail corridor.	Effect on private viewpoint from dwelling and associated rural amenity values.
Ca	Private View shaft from 76 Teihana Road	View looking south-west towards site.	The private dwelling located at 76 Teihana Road is approx. 250m to the north-east of the closest site boundary, and is located at an elevation of RL22m (Motoriki Datum)	No degree of visibility to the subject site due to extensive boundary planting along southern boundary and within adjacent rail corridor.	Effect on private viewpoint from dwelling and associated rural amenity values.
F	Private dwelling at 166 Te Puna Road, located to the north-west of the site.	South-east towards site.	The dwelling located at 166 Te Puna Road is located approx. 150m from the western boundary of the site and has an elevation of RL18 (Motoriki Datum)	The line of sight from the dwelling to the site, is heavily obscured by vegetation on private and public property.	Proximity of site to private dwelling, and potential effects on rural amenity values associated with the south-eastern view shaft.

View Point No	Location	Direction of View	Proximity to Site	Degree of visibility	Reason for Selection
G	Private dwellings accessed off Te Puna Road, located to the west, south-west of the site. These properties include; 138 and 148 Te Puna Road.	Private dwelling has view when looking east over the site.	The dwellings are located approx. 70m from the western boundary of the site, and are at 28 – 32m elevation, with the majority of the site being located between 2 – 4m (Motoriki Datum)	The line of sight from these dwellings are screened by the existing topography and intervening vegetation/shelter planting.	Proximity of site to private dwelling, and potential effects on rural amenity values associated with the eastern view shaft.
H	Elevated view shafts from the eastern side of the Hakao Stream valley visual catchment area. Properties include; 112 and 118 Te Puna Road	Elevated views looking north-east to the site at 297 Te Puna Station Road.	112 and 118 Te Puna Road properties adjoin the southern boundary. The private dwellings are approximately 300m from this boundary.	Existing vegetation obscures views to the majority of site, with some unobstructed views to the south-eastern portion of the site. Particularly from the dwelling at 112.	Potential effects on rural amenity values associated with the north-eastern view shaft.
I	Elevated views from the eastern side of the Hakao Stream valley visual catchment area. Properties include; 88, 106, 106A, and 110 Te Puna Road.	Elevated views looking north, north-east to the site at 297 Te Puna Station Road.	This cluster of dwellings are situated 300-350m from the southern boundary of the site, at an elevation of between RL 34-44	Existing vegetation obscures views to the majority of site, with some unobstructed views to the south-eastern portion of the site. Particularly from the dwelling at 110, to its proximity on the knoll.	Potential effects on rural amenity values associated with the north-eastern view shaft.
J	Elevated views from the western side of the Hakao Stream valley visual catchment area. Properties I this visual catchment include; 66, 72, 78, 80, 86a, 86b	Elevated views looking north towards the site at 297 Te Puna Station Road.	This cluster of dwellings are situated 400-550m from the southern boundary of the site, at an elevation of between RL 18-40m.	Moderate degree of visibility to the site. private dwellings in question are predominantly surrounded by trees and at a higher elevation then the site.	Potential effects on rural amenity values associated with their northern view shaft.
k	Elevated views from the western side of the Hakao Stream valley visual catchment	Elevated views looking north towards the site at 297 Te Puna Station Road.	This cluster of dwellings are situated 400-600m from the southern	Moderate degree of visibility to the site. private dwellings in question are	Potential effects on rural amenity values associated with their northern view shaft.

View Point No	Location	Direction of View	Proximity to Site	Degree of visibility	Reason for Selection
	area. Properties in this visual catchment include; 56A-E Te Puna Road.		boundary of the site, at an elevation of between RL 10-25m	predominantly surrounded by trees and at a higher elevation then the site.	
L	Elevated views from the western side of the Hakao Stream valley visual catchment area. Properties in this visual catchment include; 2A, 2C, 4A-4C and 18 Armstrong Road.	Distant elevated views looking north towards the site at 297 Te Puna Station Road.	This cluster of dwellings are situated 550-800m from the southern boundary of the site, at an elevation of between RL 4-40m	Low-Moderate degree of visibility to the site. private dwellings in question are predominantly surrounded by trees and at a higher elevation then the site.	Potential effects on rural amenity values associated with their northern view shaft.
M	Elevated views from the eastern side of the Hakao Stream valley visual catchment area. Properties in this visual catchment include; 85, 97A, 97B Clarke Road.	Distant elevated views looking north, north-west towards the site at 297 Te Puna Station Road.	This cluster of dwellings are situated 550-800m from the southern boundary of the site, at an elevation of between RL 4-40m	Moderate degree of visibility to the site, takin into consideration the distance to the site, the unobstructed view shafts and current lack of boundary treatment along southern boundary.	Potential effects on rural amenity values associated with their north, north-western view shaft.
N	Elevated views from the eastern side of the Hakao Stream valley visual catchment area. Properties include; 139, 145, 159 and 161 Clarke Road (directly east).	Elevated views looking west to the site. This viewpoint looks over the entire site.	Private dwellings range for 420 – 500m away from eastern boundary of the site. Private dwellings located between 28 – 12m elevation.	Low to moderate degree of visibility to the site due to the western boundary treatments of private properties	Effects on private viewshafts and associated dwellings.

8.1 Detailed Assessment of Landscape and Visual Effects

A detailed assessment of the change in landscape values based on the collective impact from the proposed industrial park and subsequent development, is outlined in the following sections. The landscape mitigation recommended within this assessment is illustrated on the landscape plan within Attachment A of this report. The landscape mitigation proposed is informed by the landscape requirements set out in the Te Puna Business Park Structure Plan and Environmental Court decision which requires a naturalised wetland within the site to treat stormwater.

Note: The permitted baseline for bulk and location on site is considered relevant to this assessment, as it informs what could be built on site as a permitted activity, in accordance with the provisions of the industrial zone/ structure plan. This is described below.

Permitted Baseline – Bulk and location for Te Puna Business Park (subject to landscaping in accordance with Te Puna Business Park Structure Plan)

Height , Daylighting, Building Footprint

Height: Te Puna Business Park – 9m (Rule 21.4.1a);

Daylighting: No part of any *building/structure* shall exceed a *height* equal to 2m above ground level at all boundaries and an angle of 45° into the site from that point. Except where the site boundary is with a road in which case this rule shall not apply in respect to that boundary (Rule 21.4.1a).

Building Footprint: 100m^2 (Rule 21.3.7)

Yards

Te Puna Industrial Park specific provisions (Rule 21.4.1b):

- 10m where a property adjoins a Rural Zone;
- 20m from Te Puna Station Road and 5m from any other road boundary.

Visual Amenity – Reflectivity

Te Puna Business Park – All external surfaces of buildings/structures (excluding glazing) shall comply with the following reflectivity standards (Rule 21.4.1d):

- Walls no greater than 35%;
- Roofs no greater than 25% (also applies to workshop roof, where a darker recessive canvas colour will be required).

Viewpoint A, Assessment

Viewpoint A is depicted below.

Photo 10: View looking east along Te Puna Station Road. Representative of vehicles travelling along Te Puna Station Road.

The views of concern, relate to public views into the site from Te Puna Station Road, associated with vehicles and cyclists travelling east. View's into the site are currently unobstructed and the viewer is able to see almost the entirety of the site.

With the proposed landscape mitigation along Te Puna Station road frontage, views into the site will be predominantly screened by the road side planting along the landscape bund. See proposed planting details of this bund within the Landscape Plan and Planting Palette at **Appendix 2**. This is proposed to be exclusively native plants drawing on Environment Court decision direction on this matter.

Temporary views into the site and associated activities, including stacked containers will be seen where there are openings in the road side vegetation, particularly at the entrance to the site. However, given cars will be travelling at open road speeds, these will be for a very limited time and for the most part travellers will experience a planted roadside. The same can be said of cyclists/pedestrians along the planned cycle path by WBOPDC on the southern side of Te Puna Station Road, owing to the proximity of the path to the landscaped bund and high degree of screening of visibility of buildings within the site which are limited to 9m in height and 20m set back from the boundary.

For these reasons travellers will experience limited visual impact from the industrial uses proposed. Visual effects are assessed as **low** level.

Further, it is considered that the landscape planting proposed will result in an improved native planted edge to the roadside.

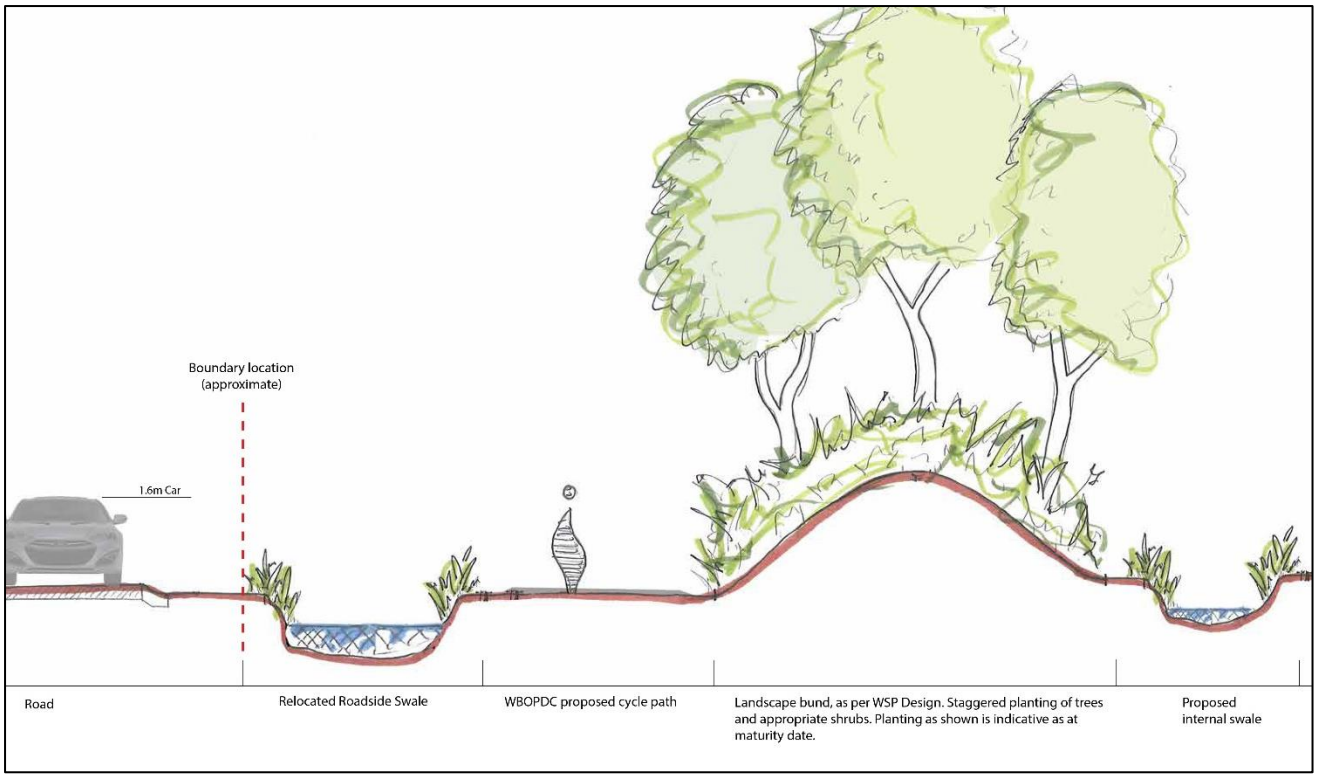


***Figure 8**: Roadside cross section through Te Puna Station Road, based on WSP design – Illustrative only*

Viewpoint B, Assessment

Viewpoint B is depicted below.

Photo 11: View looking west along Te Puna Station Road, representative of views from cars travelling west along Te Puna Station Road.

The views of concern, relate to public views into the site from Te Puna Station Road, associated with vehicles and cyclists travelling west. View's into the site are predominantly unobstructed, with the exception of some screening at the eastern end of the site. As the traveller moves west along Te Puna Station Road, views are unobstructed and the viewer is able to see almost the entirety of the site. The proposed mitigation planting along Te Puna Station Road, will screen views as per the previous viewpoint. Some temporary views will be available where there are openings in the roadside vegetation, particularly at the entrance to the site. However, given cars will be travelling at open road speeds, and less frequently cyclists at a slower space, views are for a very limited time only, and for the most part travellers will experience a planted roadside.

For these reasons travellers will experience limited visual impact from the industrial uses proposed. Visual effects are assessed as **low** level.

Further, it is considered that the landscape planting proposed will result in an improved native planted edge to the roadside.

Viewpoint C and Ca, Assessment

Viewpoint C and Ca is depicted below. Photographs from within the site looking back up to the viewpoint dwellings, as well as drone photography used to show the relationship between the site and the viewpoint dwellings, are included in Photographs 12 and 13 below. This relates to properties

and associated residences accessed off James and Teihana Road, located to the north-east of the site, at an elevation of RL 22-30. These properties include 72B and 72C James Road and 76 Teihana Road.

