CN Top Ltd, Lexus Trustees 11 Ltd and Rajasingham Family Trust

Nukuhau Private Plan Change
Landscape and Visual Assessment

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1 Introduction

WSP has been commissioned by three private landowners - CN Top Ltd, Lexus Trustees 11 Ltd and Rajasingham Family Trust - to prepare a Structure Plan (SP) and lodge an application for a Private Plan Change (PPC) to Taupō District Council (TDC) to rezone 77.78 ha of land to enable residential development for approximately 800 new residential lots.

It is also intended that the proposed PPC would include the notification for the future re-routing and therefore revoking of Road Reserve, being part of Poihipi Road, at the applicable time.

This Landscape and Visual Assessment (LVA) is part of the PPC application and will be used to assess the potential landscape and visual effects of the proposed residential rezoning. For the most part the proposed section sizes are generally consistent in shape and layout with the surrounding residential subdivisions of Nukuhau, Rangatira Park and Huka Heights; however, a small localised area of medium density residential development is also proposed.

This LVA evaluates the degree of change that would result from the development envisaged by the PPC and whether this is consistent with the relevant provisions of Part 2 of the Resource Management Act 1991 (RMA) with regards to landscape and visual effects.

The assessment will be used to help guide and inform the preparation of a Structure Plan for the PPC area. In doing so, it will recommend mitigation measures that will ensure landscape and visual effects are minimised, so that the development envisaged fits well with its surroundings.

2 Description of the Project

The PPC area is located at the existing urban boundary on rural land approximately 1.5 km north of the Taupō Central Business District. It is immediately to the north of the existing Nukuhau residential area; bounded by Wairakei Drive to the east and low density residential area of Rangatira Park and Huka Heights, and rural land to the north and west. Part of the PPC area is therefore located at a prominent entry point into the town from the north.

In developing the structure plan, a series of landscape measures and urban design principles were identified to help inform and enhance the layout and design of the future development of the site, and to mitigate any adverse effects. These landscape design measures are illustrated in Section 7 of this report.

In terms of urban design measures, the intent and detailed explanation of the Structure Plan and urban design principles incorporated into the PPC area proposal are included in the WSP Urban Design Assessment. This forms part of the PPC application and should be read in conjunction with this assessment. The PPC area application includes the following:

- Proposed residential zones of two types; being predominantly general density, but with a small area of medium density.
- Proposed Neighbourhood Shopping Centre (Shops) (centre enabling commercial activity such as local convenience needs).
- Proposed stormwater reserves, varying widths, with pedestrian access, cycleway, shallow detention ponds and planting. The stormwater reserves will soften the interface between proposed residential development, existing urban edge and road corridor. Tree and shrub planting will retain the existing sense of openness, avoiding the 'wall' effect that would occur from more dense planting. Within the reserves, grass areas are combined with informal groups of clear stem specimen trees to provide a parkland-aesthetic for residential properties backing onto the reserve. The reserves can be used for informal recreation activities such as walking and cycling.

- Proposed recreation reserves of typically narrow widths for the main purpose of pedestrian and cycleway access, and with amenity planting. They provide alternative access between roads and to the mixed-use stormwater reserves. Similar to stormwater reserves, recreation reserves comprise trees and shrubs to obscure and buffer views from road corridors towards the PPC area. Mown lawns are combined with informal groups of clear stem specimen trees to provide a parkland-aesthetic for residential properties backing onto the reserve. This includes the rural-urban interface between the rural and urban edge along the northern and western boundaries of the PPC area. The aim of the edge treatment is to create a parkland setting that will deliver a defined but soft urban edge, with visual permeability. This will facilitate the use of the urban edge rural aesthetic and for recreation activities such as walking. It also establishes a positive backdrop for the residential properties backing onto the rural landscape.
- Proposed gully reserves, varying widths, with pedestrian access, cycleway and planting. Where low volume roads and / or residential properties front gullies the reserves seek to optimise benefits and value from the aesthetic opportunities of this recreational open space amenity, and the retention of the natural gully landscape. The gully will lend a more individual and unique character to these streets (benefitting residents and other users). Through design and location this ensures visual and physical access for all the residential properties throughout the site and neighbouring areas. This optimises and reinforces opportunities for the gully network to deliver a more unique identity to the subdivision and to act as the hub for recreational activities.
- Proposed urban roads (arterial, collector and low volume) comprising kerb and channel, grass berms, pedestrian footpaths, planted strips, street trees and streetlights (for more detail see Section 7 of this report).
- Eight access points are proposed to the roading network to provide connections to traffic from the PPC area. Five access points are via the continuation of an existing road and the remaining three access points are new intersections. The proposed PPC proposes to close the current Poihipi Road and Wairakei Drive Intersection and realign Poihipi Road to form a new roundabout with Wairakei Drive and Huka Falls Road. This will include a recreation reserve comprising grass and landscape planting. Additionally, a series of on and off-road pedestrian-cycleway connections are proposed, for the most part these are alongside roading connections.