Photo 12: Drone Shot, looking north illustrating the relationship between the site and the visual catchment from residences at 72B and 72C James Road, and 76 Teihana Road. As illustrated, large mature trees completely screen the site from these properties.

Photo 13: Photo looking north from within the site, also showing the relationship between the residences at 72B and 72C James Road. As illustrated, large mature trees completely screen the site from these properties.

Assessment

As illustrated, the site is separated from these properties by the northern extent of the Te Puna Business Park, which comprises 250 Te Puna Station Road. There are a number of mature shelter belt trees along northern boundary of this property with the rail corridor further north, which also has a number of shelter belt trees along its northern side. The density of trees around the rail corridor means visibility of the site is limited. Further the distance of 150-250 metres from the northern extent of the site to these properties makes any glimpsed views back to the site from these properties distant as well as obscured.

This combined with the proposed roadside planting along Te Puna Station Road, will ensure effects on these properties remain **very low to negligible**, taking into consideration if the intervening planting within the rail corridor or to boundaries, was ever removed.

Viewpoint D, Assessment

Viewpoint D is depicted below. Photos from within the site looking back up to the visual catchment, as well as drone photography is used to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off James Road, located to the north of the site, which are elevated at RL 26-28. These properties include; 52, 54 and 66 James Road.

Photo 14: Drone photo looking north from within the site, showing the relationship between the residences at 52, 54 and 56 James Road.

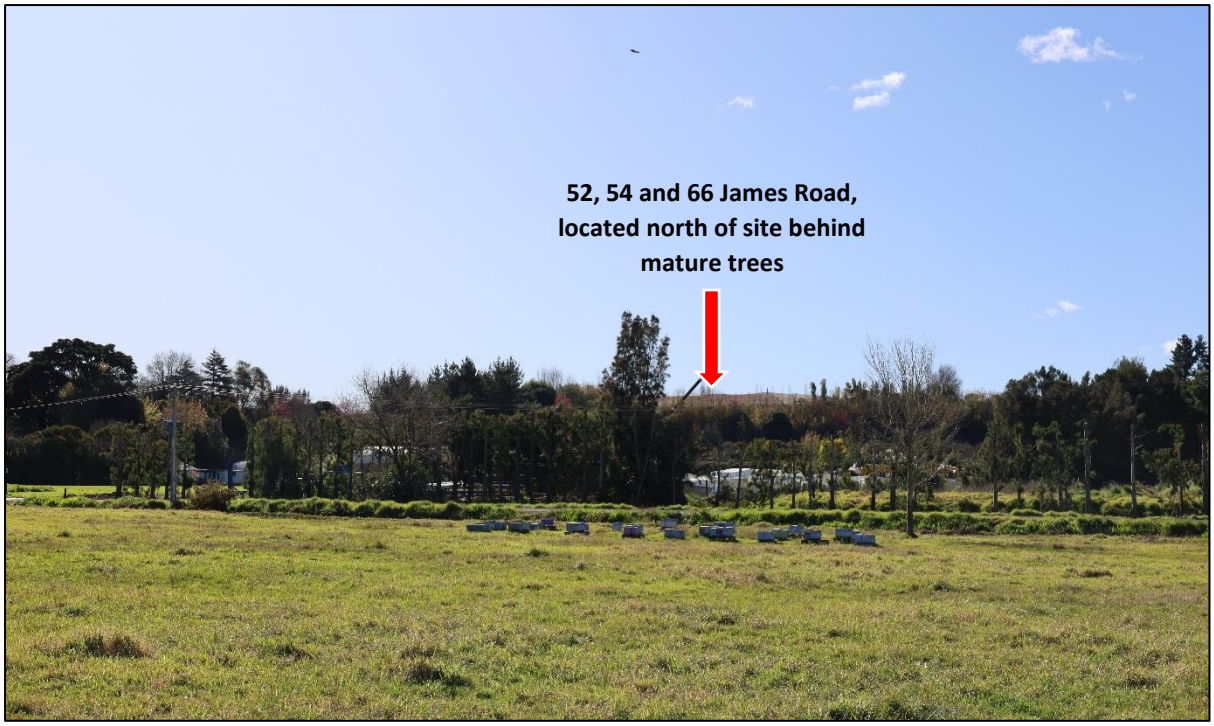


Photo 15: Photo looking north from within the site, showing the relationship between the residences at 52, 54 and 56 James Road.

Assessment

Likewise with the Viewpoint C assessment, the site is separated from these properties, by the northern extent of the Te Puna Business Park. Where there are a number of mature shelter belt trees along the northern boundary of 250 Te Puna Station Road and within the adjacent rail corridor. There is an increase in distant back to the site from these properties, at 500m plus from the northern extent of the site. This also makes any available views back from these properties very distant. These existing factors of separation and screening, combined with the proposed roadside planting along Te Puna Station Road, will ensure effects on these properties remain **very low to negligible**, taking into consideration if the intervening planting within the rail corridor or to boundaries, was ever removed.

Viewpoint E, Assessment

Viewpoint E is depicted below, which includes photography from the site, back towards the properties in question. Photos from within the site looking back up to the visual catchment, as well as drone photography is used to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off James Road, located to the north-west of the site. These properties include: 288a, 288b and 326 James Road.

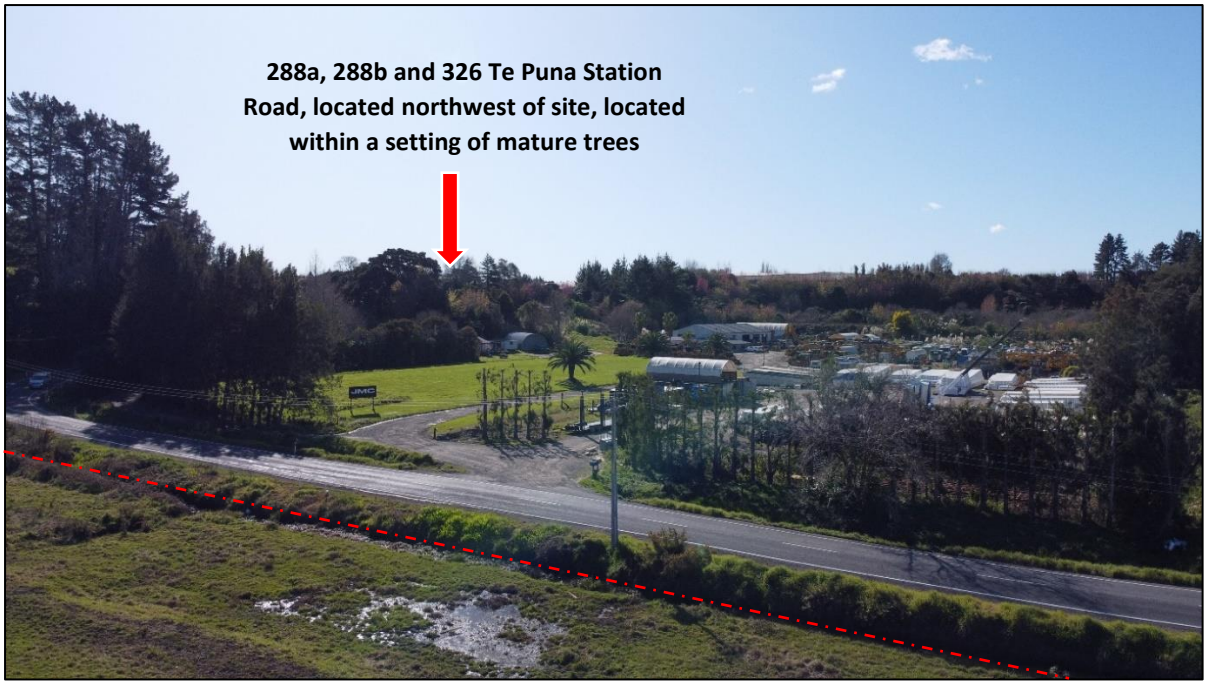


Photo 16: Drone photo looking north-west from within the site, showing the relationship between the residences at 288a, 288b and 326 Te Puna Station Road.

Photo 17: Photo looking north-west from within the site, showing the relationship between the residences at 288a, 288b and 326 Te Puna Station Road.

Assessment

As illustrated within the photography, the site is separated from these properties by Te Puna Station Road, and the northern extent of the Te Puna Business Park. These dwellings are located between 160-200m from the northern boundary of the site and are situated within a setting of mature trees, which provides visual screening to between the site and these properties. This will be further

enhanced by the proposed bund and associated landscaping along Te Puna Station Road, which will be a combination of native plants and trees as per the Landscape Mitigation Plan in Attachment A.

Given the level of separation between the sites, the extent of existing mature trees between these properties along the northern boundary of the Te Puna Station Road, and proposed along the landscape bund along the sites boundary, views into the site will remain screened. Therefore effects on visual amenity and associated rural amenity values from these properties is assessed as **very low.**

Viewpoint F and G, Assessment

Viewpoint F and G is depicted below, which includes photography from the site, back up towards the properties in question. This relates to properties and associated residences accessed off Te Puna Road, located to the west and south-west of the site. These properties include; 138, 148 and 166 Te Puna Road.

Photo 18: Photo looking west from within the site, also showing the relationship between the residences at 138 and 148 Te Puna Road. As illustrated, large mature trees are situated between the site and these dwellings. Due to the elevation of the drone (approx. 35-40m above ground level), the dwelling at 138 Te puna Road can be seen. 148 Te Puna Road remains screened.

Photo 19: Looking back up towards 138 and 148 Te Puna Road. Dwellings are obscured from view as a result of mature trees.

Photo 20: Looking back up towards 166 Te Puna Road from within the site. Photo illustrates that the dwelling is completely screened by large mature trees at the common boundary.

Assessment

- 138 and 148 Te Puna Road (south-west/west):
    - Some 30m elevation difference ensures rural outlook from these dwellings is substantially above and over the site with important landscape and visual amenity components (hills,

ridges and harbour, where visible) not materially impacted. Screening also achieved by intervening vegetation at these sites shrouding dwellings, it is acknowledged however this may be changed as of right with no control by the applicant.

- 166 Te Puna Road (north-west):
    - The dwelling at this property is some 25m elevated above the site, with the line of sight to the property heavily obscured by vegetation on private and public property (road reserve). Also, the dwelling is over 200m away from the western boundary of site. Rural outlook effects upon occupants of this property are considered negligible. Further any views that this property experiences towards the harbour and expansive horticultural land, ridges and hills further north are not affected. Relationship between site and illustrated in the photographs below.

Further to the above the extensive mature planting along the hillside is unlikely to change given the geotechnical and access constraints of these planted areas, which restricts development potential. This combined with the shelter planting proposed along the western boundary as per the structure plan. Ensures that visual landscape effects on these properties and their rural amenity values remain **very low,** and important long views across the site to further afield hillsides, ridges and harbour will remain unaffected due to the higher elevation and the 9m height limit within the Industrial zone.

Viewpoint H and I, Assessment

Viewpoint H catchment is depicted below, which includes photos from within the site looking back up to the visual catchment, as well as drone photography to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off Te Puna Road, located to the west and south-west of the site. These properties include; 112 and 118 (View point H) and 88, 106, 106A and 110 Te Puna Road (View point I).

Photo 21: Drone shot looking south- south-west from within the site towards view catchment H and I. The dwellings on these properties are highlighted, some are in view due to elevated nature of the house sites, while the majority are screened by vegetation and the nature of the landform.

Photo 22: Photo taken from within the site looking up towards viewing audience H and I. Views down into the centre of the site and western portion are screened by established shelter planting.