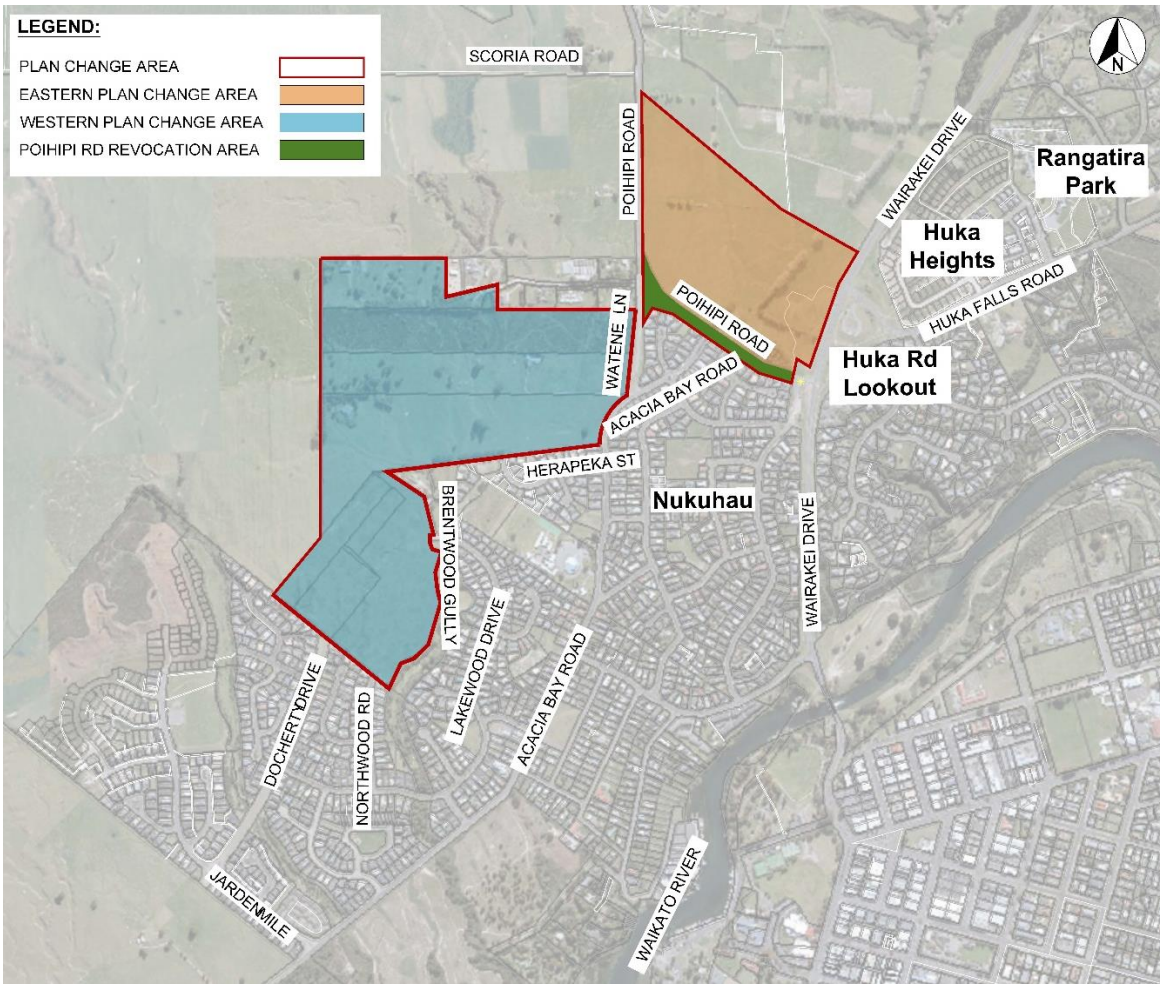


Figure 1.1 Private Plan Change Area

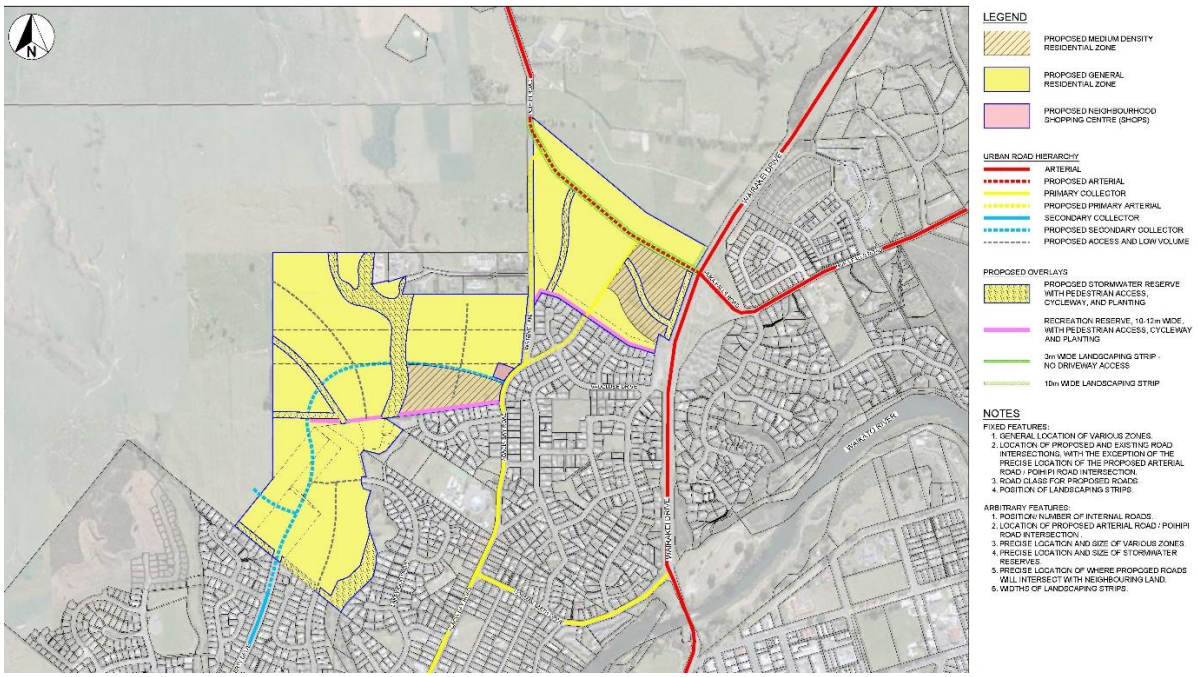


Figure 2.2 Layout Plan (See Appendix A for enlargement)

3 Relevant Statutory and Non-Statutory Provisions

3.1 Resource Management Act 1991

This LVA responds to the RMA, which provides a framework for managing the effects of activities on the environment, and therefore is a critical component to any development. This LVA has considered effects on:

- The physical landscape in relation to section 7 (c) *the maintenance and enhancement of amenity values* and section 7*(f) maintenance and enhancement of the quality of the environment*. These matters are referred to as 'landscape effects' within this report, which take into account:
    - Landform (earthworks including cut and fill)
    - Loss of vegetation and existing structures; and
    - Effects on land use.
- The landscape amenity in relation to section 7 (c) *the maintenance and enhancement of amenity values* and section 7 (f) *maintenance and enhancement of the quality of the environment*. These matters are referred to as 'visual effects' within this report, which take into account:
    - The 'fit' within existing landscape character and patterns
    - The visual amenity in relation to the appearance of structures such as buildings; and
    - Visual effects as seen from dwellings and private property.

3.2 Policy Documents

Other policy documents that are relevant to the context of the proposed site and have been considered in this document are **(Appendix B)**:

- *The operative Taupō District Plan* (2007)
- *Taupō Urban Structure Plan* (2004)
- *The Taupō District Landscape Study*[1], (2000)
- *Outstanding and Amenity Landscapes of the Taupō District*[2] (2009).

3.2.1 The Taupō District Plan

The Taupō District Plan (District Plan) identifies that the PPC area is zoned Rural Environment (See **Figure 3.1**). There are no other zoning or overlay matters affecting the PPC area.

The District Plan sets out a baseline for the issues, objectives, policies and outcomes sought for Taupō's landscape. It also provides guidance of the appropriateness of residential development within the rural environment. In particular, the preservation of the landscape, natural character and visual amenity values of the landscape is of importance.

3.2.2 Taupō Urban Structure Plan

The Objectives of the Taupō Urban Structure Plan (TUSP) seeks to discourage urban-residential development outside the urban environments identified in the District Plan and the TUSP 2004 (See **Figure 3.2 and Appendix A**).

[1] The Taupō District Landscape Study (Preliminary Landscape Study), Prepared for TDC by Priest Mansergh Landscape Architects, 2000. The preliminary overview study is intended as the first stage in a comprehensive assessment of Taupo District's Landscapes to identify, assess and rank the landscapes contained within the Taupo District for the purpose of guiding the development of management strategies within the Taupo District Plan.

[2] Outstanding and Amenity Landscapes of the Taupō District. Prepared for TDC by Isthmus, 2009.

In terms of Urban Amenity, the TUSP seeks to ensure the following outcomes are achieved:

- Integrated network of open space, reserves, recreational areas, walkways, and cycleways
- Networks that have good linkages to public facilities are provided for in the development of urban areas
- Well-designed urban public spaces.