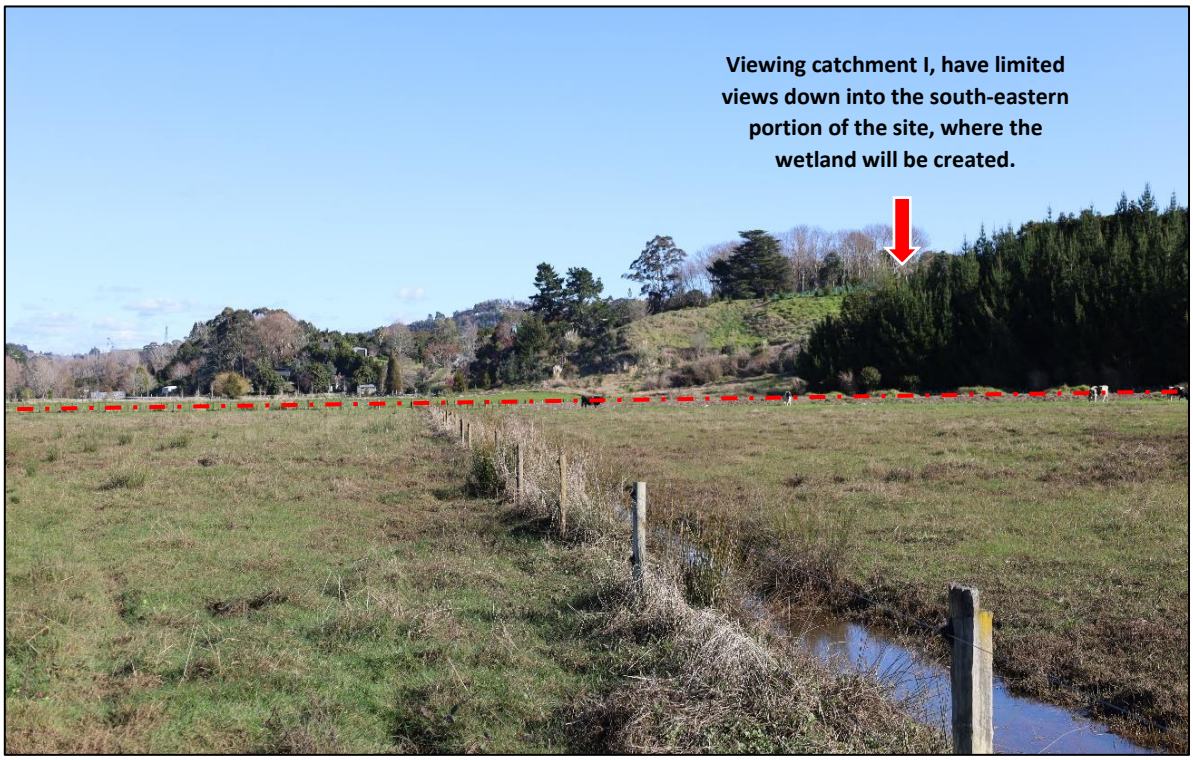


Photo 23: Photo taken from within the site looking up towards viewing catchment I. The majority of the site is screened by existing shelter, however Some views are available into the eastern portion of the site where the wetland is proposed. This is illustrated further in the following photo (24).

Photo 24: Photo taken from within the site (south-eastern corner) looking up towards viewing audience I, which has views available into the eastern portion of the site where the wetland is proposed. The large mature trees which screen views down into the centre and western portion of the site can also be seen from this angle.

Assessment

Some 30m elevation difference ensures rural outlook from these dwellings is substantially above and over the site with important landscape and visual amenity components (hills, ridges and harbour, where visible) not being obscured. Existing topography and intervening vegetation/shelter planting provide a level of screening from these properties, down into site where the industrial activities will be taking place. Some views into site will be visible, particularly around the eastern areas, which includes the low-lying wetland/stormwater management area. The intent of the landscaping outcomes of the structure plan is to provide screening into the site, particularly along the southern boundary where shelter planting is proposed. As per the Landscape plan, this is proposed both at boundaries and at the inter-lease locations, and will be met through a combination of fast growing exotic and native trees.

Given the distance, existing and proposed screening, and landscape mitigation proposed, effects on rural amenity values from these existing properties and associated dwellings are assessed as **low.**

Further, the wetland that will be created in the eastern portion of the site is considered to be an positive improvement in this area, by restoring degraded farmland to native species, and appropriately managing stormwater. The wetland and native planting will also provide improved visual effects in this location.

Viewpoint J, K, L, Assessment

The viewing catchment associated with viewpoints J K and L is depicted below. Photos from within the site looking back up to the visual catchment, as well as drone photography is used to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off Te Puna Station Road, located to the south of the site, on the western hillside of the Hakao Valley. These properties include; 66, 72, 78, 80, 86a, 86b Te Puna Road (J). 56-56E Te Puna (K) and 2A,2C, 4A-4C and 18 Armstrong Road (L).

Drone Photo 25: Viewing catchment along western side of Hakao Valley from the southern boundary of the subject site, to southwest of site (identified as J, K and L). This catchment is located between 375-500m from the southern boundary of the site. Dwellings are located between 12 – 40m elevation across the valley hillside and situated within clusters of trees.

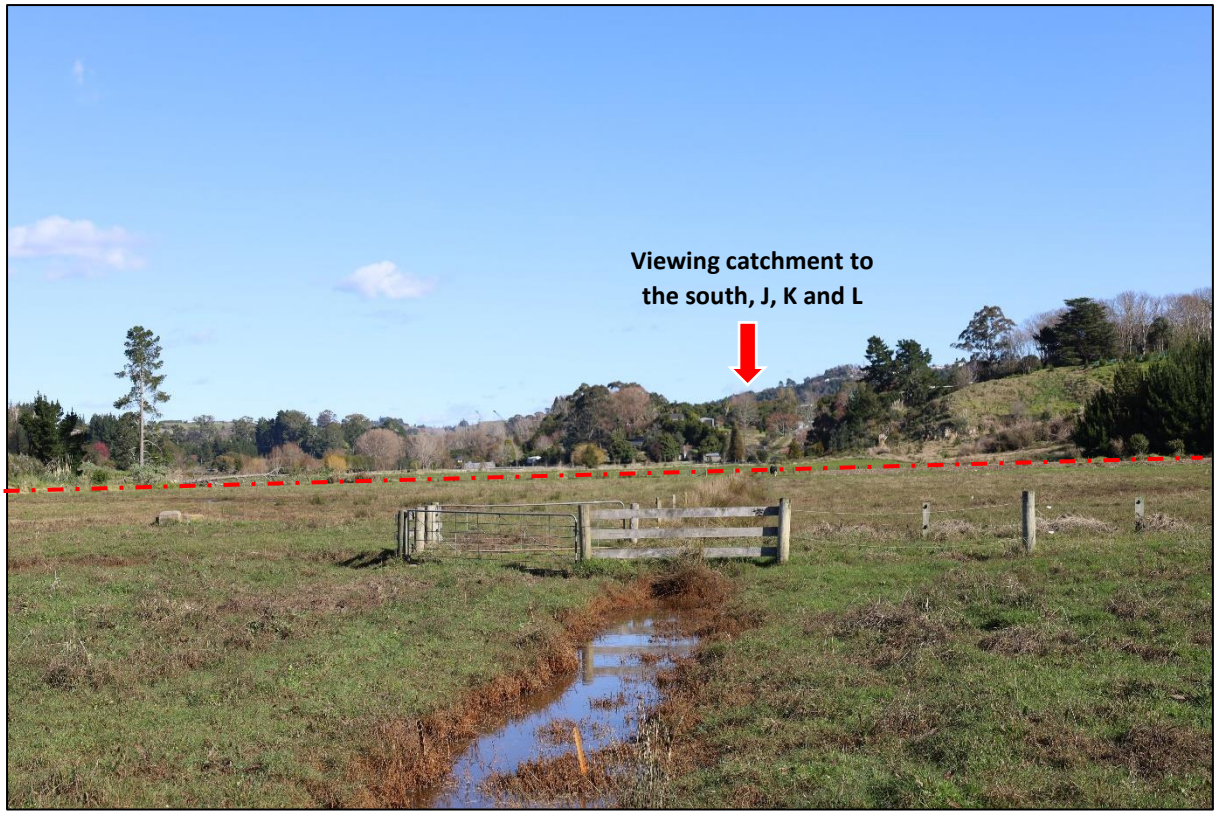


Photo 26: Photo looking south from within the site, up the Hakao Stream valley, with the location of viewing catchment J, K and L on the western side of the valley highlighted.

Assessment

These properties are located close to directly south of the site, with dwellings and associated outdoor spaces oriented north/north-east. Dwellings within this viewing audience are predominantly surrounded by trees and are at a higher elevation then the site. Views will be a minimum of 350m away from the site and are screened/softened by the proposed shelter planting to the southern boundary, as per the landscape mitigation plan in Attachment A. Similar to view points H and I, views from this catchment will be mainly focused to the eastern portion of the site, where the wetland is proposed, this is due to the existing topography and mature trees which screen some of the central and all of the western parts of the site from this viewing audience.

Given the distance and mitigation planting proposed along the southern and eastern boundaries of the site, effects on rural amenity values associated with these properties are assessed as **low to very low.**

Viewpoint M, Assessment

Viewpoint M is depicted below, which includes photos from within the site looking back up to the visual catchment, as well as drone photography to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off Clarke Road, located to the south-east of the site. These properties include; 85, 97B, 109 Clarke Road (south-east).

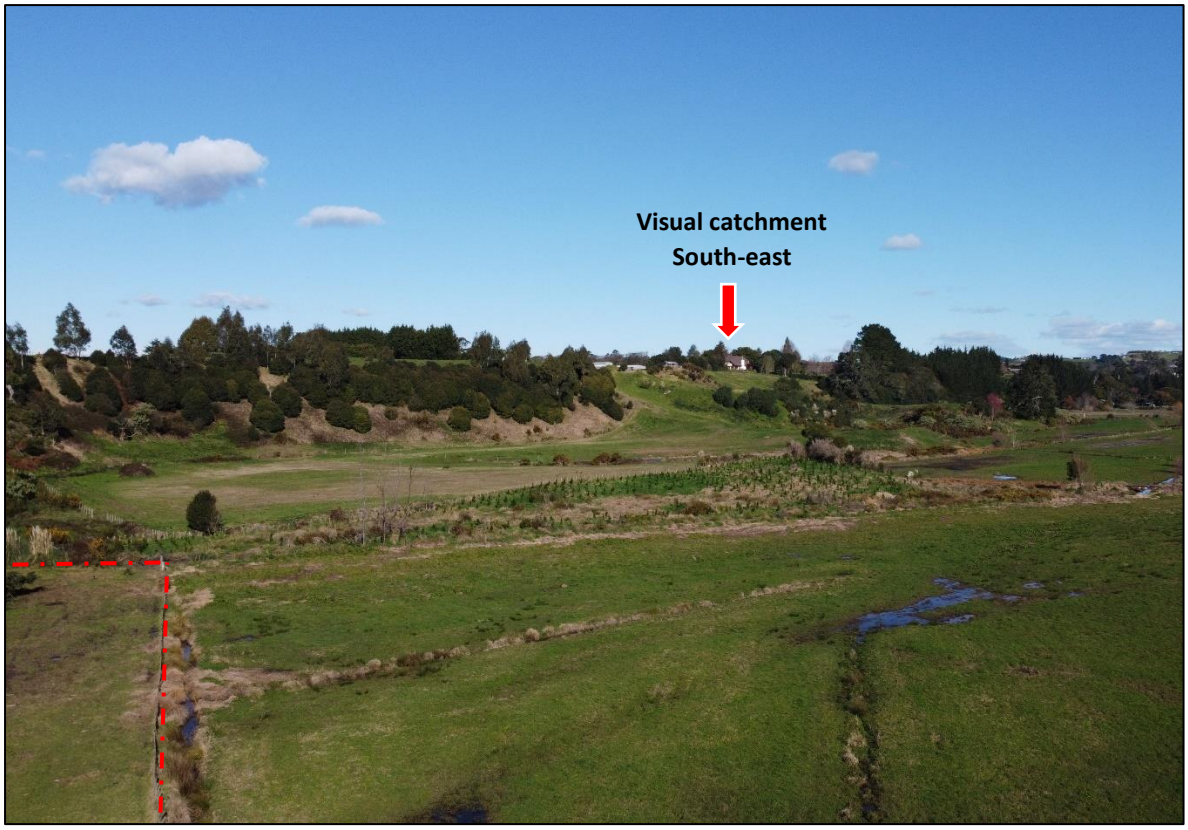


Photo 27: Drone Photo looking south-east from within the site, up the Hakao Stream valley, with the properties on the eastern side of the valley highlighted, accessed from Clarke Road (View point M).

Photo 28: Photo looking south-east from within the site, up the Hakao Stream valley, with the properties on the eastern side of the valley highlighted, accessed from Clarke Road (View point M).

Assessment

Elevated views from the eastern side of the Hakao Stream valley visual catchment area are available to the site. Properties include; 85, 97B, 109 Clarke Road (south-east), and are located between 28-34m elevation. A reasonable degree of existing vegetation surrounds most properties and creates intermittent screening of viewshaft towards site. Ssome residences currently experience a moderate degree of visibility towards the site.

Common to other viewpoints, there is considerable visual improvement of the eastern portion of the site through the establishment of a wetland with native species, trees and shrubs which will become a habitat for bird life and a variety of fauna. This is a significant improvement on landscape values in this location, given it is currently degraded farmland. Long views into this section of the site from this view point, are therefore considered to be improved.

The intent of the landscaping outcomes of the structure plan is to provide screening into the site, Shelter planting is proposed to the southern boundary which will assist in visually softening the appearance of the site from this view point. A mix of exotics and natives as called for at perimeter and inter-lease locations is proposed to minimise the extent and prominence of visibility of the industrial use.

Given the proposed industrial areas are over 500m (minimum) away and taking into consideration the proposed perimeter planting to southern boundary, roadside and inter-lease planting, and trees along the edge of the wetland/ eastern boundary of yards, effects on rural amenity outlook are considered **low.**

Viewpoint N, Assessment

Viewpoint N is depicted below, which includes photos from within the site looking back up to the visual catchment, as well as drone photography to show the relationship between the site and the viewing audience. This relates to properties and associated residences accessed off Clarke Road, located to the south-east of the site. These properties include; 139, 145, 159 and 161 Clarke Road (directly east).