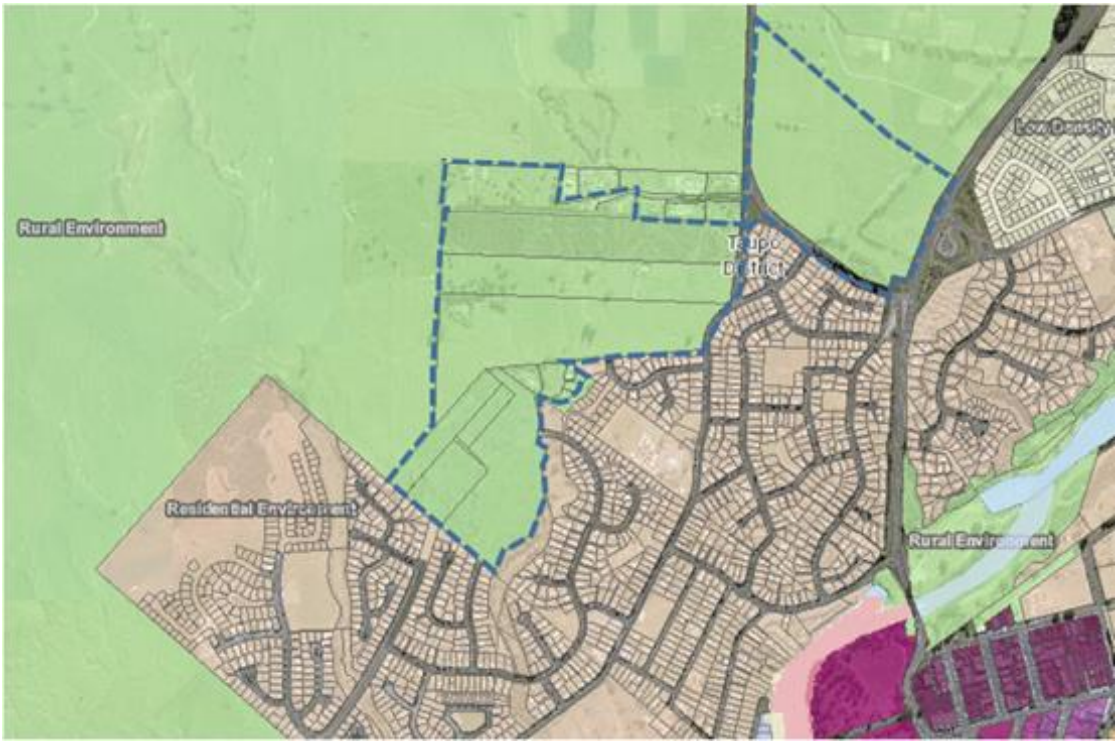


Figure 3.1 The land subject to the PPC (blue dashed line) showing the current Rural Environment Zoning (Source: Mapi)

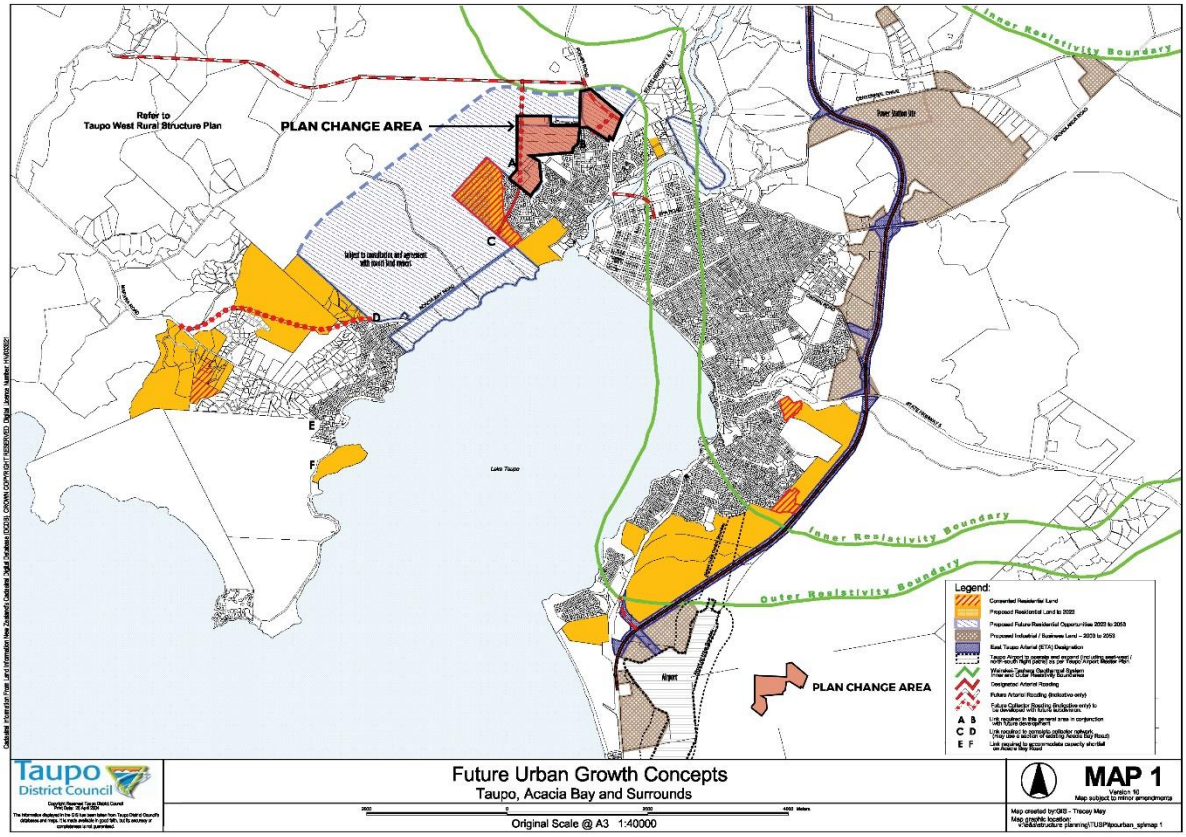


Figure 3.2 The Taupō Urban Structure Plan (Source: TDC, see Appendix A for enlargement)