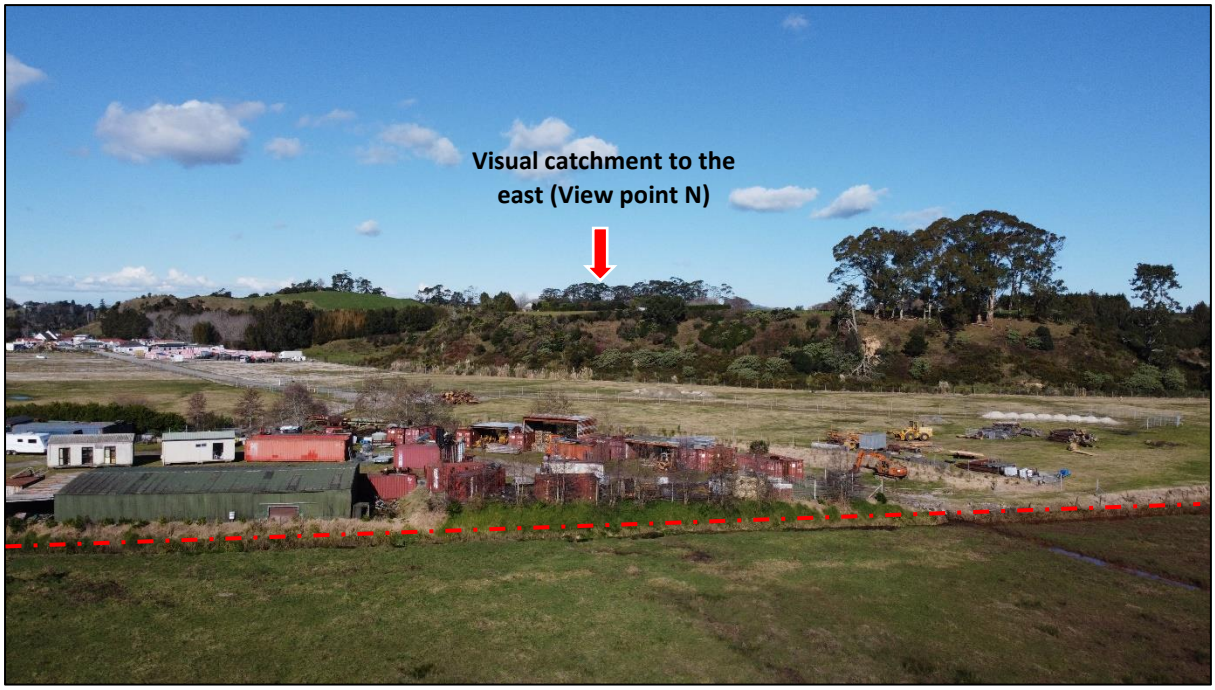


Photo 29: Drone photo looking east from eastern boundary of site, up towards the properties accessed off Clarke Road associated with View Point N.

Photo 29: Photo looking east from paper road in south -east corner of site up towards the properties accessed off Clarke Road associated with View Point N. No dwellings are visible as these are set back considerably behind the crest of the hillside and existing planting which follows the ridge line.

Assessment

Potential elevated views from the eastern side of the Hakao Stream valley visual catchment area are available to the site. Private dwellings on the western side of Clarke Road range from 420 – 500m away from eastern boundary of the site at an elevation of RL 12-28 m.

The change in elevation ensures rural outlook from these dwellings is substantially above and over the site with important landscape and visual amenity components (hills, and ridges, where visible) are not affected. Existing topography and intervening vegetation along the crest of the hillside, provide screening from these properties, down into site where the industrial activities will be taking place.

This existing condition, combined with the native trees that are proposed along the eastern boundary of the industrial yards, to the periphery of the wetland, and roadside and inter-lease planting, ensures that the visual amenity/outlook effects of the proposal upon these properties remains **very low to negligible** in this context. This takes into consideration both views from within the properties and from dwelling locations.

8.2 Temporary Visual Effects

It is acknowledged that plants will take up to 10 years to establish to maturity where substantial softening and screening occurs. However the proposed Landscape Plan and Planting Palette provides for plants that will be established to a height of at least 1.2m at the time of planting, and reach a height of 2m within 2 years of planting when following the proposed Outline Maintenance Plan (see **Attachment D**), as expected by Rule 4C.5.3.1. Given the 45L bag specification, trees will likely be closer to 2m at time of planting.

Given compliance with this rule, and the intent of the structure plan in respect of all landscaping deliverables, the temporary visual effects experienced are considered to be as anticipated by the Structure Plan.

8.3 Positive Landscape Effects

Historically the site has been relatively poorly maintained, with degraded open space, including exposed areas of dirt and gravel amongst the grassed areas, with boggy paddocks across the existing pastoral land. Road side planting is relatively adhoc and lacks density and definition. Stormwater is diverted through fam drains, while the eastern potion of the site is subject to flooding in large rain events, without any particular management in place.

The proposed landscaped bund to Te Puna Station Road, will provide a native planted swale systems and row of native trees and undercorft shrub planting, which will provide a densely planted roadside, which is an improvement on the existing situation.

The proposed naturalise wetland within the eastern portion of the site, will mange stormwater across the site and provide for a native habitat for birds insects and freshwater fauna, and ultimately

enhance biodiversity across the site. There is a national push to restore and enhance wetlands, given their ecological benefits. As such this elements of the landscaping proposal in particularly is considered a vast improvement of landscape values within this eastern portion of the site.

Further the introduction of native an exotic trees to the southern and eastern boundaries, between future yard spaces and along the internal road will all help to screen, soften and enhance biodiversity against the harder industrial land uses.

9.0 Summary of Landscape Effects

9.1 Visual Landscape Effects

A rating of the effects upon the identified viewpoints and their associated visual landscape values, using the NZILA best practice rating scale, is provided below. This is based on the detailed viewpoint assessment outlined earlier within section 8 of this landscape and visual assessment report, and takes into consideration the mitigation planting proposed.

Table 3: Assessment of Viewpoints

View Point No	Location	Rating (negligible; very low; low; moderate; high; very high; extreme)
A	Public view from vehicles travelling east along Te Puna Station Road	Low
B	Public view from vehicles travelling west along Te Puna Station Road.	Low
C	Private View shaft from 72B and &2C James Road	Very Low – Negligible
Ca	Private View shaft from 76 Teihana Road	Very Low – Negligible
D	Private View shaft from 52, 54 and 66 James Road	Very Low – Negligible
E	Private View shafts from 288a, 288b and 326 Te Puna Station Road	Very Low
F	- Private View shaft from 166 Te Puna Road	Very Low
G	Private View shafts from 148 and 138 Te Puna Road	Very Low
H	Private view shafts from 118 and 112 Te Puna Road	Low
I	Private view shafts from 88, 106, 106A and 110 Te Puna Road	Low
J	Private view shafts from 66, 72, 78, 80, 86a, 86b	Low

K	Private view shafts from 56A-56E Te Puna Road	Low – Very Low
L	Private view shafts from 2A,2C, 4A-4C and 18 Armstrong Road.	Low - Very Low
M	Private view shafts from 85, 97A, 97B Clarke Road	Low
N	Private view shafts from 139, 145, 147, 149 and 161 Clarke Road.	Very Low – Negligible

Summary

The overall level of landscape and visual effects are assessed as generally **low to very low to negligible** on the wider rural context. This has taken into consideration the distance from the site, change in elevation, and natural topography of the landscape, existing vegetation and proposed mitigation planting with the site.

9.2 Physical Landscape Effects

It is relevant to assess and comment on the physical change in landform and vegetation, and ultimately effects on the physical landscape values as a result of the proposed development on site.

The assessed changes to the physical landscape consists of the following:

1. Bulk earthworks associated with the development of the site, including localised cutting and filling of the land west of the proposed stormwater ponds and wetland/overland flow path to RL 2.5m, where required, as per the WSP earthworks plan.
2. Formation of the central road, which services the future industrial yard spaces.
3. Associated entrance fencing and landscaping.
4. Future yard spaces, sealed and unsealed.
5. Commercial buildings and sheds associated with yards.
6. Future wetland stormwater management area
7. Landscaping to periphery of the site, along Te Puna Station Road, either side of the proposed internal street network, and between yard spaces, as anticipated by the structure plan. Wetland planting as part of the stormwater treatment area.

The existing condition of the site is predominantly vacant/ degraded pastoral land with some yard areas and ancillary sheds clustered within the south-western corner of the site.

The proposed civil infrastructure, future yard spaces and ancillary building (workshop) will fundamentally alter the landscape from its predominantly current rural form.

Maintaining existing mature trees where possible along boundaries, and introducing rows/clusters of specimen trees in accordance with the structure plan landscape requirements, is also important and will help to maintain a level of existing rural amenity values to the properties that interface with the site and have views towards the site. This is particularly important for the properties which are situated south up the Hako valley stream, and have long views towards the site.

Using the NZILA 7-point rating scale system, the effects on the physical landscape in this location, would be considered **moderate – high,** as a result of the earthworks, and urbanisation required to establish the industrial yards.

Although physical landscape effects are assessed as moderate - high, it is acknowledged that this is anticipated by the underlying Industrial Zoning, provided the requirements of the structure plan are met including landscaping.

Further, it is also worth noting there is substantial benefit from the change in the eastern portion of the site from a landscape perspective, where degraded farmland is being transformed to a naturalised wetland area for stormwater management. This wetland will be established with native plants, which will play a role in stormwater management and taking sediment out of the flow path, while also providing a habitat for native birds and estuarine life. The batter slope to the wetland will also include a pedestrian connection through the site to Hakao Stream, which is considered a positive benefit to the wider community.

Table 3: NZILA rating scale for physical landscape effects

Rating	Description
High	*Noticeable change to the existing character or distinctive features of the landscape or reduction in the perceived amenity or the addition of the new but uncharacteristic features and elements.*
Moderate	*Partial change to the existing character or distinctive features of the landscape and a small reduction in the perceived amenity.*

10.0 Cultural/ Associative Effects

In accordance with the NZILA landscape assessment guidelines Te Tangi a te Manu, it is important to consider cultural values associated with the landscape.

There are no archaeological sites recorded on the property by Heritage New Zealand Pouhere Taonga. The District Plan does not record any scheduled heritage features at the Site. The land is of cultural significance to tangata whenua, and engagement with Hapu and Iwi has been undertaken by the project tema. This included the following hapū and Iwi:

Hapū:

- Pirirākau
- Ngāti Taka
- Ngāti Hinerangi

Iwi:

- Ngāti Ranginui
- Ngāi Te Rangi
- Ngāti Pūkenga

A full record of consultation within Iwi and Hapu, was included in the AEE as part of the original application.

Generally speaking, the relevant hapū management plans recognise the importance of the interface, that the built environment has with the natural environment, and how the intrinsic values of the

natural landscape including indigenous flora and fauna needs to be upheld and enhanced as part of future development. This relates to impacts on water quality, and downstream effects.

The proposed landscape mitigation planting plays an important role in softening the interface between the natural and built environment, and helping to integrate the development in the landscape, particularly at the boundary edges which are most prominent to the surrounding public and private view catchment.

The current state of the land is highly modified from historical farming and recent industrial uses, and as a result a high degree of indigenous vegetation has been lost. Enhancing native plantings on site, will help to establish a degree of this in appropriate locations. Further to this, managing stormwater through a wetlands and use of native plantings, to assist in the removal of sediments is low impact and will further help to naturalise the eastern portion of the site, which is currently degraded farmland with limited stormwater management in place.

Pirirākau are being actively consulted with on the landscaping species associated with the wetland as part of the resource consent process.

11.0 Structure/District Plan Landscape and Visual Amenity Deliverables

The Structure Plan, and wider District Plan landscape and visual amenity objectives, policies and rules applying to site, are explained at sections 6.2 and 6.3 of this report, include boundary planting, inter-lease planting, roadside planting to Te Puna Station Road, wetland planting within the overland flow path and reflectivity standards for roofs and walls of buildings in the Structure Plan area. As well as supporting landscape maintenance and establishment guidelines.

The proposed landscaping as illustrated within the landscape plan in Attachment A, is considered meet the intent of and comply with these rules and the deliverables in terms of landscaping and visual amenity outcomes. In particular:

- Natives only to bunded front boundary (as envisioned by Environment Court decision);
- Fast growing natives and exotic mix to perimeter boundaries and at inter-lease locations;
- Native wetland-appropriate tree planting to wetland interface;
- Wetland planting in accordance with local best practice within the wetland.

Regarding Rule 21.5.1, which requires additional landscaping to buildings greater than 100m2. As it relates to this proposal, this applies to the workshop area, which consist of a three-sided stack of 40 foot containers (2 high) with a canvas roof.

As illustrated on the proposed landscape plan, the proposed boundary planting, including rows of trees to all boundaries, along the western edge of wetland and to each side of the internal road, will ensure an adequate level of screening to the workshop is provided from outside of the site, and therefore additional screening is not considered necessary around the workshop.

Further, having additional trees to the perimeter of the workshop area presents a potential site line/ safety issue for heavy machinery manoeuvring around this area.

In summary, the landscape proposal meets the intent of the relevant Landscape and Visual Amenity Rules within the District Plan.

12.0 Recommendations and Certification

Summary and recommendations

The overall level of landscape and visual effects are assessed as generally **low to very low to negligible** on the wider rural context, subject to the mitigation within the proposed landscape plan at **Attachment A**. This has taken into consideration, the distance from the site, change in elevation, existing vegetation and proposed mitigation planting.

In terms of the physical change and associated effects to the landscape, the proposal is considered to have a **medium to high** degree of effect, given a large portion of the site is being urbanised from grazing paddocks to industrial yards. The appropriate management of this change and associated effects would include implementing the landscape mitigation, as per the proposed landscape plan at **Attachment A**. This is aligned with the landscape requirements of the structure plan and environmental court decision. Landscape mitigation includes the following:

- Retention of existing trees where viable (inter-lease/boundary locations).
- Proposed landscaping to periphery of the site, along the internal road network, and between future yards as per the proposed Landscape Plan.
- Establishment of a naturalised stormwater wetland management area as per the Landscape Mitigation Plan.
- Darker/recessive colours to roofs of buildings so as to meet District Plan requirements.

Certification

Pursuant to Rule 4C.5.3.1.b.iii, I (Tom Watts, Landscape Architect), certify that the proposed landscape plan at **Attachment A** would deliver appropriate screening as intended by the Te Puna Business Park Structure Plan and comprises appropriate and hardy species expected to survive and successfully establish at the site.

13.0 Conclusions

The proposed development, and consequential change in use and appearance from rural to industrial, in accordance with the structure plan, will result in a low to negligible level of effects on receptors within the surrounding rural visual catchment, as identified in the viewpoint analysis, subject to the mitigation proposed. There will be a moderate to high degree of physical change and associated effects to the site as a result of the predominantly open pastoral land being raised and modified as a result of the bulk earthworks required for the industrial development. The naturalisation of degraded pastoral land to a naturalised wetland area is considered an improvement on the existing degraded farmland in the eastern portion of the site. Further this wetland will provide amenity to the area, and facilitate a pedestrian connection through to the Hakao Stream from Te Puna Station Road, which is seen as a positive design outcome.

The existing and proposed landscape mitigation along the boundaries of the site, will help to soften the interface between the rural land to the south, and provide a good level of screening into the site. Trees and landscaping throughout the future development, including the natural stormwater wetland area, will also provide a good level of amenity within the development, and help integrate with the surrounding rural/ landscaped context.

The intent of the structure plan insofar as landscaping requirements is considered to be met by the proposed landscape plan, whist including specific measures to address landscape and visual amenity factors of a wide range of nearby receptors.

The proposal is supported from a landscape perspective, provided the landscape mitigation proposed within the landscape mitigation plan is adhered to, which will be subject to detailed landscape design in the future.

Attachment A – Landscape Plan, Planting Palette (Including Outline Wetland Establishment Guide)

297 Te Puna Station Road

Landscape Plan and Planting Palette
Including Outline Wetland Establishment Plan

23 January 2023

MOMENTUM
PLANNING AND DESIGN

Landscape Requirements

The following Landscape Plan, Planting Palette and Outline Wetland Establishment Guide, have been prepared with consideration of the landscape requirements set out in the Te Puna Business Park Structure Plan and Environment Court Decision. Summarised below.

The intent of the Structure Plan, as supported by the resolution of the Environment Court appeal process which created the Te Puna Business Park Industrial Zoning, is interpreted as seeking to deliver the following landscape outcomes:

- Native tree and shrub planting atop of a bund a minimum of 1.5m high along Te Puna Station Road
- Secondary planting along internal roads (mix of natives and exotics)
- Secondary planting on boundaries between land parcels or leases (mix of natives and exotics)
- Shelter planting at business park perimeter (southern and western boundaries of the subject site), including mix of fast growing exotics and native species
- Wetland planting within structure plan overland flow path to convey water from 297 Te Puna Station Road through 245 Te Puna Station Road to a roadside drain to the north of 245 Te Puna Station Road
- Relocation of roadside drain to north of the site to inside the site boundary at 297 Te Puna Station Road, with native planting in a naturalised swale system (also applies to 245 Te Puna Station Road).

Landscape Design Rationale

The landscaping design has been specifically prepared firstly to address the aforementioned intent of the structure plan landscaping outcomes, including incorporation of a native planted bund to Te Puna Station Road, naturalised wetland for stormwater management, and a mix of exotic and native trees to the southern and western boundaries, and internal road network.

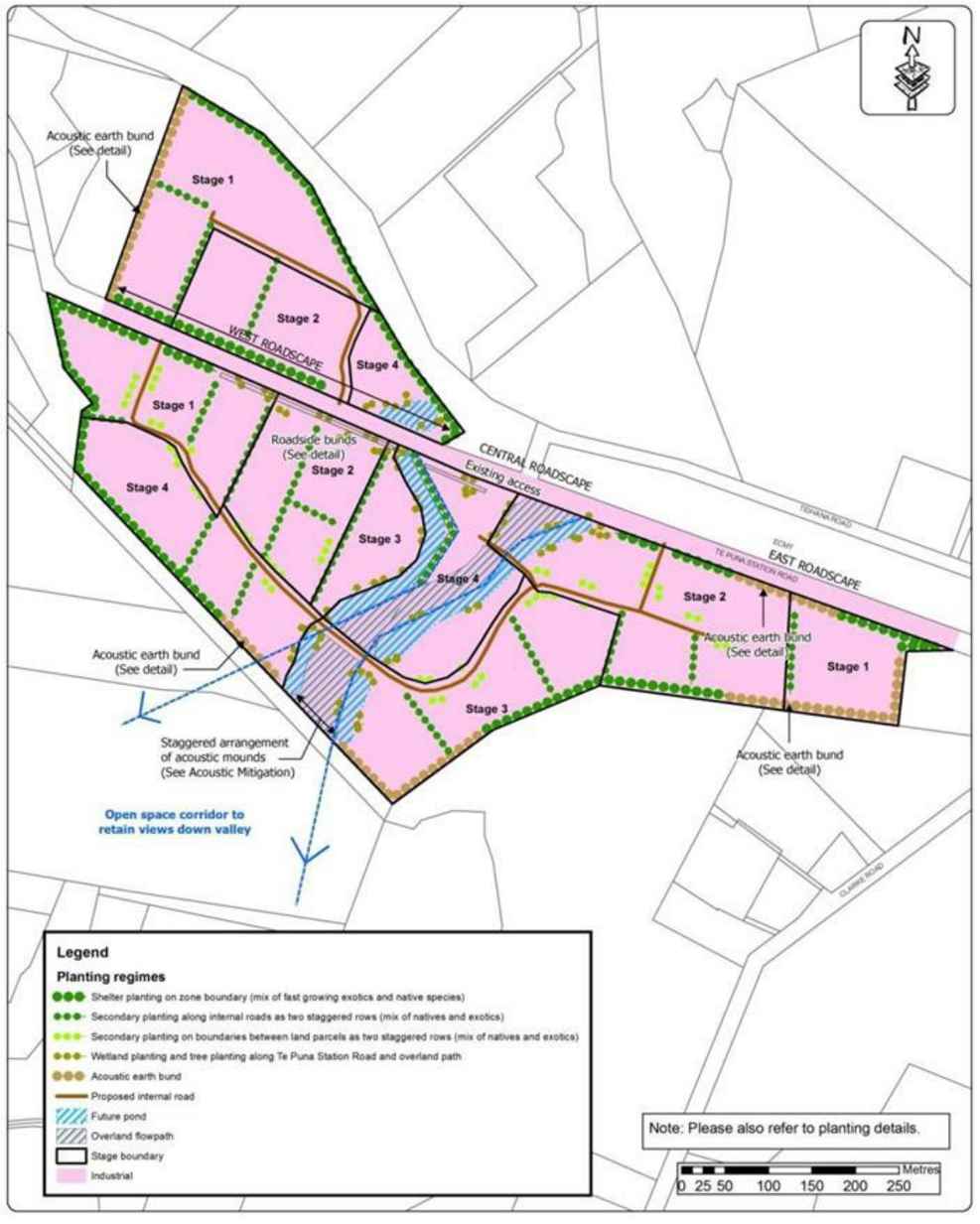
Secondly, the landscaping design has the intent of, regardless of prescribed mitigation within the structure plan, mitigating any potential landscape and visual effects created by the proposed development, to soften the development and assimilate it into the surrounding landscape. This has been completed following the completion of a Landscape and Visual Impact Impact Assessment in respect of the proposed development of the site.

The naturalised wetland within the overland flow path has been designed to include a variety of native species in accordance with the BOPRC wetland establishment guide, in order to manage stormwater on site, and enhance biodiversity within the eastern portion of the site.

The species proposed have been individually chosen with consideration to the local environment, and proposed growing conditions. All trees and shrubs to have a minimum size as specified within the Landscape Planting Palette.

The client Te Puna Industrial Limited is in the process of establishing a partnership agreement with mana whenua Pirirakau and through that process Pirirakau landscape specialists will be engaged on the detailed planting plan as detailed design stage. This will ensure the end design provides for cultural whakapapa in respect of precise plants, and wellbeing.

Te Puna Business Park, Structure Plan



297 Te Puna Station Road

Landscape Requirements

Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM
PLANNING AND DESIGN

NOTES

- TREE LOCATIONS ARE INDICATIVE AND WILL BE FINALISED ON SITE BY CONTRACTOR.

LEGEND

- OLFP AS PER STRUCTURE PLAN
- GRAVEL PEDESTRIAN PATHWAY
- RAISED TIMBER BOARDWALK ACROSS WETLAND
- ORNAMNETAL GARDEN AND SEATING AREA
- INDICATIVE WORKSHOP AREA

LANDSCAPING

- WETLAND PLANTING IN OLFP AS PER STRUCTURE PLAN
- NATIVE TREES TO EDGE OF WETLAND
- BDY SHELTER TREES (NATIVE & EXOTIC MIX)
- NATIVE TREES ALONG TE PUNA STATION RD BUND
- NATIVE SHRUBS ALONG TE PUNA STATION RD
- INTERNAL STREET TREES
- INTER-LEASE PLANTING

REFER TO PLANTING PALETTE FOR SPECIES SPECIFICATIONS

MOMENTUM
PLANNING AND DESIGN

REVISION

NO.	DATE	DESCRIPTION	APPROVED
1	15.12.22	Final Revisions	VM
2	16.01.23	Location of Workshop & Path Amendments	VM
3	23.01.23	Location of Pond	VM

297 TE PUNA STATION ROAD

LANDSCAPE CONCEPT PLAN

DESIGN	TW
DRAWN	TW
CHECKED	VM
DATE	23.01.23
DRAWING NO.	002
PROJECT NO.	20282

REV NO.	SCALE
2	1:2000 @ A3

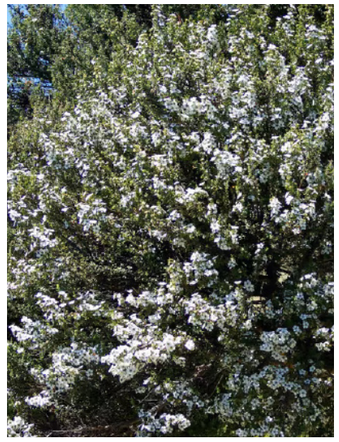
Proposed Roadside Trees (Te Puna Station Road, Landscape Bund)