3.2.3 The Taupō District Landscape Study

The PPC area sits within the Kaiapo Landscape Type. This Landscape Type is described in the preliminary assessment of the Landscape Types and Units of the Taupō District as:

This landscape is characterised by its complex land form. Heavy geological faulting within this landscape is evidenced by a number of rhyolite domes, extrusions flanked by a pumice breccia and ash bed base. A series of broad open valley systems run in a north easterly direction from Lake Taupō. These have formed between the main rhyolitic extrusions that form the northern bays between Te Kauwae Point and Acacia Bay by the subsequent withdrawal of underlying magma. A large geothermal field underlays this landscape and is evidenced around Wairakei.

Units found within this landscape type are characterised by the following land use overlying the base land form described above and include:

- *Intensive production forestry*
- *Small patches of native forests and shrub lands along the major river and stream courses and within the major gully systems*
- *Urban development associated with Kinloch and Acacia Bay.*

3.2.4 Outstanding and Amenity Landscapes of the Taupō District

In terms of the District Plan and district wide Landscape Study, the PPC area is not within any Landscape Policy Area (it is not an Outstanding or Amenity Landscape). The proposal will have no direct landscape or visual effect on identified Outstanding or Amenity Landscape areas due to distance from the site.

4 Method of Assessment

4.1 General

A site visit was conducted in February 2019 by Stefan Steyn, Registered Landscape Architect from WSP. Digital photographs were taken during this site visit. The photographs taken during these site visits were used to complete this LVA.

4.2 Landscape and Visual Assessment

The below seven-point scale is used to describe effects. Further details on the LVA's methodology are included as **Appendix C** of this report.

- **Very High**: Total loss to the key attributes of the receiving environment and/or visual context amounting to a complete change of landscape character.
- **High**: Major change to the characteristics or key attributes of the receiving environment and/or visual context within which it is seen; and/or a major effect on the perceived amenity derived from it.
- **Moderate-High**: A moderate to high level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate-high level of effect on the perceived amenity derived from it.
- **Moderate**: A moderate level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate level of effect on the perceived amenity derived from it. (Oxford English Dictionary Definition: Moderate: adjective-average in amount, intensity or degree).
- **Moderate-Low**: A moderate to low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate to low level of effect on the perceived amenity derived from it.
- **Low**: A low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a low level of effect on the perceived amenity derived from it. (Oxford English Dictionary Definition: Low: adjective-below average in amount, extent, or intensity).
- **Very Low**: Very low or no modification to key elements/features/characteristics of the baseline or available views, i.e. approximating a 'no-change' situation. It is generally understood that 'Very Low' and 'Low' are equivalent to the 'Less than minor' threshold.

Preparation for this LVA has also included the collection of baseline information through desktop studies and collation of planning information (refer to **Section: 3: Relevant Statutory and Non-Statutory Provisions**).

5 Landscape Character and Context

5.1 The Landscape Context and Visual Catchment

The broad landscape context is that of the Taupō Volcanic Zone, which stretches from White Island in the north to Mt Ruapehu in the south. This area encompasses the Taupō caldera, Lake Taupō (the Lake) and three active peeks – Mt Tongariro, Mt Ngāuruhoe and Mt Ruapehu, (the three highest summits in the North Island).

On a local scale the landscape is defined by Lake Taupō, gentle sloping to steep hills of the caldera, all of which provides its residents with a sense of enclosure within the wider landscape. Distinguishing characteristics of the landscape is the diverse range of geography, geological and geothermal elements, views of the Lake and dominant features such as Maunganamu, Mt Tauhara, Mt Tongariro and Mt Ruapehu in the distance.

The PPC area is located on land adjoining the urban-rural fringe of Taupō. Rural land use activities are generally situated on the mid and upper hill slopes of the caldera. The lower slopes are predominantly residential in nature with lawns, gardens and amenity planting, both native and exotic.

Most of the rural farmland to the north and west of the PPC area has an open rural character that includes pastoral farming, small scale forestry woodlots and rural lifestyle activities with rectilinear shelterbelts. Apart from a small number of lifestyle properties this rural area is characterised by minimal built development.