Alectryon excelsa
Titoki

Mature Height: 5-7m

Metrosideros excelsa
Pohutakawa

Mature Height: 8m



Leptospermum scoparium*a*
Manuka

Mature Height: 6m

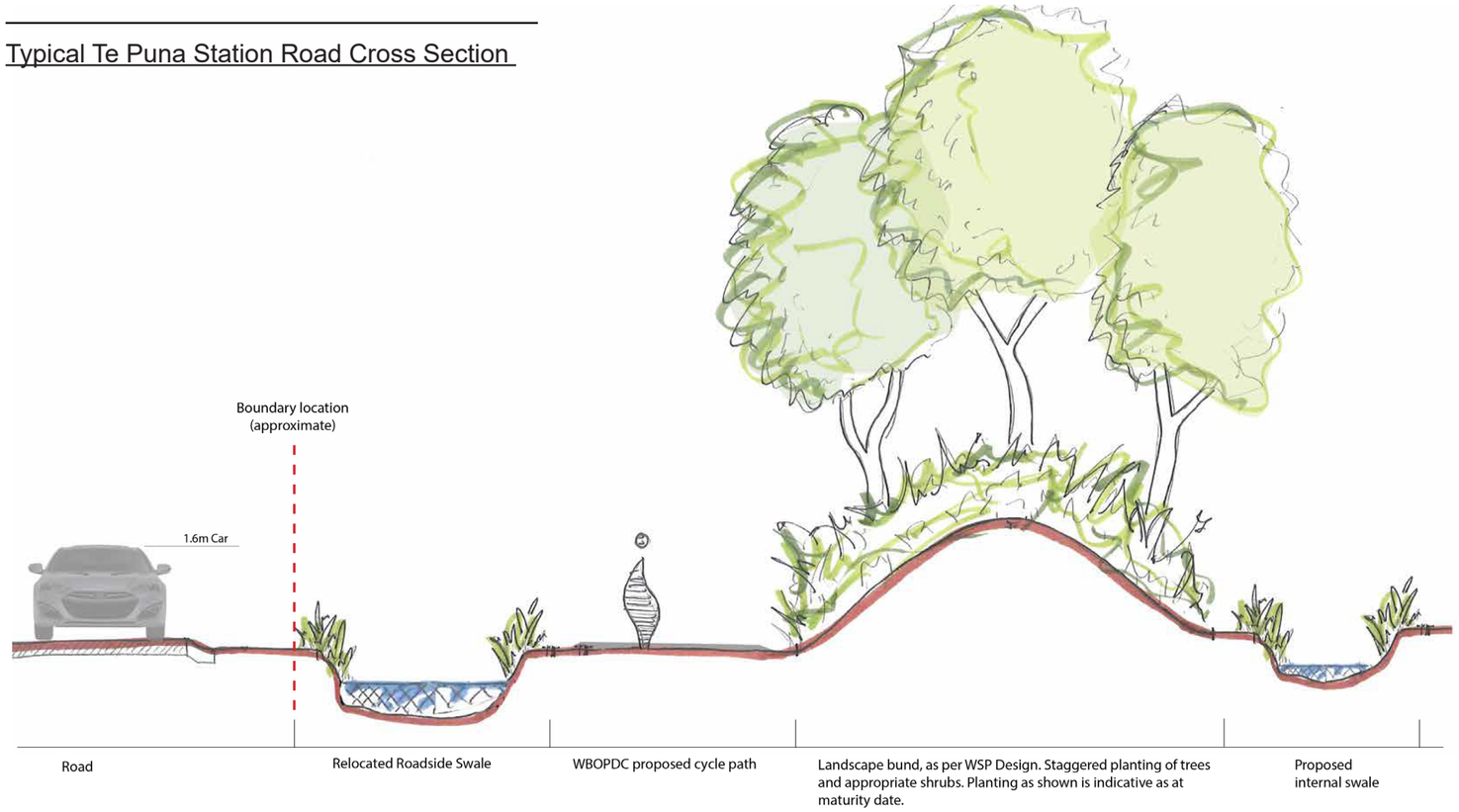
Cordyline australis
Cabbage tree

Mature Height: 4 - 8m

Pseudopanax crassifolius
Lancewood

Mature Height: 10-15m

Typical Te Puna Station Road Cross Section



Notes:

Refer to plans for spacing and set out.
Minimum bag size of 45L for all tree's at time on installation.

Trees to be sourced locally to ensure best chance of survival.

If species are unavailable, species with similar qualities can be used. To be confirmed by contractor in consultation with project Landscape Architect.

Shelter trees to eastern and western boundaries as per Structure Plan requirements: If in single row, trees must be closely spaced (2-3 metres) to prevent gaps in screening.

Refer to Outline Landscape Maintenance Plan for details on plant establishment and maintenance.

Proposed street trees are aligned with the WBOPDC Draft Urban Street Tree and Planting Guide.

297 Te Puna Station Road

Tree Palette

Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM
PLANNING AND DESIGN

Proposed Boundary Trees (Southern/ western boundaries of site & future internal boundaries between yards)

Mix of exotics and natives as per Structure Plan requirements

Magnolia grandiflora
Ferrugenia
Mature Height: 9m average

Vitex lucen
Puriri
Mature Height: 10m average

Dysoxylum spectabile
Kohekohe
Mature Height: up to 15m

Pittosporum tenuifolium
Stephens Island
Mature Height: 4m average

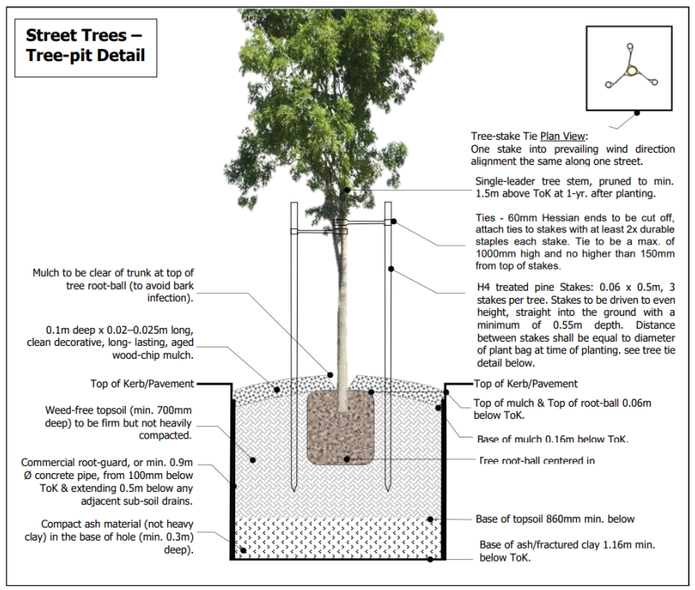
Olea Verdale
Olive
Mature Height: 5m average

Proposed Street Trees (Internal Road)

Acer buergerianum
Trident maple
Mature Height: 7m average

Alectryon excelsa
Titoki
Mature Height: 5-7m average

Jacaranda mimosaefolia
Jacaranda
Mature Height: 7m average



Tree-pit detail as per WBOPDC Draft Urban Street Tree & Planting Guide

297 Te Puna Station Road

Tree Palette

Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM
PLANNING AND DESIGN

Ground Cover Native Shrub Mix 1 (shrub planting to landscape bund on Te Puna Station Road)

Carex comas
sedge

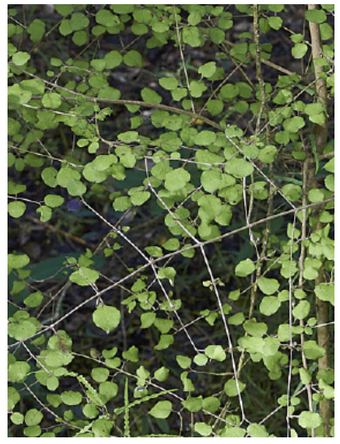
Mature Height: 0.5m
Mature Spread: 0.8m

Carex dissita
forest sedge

Mature Height: 1m
Mature Spread: 1.5m

Phormium
Emerald Green

Mature Height: 0.8m
Mature Spread: 0.8m



Comprosma propinqua
mingi ming

Mature Height: 1m
Mature Spread: 1.5m

Hebe ‘Wiri Charm’
Shrubby Veronica

Mature Height: 0.7m
Mature Spread: 1.3m

Notes:

Plants to be mass planted.
Minimum container size of 1.0L.
2-4 plants per m², depending on plant size. To be determined on site by contractor.

Plants to be sourced locally to ensure best chance of survival.

Mulch garden bed surface with a wood chip or bark mulch to a depth of 50-75mm.

Species illustrated can be bolstered with other native shrubs if desired. Species to be confirmed with project Landscape Architect for appropriateness and availability.

Ground Cover Native Mix 2 - Low lying Areas (around road side swales and edge of SW ponds)

Carex dissita
Purei

Mature Height: 0.5m
Mature Spread: 0.5m

Apodasmia similis
Oioi

Mature Height: 1m
Mature Spread: 1.5m

Austroderia fulvida
Toe Toe

Mature Height: 1.5 - 2m
Mature Spread: 1 - 2m

Carex Virgata
Tawapou

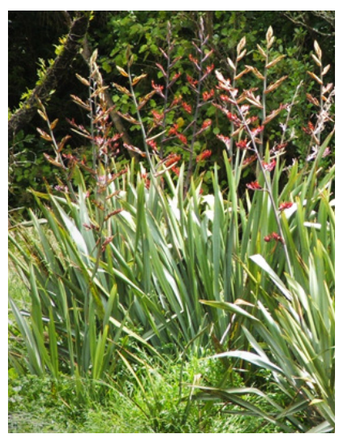
Mature Height: 1.0m
Mature Spread: 1.0m

Carex Geminata
Ruatahi

Mature Height: 1.0m
Mature Spread: 1.0m

Juncus effusus
Common Rush

Mature Height: 1.0m
Mature Spread: 0.5m



Phormium Tenax
Harakeke

Mature Height: 1.5m
Mature Spread:1.0-1.5m

297 Te Puna Station Road

Reserve Mix Palette

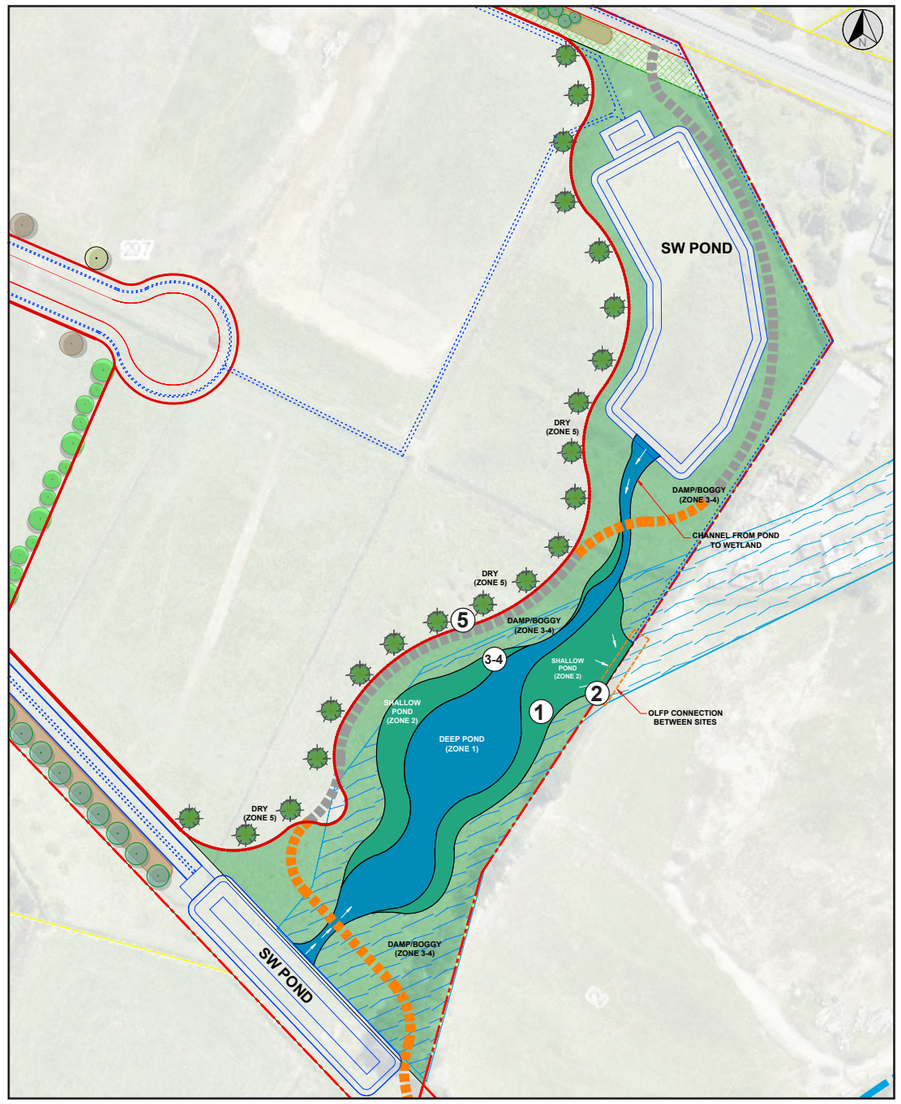
Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM
PLANNING AND DESIGN