At the eastern and southern edge of the PPC area, urban land use patterns are diverse and more residential and structured in layout, comprised of general and low density residential and holiday dwellings. The residential properties contain a range of housing sizes and styles, with typical residential amenity gardens. In recent years there has been extensive urban residential development associated with Nukuhau, Rangatira Park and Huka Heights subdivisions.

To the south, the Nukuhau residential area is typical of a general density residential development. Immediately to the east of the eastern PPC area and to the north of Huka Falls Road, a small pocket of potentially higher density development is located (the zoning is 'Low Density Residential') but it has Land Use Consents for much higher density than typical in the remainder of the area.

Further north and also further down Huka Falls Road, existing low-density development creates a 'soft' urban-rural interface. Other land uses that contribute to the diverse character of the area include some minor commercial activity (local convenience centre), a church and green open space. Open space reserves and stormwater management areas follow existing gullies and provide recreational opportunities. It is clear that all of the surrounding land, both urban and rural has been modified by human activity over the years.

5.1.1 Visual Character

Apart from a few stands of trees and shelterbelts both the eastern and western portions of the PPC area have a relatively open pastoral character. It adjoins a predominantly rural land use to the north and west. To the south and east the land use patterns are residential.

Visual amenity is largely determined by views of dominant landscape features such as the Lake and vegetated margins, wider caldera and caldera rim, Mapara Valley hill slopes, Mt Tauhara and Mt Ruapehu. Expansive, long distance views of these landscape features can be obtained from the PPC area. Other visible elements include open grazed hill slopes, urban development spread along the lake edge, town centre and steam fields. At a more localised scale the gully network contributes to the undulating character of the wider landscape and in the PPC area.

When viewed from the PPC area to the north, north east and west the landscape gently rises to the caldera rim in the background. Views in this direction typical comprises large areas of grazed pasture, smaller localised gully systems, post and wire fences, shelterbelts, gardens and driveways associated with established homesteads. To the south, views include the Nukuhau residential subdivision in the foreground, and Taupō CBD and Tapuaeharuru Bay in the mid distance.

Beyond this, sweeping views of the southern shoreline include Two Mile Bay, Three Mile Bay, Four Mile Bay and residential areas on the foothills (Richmond Heights and Rainbow Point and Wharewaka). Distant views include Mt Tauhara and Mt Ruapehu further to the south-east. Views to the east comprises the residential subdivision of Rangatira Park to the east. Views from the PPC area to the east and south are often contained because of residential subdivision or from vegetation on the property boundaries. The hill slopes, caldera rim and elevated areas provide a strong sense of visual containment to the town. Views immediately to the west comprise large areas of pasture, with Acacia Bay and the east facing slopes and ridgeline of the Mapara Valley in the distance.

Views of the PPC area typically include large areas of pasture including three dwellings and gravel access tracks, smaller localised gully systems, scattered vegetation, small stands of trees and post and wire fences. Residences located on the urban edge facing the eastern and southern boundaries of the PPC area will have clear views of the PPC area unless they are screened by boundary fences. Residences beyond this urban edge will be screened by the rows of intervening residential dwellings. The residential subdivision of Rangatira Park to the east is situated at the same elevation as the PPC area and orientated south or south west with views from their main living areas down towards the lake and other landscape features. Similarly, residences within Nukuhau subdivision to the south are generally situated at the same elevation or below the PPC area, orientated away from the rising foothills and PPC area towards the lake. Viewers in the rural environment to the north are generally situated above the PPC area and potentially look south from their properties down or across the PPC area towards the lake in the distance. Views from the rural west will potentially be directed towards the lake, away from the PPC area.