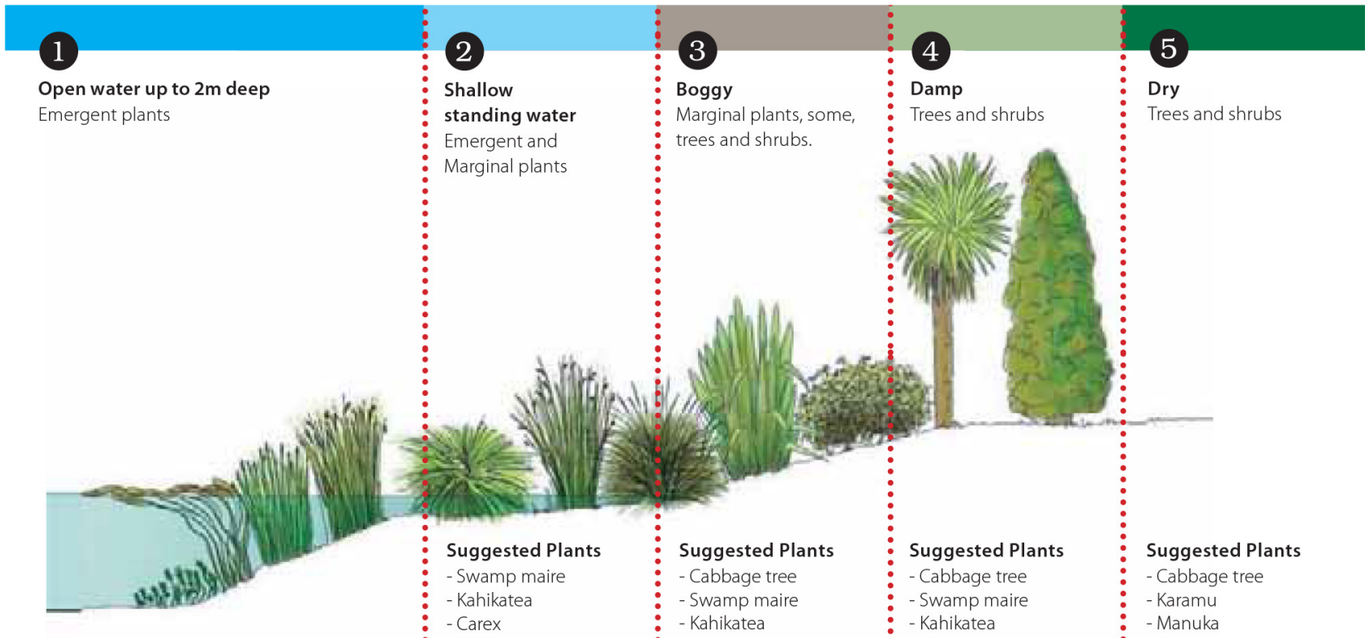
Outline Wetland Establishment Guide

This Outline Wetland Establishment Guide, takes into consideration the Bay of Plenty Regional Council Wetland Restoration Guide. This provides specific guidance on restoring and creating new wetlands within the Bay of Plenty Context. As part of the Development Works Approval process, a more comprehensive detailed design will be submitted for approval, based on this Outline Guide.

Wetland Planting Zones



Wetland Planting Zones



1
Open water up to 2m deep
Emergent plants

Suggested Plants
- Lake club rush
- Raupo

2
Shallow standing water
Emergent and Marginal plants

Suggested Plants
- Swamp maire
- Kahikatea
- Carex
- Jointed twig rush
- Bamboo spike sedge
- Lake club rush
- Marsh club rush
- Baumea
- Raupo

3
Boggy
Marginal plants, some, trees and shrubs.

Suggested Plants
- Cabbage tree
- Swamp maire
- Kahikatea
- Coprosma propinqua
- Pukatea
- Swamp coprosma
- Manuka
- Flax
- Toetoe
- Carex
- Rush
- Giant umbrella sedge
- Bamboo spike sedge
- Lake club rush
- Marsh club rush
- Baumea

4
Damp
Trees and shrubs

Suggested Plants
- Cabbage tree
- Swamp maire
- Kahikatea
- Karamu
- Coprosma propinqua
- Pukatea
- Swamp coprosma
- Manuka
- Flax
- Toetoe
- Carex
- Rush
- Giant umbrella sedge
- Bamboo spike sedge

5
Dry
Trees and shrubs

Suggested Plants
- Cabbage tree
- Karamu
- Manuka
- Toetoe
- Coprosma propinqua

For more Zone 5 dryland plants, visit the websites on page 15 or contact any of the agencies listed.

Diagram courtesy Greater Wellington Regional Council and Lisa Paton, Morphological Environmental Communication.

Source: BOPRC Wetland Restoration Guide

297 Te Puna Station Road

Outline Wetland Establishment - Formation and Planting Zones

Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM PLANNING AND DESIGN

Outline Wetland Establishment Guide

The following native species are recommended by BOPRC for Zones 1-5 identified.
Species to be confirmed at detailed design stage by project Landscape Architect and Pirirākau.

Plant Name	Visual Descritpion / Planting Proportions	When to Plant	Restoration Aim	Planting Conditions: Zone	Light	Drainage	Wind/Frost	Animal Browse
Cabbage tree Ti kouka *Cordyline australis* (DOC)	**Tree** Moderate numbers in groups	Early-late (late in areas with heavy frosts)	FSN 10m	3 4 5				
Swamp maire Maire tawake *Syzygium maire* (Peter de Lange)	**Tree** Few - enrichment planting	Early-late (late in areas with heavy frosts)	F 15m	2 3 4				Possums (young and mature trees)
Kahikatea *Dacrycarpus dacrydioides* (DOC)	**Tree** Concentrate plantings to create stands. Few to moderate numbers	Early	FS 30m	2 3 4				
Pukatea *Laurelia novae-zelandiae* (Jeremy Rolfe)	**Tree** Plant a few - enrichment planting	Late	25m	3 4				
Karamu *Coprosma robusta* (Jeremy Rolfe)	**Shrub** Moderate numbers in appropriate zone	Early	FS 2-4m	4 5				Rabbits, hares, cattle. But not possums
Mingimingi *Coprosma propinqua* (Jeremy Rolfe)	**Shrub** Few	Mid	F 3m	3 4				
Swamp coprosma *Coprosma tenuicaulis* (Jeremy Rolfe)	**Shrub** Few	Early	F 3m	3 4				
Manuka *Leptospermum scoparium* (John Smith-Dodsworth)	**Tree** Many in appropriate zones. These would make up the bulk of most plantings.	Early	4m	3 4 5				
Flax Harakeke *Phormium tenax* (Peter de Lange)	Moderate numbers - plant in groups away from species that will shade them later.	Early	N 2m	2 3 4				
Toetoe* *Cortaderia fulvida* (Scion)	**Grass** *Throughout the BOP, especially in inland districts.* Few	Early	2m	3 4 5				Rabbits, young plants
Toetoe* *Cortaderia toetoe* (Scion)	**Grass** *South of Tauranga only. More coastal.* Few	Early	2m	3 4 5				Rabbits, young plants

Important note:** Similar to invasive pampas grass which should ***not be planted. Pampas has bushy erect flower heads late January - mid April and dead leaves curl at the base; versus toetoe which droops, flowers in October - January and has a white waxy substance at the base of the leaves.

Plant Name	Visual Descritpion / Planting Proportions	When to Plant	Restoration Aim	Planting Conditions: Zone	Light	Drainage	Wind/Frost	Animal Browse
Carex Pukio *Carex secta* (John Smith-Dodsworth)	**Sedge** Many in appropriate zones. These would make up the bulk of the plantings in wetter areas	Early	W 2m	2 3 4				
Carex *Carex virgata* (John Smith-Dodsworth)	**Sedge** Many in appropriate zones. These would make up the bulk of the plantings in wetter areas	Early	W 1m	3 4				
Carex *Carex geminata* (John Smith-Dodsworth)	**Sedge** Few	Early	W 1m	3 4				
Jointed twig rush *Baumea articulata* (John Smith-Dodsworth)	**Sedge** Few - enrichment planting; limited by zone	Early	W 1.8m	2				
Rush *Baumea tenax* (Jeremy Rolfe)	**Sedge** Few - enrichment planting	Early	W 0.5m	3 4				
Giant umbrella sedge *Cyperus ustulatus* (John Smith-Dodsworth)	**Sedge** *Some die-back in winter.* Few - enrichment planting	Early	W 0.8m	3 4				
Bamboo spike sedge *Eleocharis sphacelata* (John Smith-Dodsworth)	**Sedge** Few - enrichment planting; limited by zone	Early	W 1.2m	1 2				
Lake club rush *Schoenoplectus tabernaemontani* (John Boxila)	**Sedge** *Propagate by subdivision.* Few - enrichment planting; limited by zone	Early	W 2m	2 3				
Marsh club rush *Bolboschoenus fluviatilus* (John Smith-Dodsworth)	**Upright sedge** *Stems die back over winter. Propogate by subdivision.* Few - enrichment planting	Early	W 1.5m	2 3				
Baumea *Baumea rubiginosa* (John Smith-Dodsworth)	**Sedge** Few - enrichment planting	Early	W 1m	2 3				
Raupo *Typha orientalis* (John Smith-Dodsworth)	**Herb** *Dies off in winter. Can be hard to propagate by division. Can be invasive.* Few - enrichment planting	Early	W 2m	1 2				

Source: BOPRC Wetland Restoration Guide

PLANT SPACINGS

Sedges and Rushes	0.5m
Shrubs	1.0m
Small trees	1.5-2m
Large trees	3.0m

Spacing	Plants per m2
0.5m	4
1.0m	1
1.5m	0.44
2.0m	0.25
3.0m	0.11

plant guide key

FSNW	Attracts birds **F** = fruit **S** = seeds **N** = nectar **W** = wildlife shelter/nesting
10m	Approx max height
	Full sun
	Partial sun
	Full shade
	Drainage - good
	Drainage - moderate
	Drainage - poor
	Wind sensitive
	Frost sensitive

When to Plant: Means at what stage in the project. Early are the pioneer species that can go in first on bare site. Mid and late species require some shelter from other plants as they can be frost tender or generally grow in moderate to heavy shade.

Enrichment planting: to add diversity to your planting

297 Te Puna Station Road

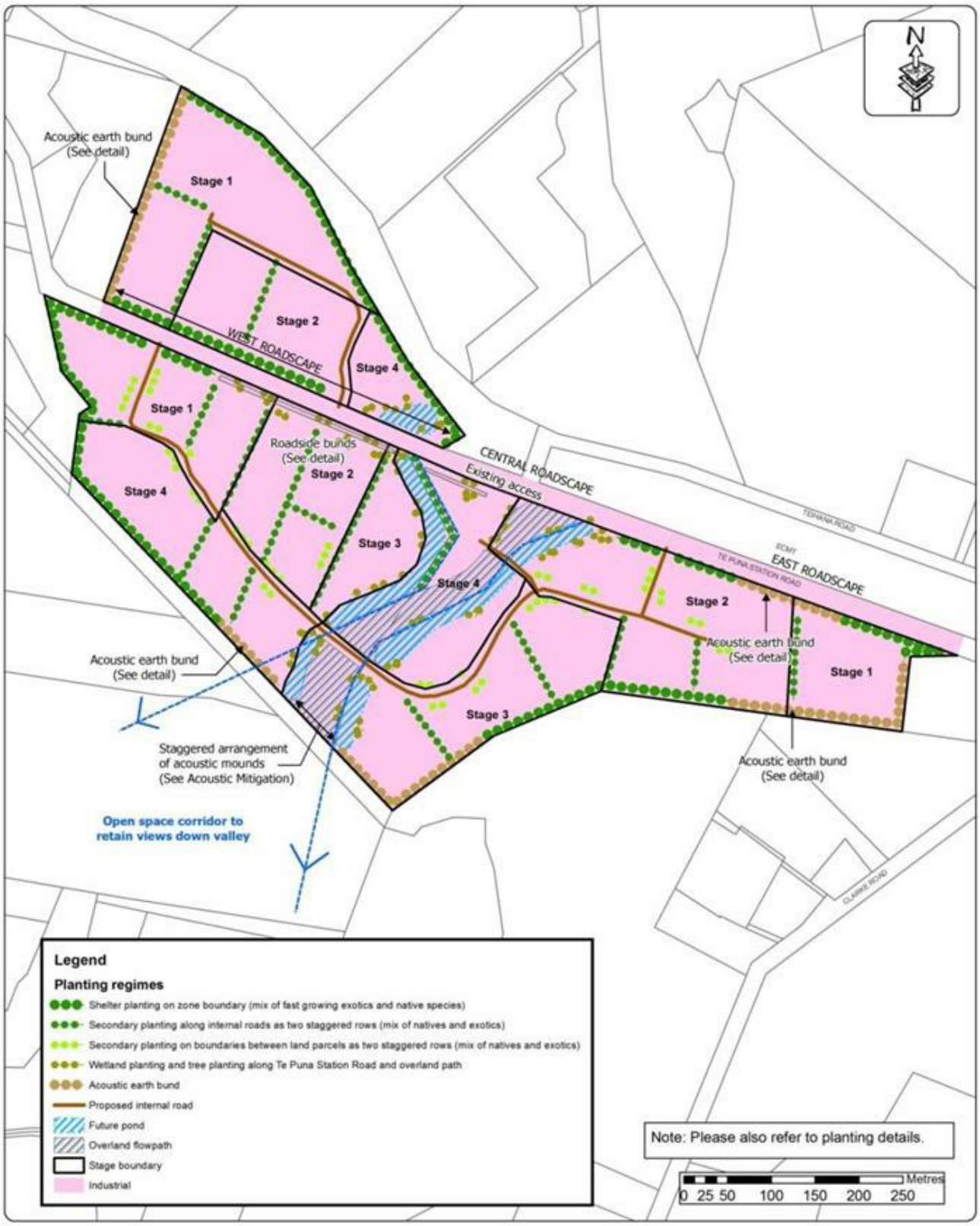
Outline Wetland Establishment - Wetland Zone Planting Options

Drawn - TW
Review - VM
Date - 21 | 12 | 22
Scale - NTS
Job No. - 20282

MOMENTUM PLANNING AND DESIGN

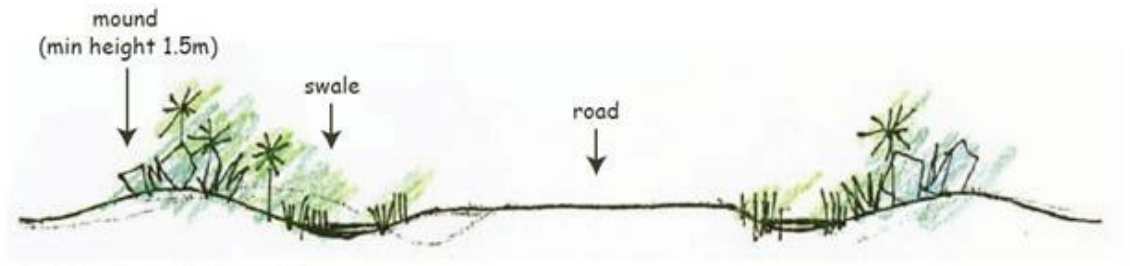
Attachment B – Te Puna Business Park Structure Plan Map

7. Te Puna Business Park



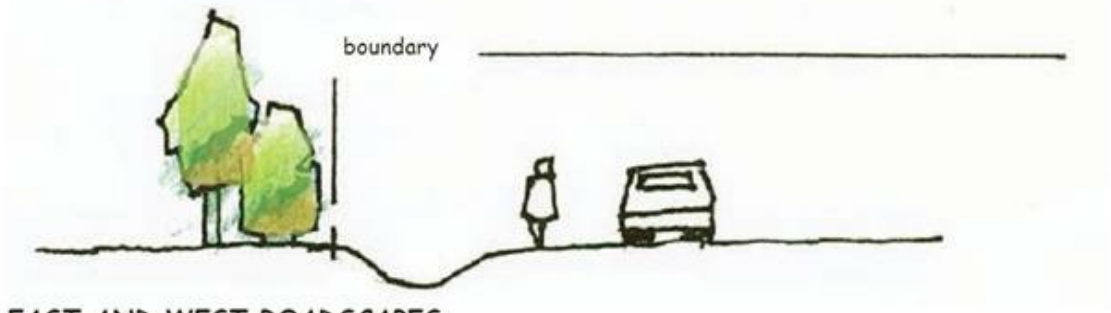
TE PUNA STATION ROAD PLANTING SECTIONS

(Planting to comply with sightline requirements at access points onto Te Puna Station Road)



CENTRAL ROADSCAPE
(20m SETBACK FROM TE PUNA STATION ROAD)

- Mound and swale relates to new ponds and open space pattern
- Wider roadscape contrasts with east and west roadscapes



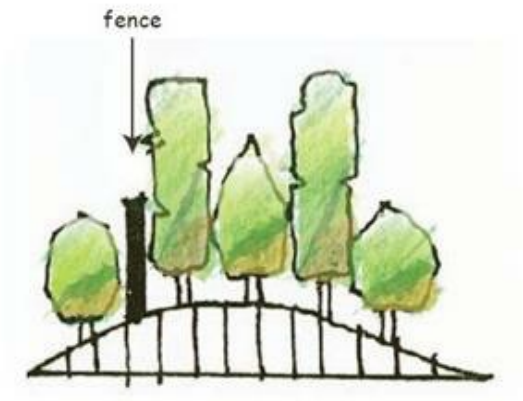
EAST AND WEST ROADSCAPES
(20m SETBACK FROM TE PUNA STATION ROAD)

- Linear planting reinforces local character

ACOUSTIC EARTH BUNDS

2.0 metre high earth bund (landscaped) above finished ground level

DETAIL 1



1.5-2.0 metre high earth bund with 1.5-2.0 metre high fence (landscaped) (total height not less than 3.0m above finished G.L.)

DETAIL 2

PERIMETER PLANTING

Attachment C - Viewpoint Location Plan

VIEW POINTS

A - Public view shaft from cars travelling east along Te Puna Station Road

B - Public view shaft from cars travelling west along Te Puna Station Road

C - Private View shaft from 72B and &2C James Road

Ca - Private View shaft from 76 Teihana Road

D - Private View shaft from 52, 54 and 66 James Road

E- Private View shafts from 288a, 288b and 326 Te Puna Station Road

F- Private View shaft from 166 Te Puna Road

G - Private View shafts from 148 and 138 Te Puna Road

H - Private view shafts from 118 and 112 Te Puna Road

I - Private view shafts from 88, 106, 106A and 110 Te Puna Road

J - Private view shafts from 66, 72, 78, 80, 86a, 86b

K - Private view shafts from 56A-56E Te Puna Road

L - Private view shafts from 2A,2C, 4A-4C and 18 Armstrong Road.

M - Private view shafts from 85, 97A, 97B Clarke Road

N - Private view shafts from 139, 145, 147, 149 and 161 Clarke Road.

297 Te Puna Station Road

Visual Catchment

0 50 100 150 200

Legend

Dwellings

Ancillary Buildings

297 Te Puna Station Road
Te Puna.

Subject Site

Date: SEPTEMBER 9th 2022 Drawn: TW

Scale: REFER TO SCALE BAR Checked: RC

Drawing No. 297 Te Puna Station Road view shaft. ai

MOMENTUM
PLANNING AND DESIGN

Attachment D - Outline Maintenance Plan

21st December 2022

Te Puna Business Park, 297 Te Puna Station Road

Outline Soft Landscaping Establishment and Maintenance Schedule

INTRODUCTION

This maintenance schedule relates to all proposed soft landscaping measures within the site at 297 Te Puna Station Road, including to the street boundary, other site boundaries, and wetland area within the planned overland flowpath of the Te Puna Business Park Structure Plan (within 297 Te Puna Station Road only).

MAINTENANCE PERIOD

Maintenance is required in perpetuity, with specific care taken within the initial 3 years to ensure proper establishment of plants.

ESTABLISHMENT REQUIREMENTS:

Tree requirements

- Tree pit diameter to be twice that of the root ball.
- Root ball to be inspected and root ball freed if tree is root bound.
- Tree pit to be fertilised with an appropriate fertiliser.
- Tree placed in tree pit and excavated soil back filled around the root ball. Soil to be lightly tamped and pressed to secure tree in ground.
- If additional soil is needed, appropriate soil with a high amount of organic material can be used to bring soil in tree pit level with adjacent levels.
- Add 75mm of mulch to surface of tree pit , make sure mulch is not in physical contact with tree base.
- Stake tree with a minimum of two stakes to ensure successful establishment. Stakes are to be maintained to support the tree for a minimum of twelve months.

Shrub requirements

- Prepare garden beds by removing weeds and any other foreign debris.
- Rake in soil high in organic material or compost to the existing top soil.
- Set plant out at nominated spacings as per the landscape plan.
- Dig hole for shrubs and fertilise bottom of hole with appropriate fertiliser.
- Inspect shrub root ball and loosen if plant is root bound.

- Plant shrubs, back fill top soil around shrubs to appropriate level.
- Mulch planted surfaces with a wood chip or bark mulch to a depth of 75mm. Make sure mulch is not touching the base of the shrubs.

MAINTENANCE REQUIREMENTS:

This maintenance plan is recommended to be followed by the owners and tenants of the property. Landscaped areas that are to be vested, it is understood council contractors will have their own bespoke maintenance schedule once landscaping is vested. Regular adherence is required particularly in the first three years following establishment of plants.

Where there is loss/damage to hard or soft landscaping elements, remediation must be in accordance with the approved landscape plan and actioned as soon as possible.

SCOPE OF MAINTENANCE WORKS

The maintenance works include the following:

(a) Fertilising all trees, planted areas and grassed areas;

(b) Control of pests and diseases;

(c) Pruning of trees, shrubs, tubestock and groundcovers;

(d) Weekly hand watering operations to all unirrigated plants and trees;

(e) Removal of weeds, rubbish, litter and any other undesirable objects from all planted and grassed areas;

(f) Topping up mulch;

(g) Checking and repair or removal of tree stakes and ties during initial 4-6 month period after planting;

(h) The immediate replacement of dead or failing plants and grass areas;

(i) Maintaining hard paved and walled areas free of graffiti, dirt, litter, weeds and any other undesirable material or sediment which may be transported to planted areas;

(j) Adjustment, cleaning and minor repairs to paving and fences to avoid pollution to or debris within planted areas;

(k) Reporting on and making good theft and vandal damage;

(l) All other work necessary to maintain a healthy, clean, neat and tidy landscape in accordance with the objectives stated above.

GENERAL MAINTENANCE OPERATIONS

Rubbish Collection and Removal

GENERALLY: All landscaping shall be kept clear of litter at all times and collection frequency shall be adjusted as necessary to achieve this objective.

RUBBISH & LITTER: Collect and remove all cigarette butts, bottles, cans, litter, vegetative matter (dead leaves, grass cuttings, twigs etc.) and any other undesirable material from all landscaped areas and paved areas/paths/roads and remove from site.

Irrigation Networks

Such networks are not considered to be necessary to maintain the majority of soft landscaping within the scheme.

If irrigation systems are proposed at detailed design, it shall be maintained and operated so as to maintain the landscape in peak condition, optimising growth rates without causing water logging of the soil or wasting water.

The watering regime for planted areas shall reflect the plant's needs in accordance with the plant type and natural rainfall.

HORTICULTURAL MAINTENANCE OPERATIONS

Trees

GENERALLY: Inspect all trees to ensure that trees are not exhibiting signs of stress (fading of foliage/trunk, splitting and clearly dying limbs etc). Remedy any problems evident firstly with irrigation and pruning or other appropriate action including consultation with an arborist as required.

STAKES AND TIES:

- Inspect stakes and ties (including guard ties) and adjust and replace as necessary to prevent trees being damaged by wind or chaffing. Loosen ties regularly to prevent damage.
- Remove stakes and ties as soon as trees are wind firm, after the twelve-month establishment period.

PRUNING: Prune to remove dead, diseased, damaged and dying limbs; to remove obstructions to pedestrian circulation; to shape as appropriate to species.

REPLACEMENT: Remove any dead or dying trees.

Garden Beds/Planted Areas

GENERALLY: Maintain garden beds free from litter, grass, weeds and any pest/disease infestations. Remove any dead, diseased or dying plants immediately upon discovery.

MULCH TO GARDEN BEDS: Rake mulch to maintain even coverage and top-up as necessary.

PLANT REPLACEMENT: Replace any individual plants which have failed to thrive with species of the same type as those specified by the approved landscape plan.

Mulch

GENERALLY: Supply and spread additional mulch where depth of existing cover has reduced to less than 50mm.

Fertilising and Soil Amelioration

GARDEN BEDS/PLANTED AREAS: Where required, fertilise every six months using slow-release fertiliser applied in accordance with manufacturer's recommendations. It is noted that once established, plants will not require long term fertiliser, unless showing signs of malnourishment.

Pruning

SHRUBS AND GROUNDCOVERS:

Any pruning to shrubs and groundcovers shall be carried out in such a way to promote the effect of an interlocking cover of plant growth.

Groundcovers shall be allowed to spill onto the edges of paths, kerbs and recalls. Where plant growth inhibits the use of paths, roads, etc. trimming shall be carried out to produce informal wavy edges, not hard straight lines.

TREES: Selectively prune low level lateral growth on trees to prevent sight lines from being obscured and to allow unrestricted pedestrian movement. Pruning shall be gradual, always leaving ample branch and foliage coverage typical of the growing habit of the tree species.

Pests and Diseases

GENERALLY: Identify the problem and employ approved treatment method until the problem has been eliminated.

USE OF HERBICIDES AND PESTICIDES

NOTE: Generally, herbicides and pesticides should be avoided if possible.

APPROVAL: Use of herbicides and pesticides is subject to approval from owners.

APPLICATION: Chemical sprays shall be used only in still conditions. Chemicals shall only be applied strictly in accordance with the Manufacturer's recommendations.

Public Safety

Take all precautions necessary to protect users of the site from any harmful effects of herbicide and pesticide applications.

WETLAND AREA AND STORMWATER TREATMENT PONDS

Dredging/sediment removal from stormwater treatment ponds (Zone 1, as per Landscape Plan) will also be required on a periodic basis, and should be inspected annually to inform frequency of removal of sediment build up.

Ensure dredging is restricted to the central channels where sediment settles, in order to not disturb the wetland planting to the periphery, in the shallow pond areas (Zone 2).

Conclusion

If the establishment and maintenance advice is followed as recorded within the document above, the plants will have optimum growing conditions and circumstances for quick establishment.

Should there be any clarifications required of the recommended establishment or maintenance measures as detailed within this document, please contact the author undersigned.

Tom Watts

Landscape Architect