5.2 The Viewing Audience

The potential viewing audience has been identified from a desktop study and field work and includes:

- Users of local roads – views from local roads immediately adjacent to the PPC area are likely to be only glimpsed due to speed and sequence of movement; being seen for a short timeframe or obstructed by intervening buildings and vegetation. Roads further afield were not assessed in further detail due to the screening effect of intervening buildings, vegetation and distance from the PPC area.
- Occupiers of rural residential properties and workers within the wider rural landscape – their views towards the PPC area are likely to be partially or fully screened by intervening landform, vegetation or distance from the area. As such only representative viewpoints in close proximity to the PPC area were selected.
- Users of Lake Taupō - These views to the PPC area will be screened PPC by intervening vegetation, landform and diminished by distance from the area. Where the PPC area is visible from the Lake it will be too far from the site to have any discernible effect on these views.
- Users of the Huka Falls Road Lookout - these viewers will be able to see the eastern boundary of the PPC area.
- Occupiers of residential properties on the southern boundary of the PPC area - these viewers will have clear open views of the PPC area.
- Occupiers further south on the lower slopes below the PPC area located in the mid distance, CBD and along the lake edge. These viewpoints will look up towards the PPC area however, it is screened from view by intervening vegetation, buildings and the rising landform. As such, these viewpoints were not assessed in any further detail.
- Occupiers of residential properties on the eastern boundary of the PPC area - these viewers will be screened from the PPC area by intervening buildings, boundary planting and/or fences, and orientation.

6 Assessment of Landscape and Visual Effects

6.1 Landscape Effects

The overall landscape effect arises from the physical changes brought about by the development of the PPC area on the rural landscape. Physical changes may give rise to changes to a sites natural character and its appearance. This may in turn affect the perceived value ascribed to the landscape, with the magnitude of change described below.

6.1.1 Landform

Due to the eastern PPC area's comparatively flat and gently sloping landform, this area does not require significant landform modifications to construct building platforms, roads and other infrastructure elements. However, development of the western portion of the PPC area will require infill of the smaller gullies and reshaping of the topography to achieve a flatter profile.

The introduction of earthworks into an otherwise undeveloped site must by definition result in a level of effect on landform. It is therefore imperative that the proposal manages the effects of earthworks in terms of scale, form, location and cover to manage and mitigate such effects.

While the enabling earthworks, including amongst other things the construction of building platforms and the installation of infrastructure, will result in some finer grain landform features to be lost and the modified surface to appear more engineered and flattened, more significant and noticeable landform features such as the gully network and moderate general north-south sloping profile of the wider landscape will be retained. Furthermore, the scale of the earthworks will vary across the PPC area, it is conceivable that large scale earthworks will be prominent in localised areas but have only a small footprint and impact when considered in relation to the extent of the wider PPC area and in respect to how noticeable these modifications will be. The proposed PPC area will not result in significant cut and fill batters, and within the immediate and wider rural landscape the effects on landform will be Moderate - Low.

It is for these reasons considered that the landscape character of the proposed PPC area is not highly vulnerable to change from earthworks of the scale envisaged by the PPC. Furthermore, it is anticipated that the proposed earthworks will take place gradually or in stages over a number of years, and ultimately blend into the already modified landform of the surrounding residential developments. In addition, once vegetation associated with the new housing development has been established the proposed change in landform will be difficult to discern and the PPC area will appear as an extension of the surrounding residential areas.

6.1.2 Landcover

A large stand of sizeable, mature native and exotic trees along the Poihipi Road boundary provide relevant amenity value that would ideally be protected for both amenity and mitigation purposes (See **Figure 6.1**). Apart from this, most native vegetation within the rural zone including the PPC area has been cleared to provide for rural land use. The remaining patterns are dominated by pasture, small exotic woodlots, scrub like vegetation, rural-residential gardens and remnant stands of native vegetation. Therefore, vegetation within the PPC area, and in fact the wider rural landscape is of low quality due to the degree of modification, and subsequently less sensitive to change.

Figure 6.1 Photo of the stand of mature trees along Poihipi Road (left) and as viewed from the Huka Falls Road lookout (right)

The PPC area will have a **Moderate - Low** effect on the existing landscape as it will result in the loss of pasture and the large stand of trees.

6.1.3 Land Use

The surrounding area to the north and west is currently used for grazing, horse paddocks, small woodlots and other agricultural uses. Residential development is clearly well established to the east and south of the PPC area. It is noted that a change in the land use from rural to residential, as signalled by TUSP might occur over the coming years, although such a change is not certain.

The PPC area abuts the existing residential environment to the east and south and this PPC will in affect shift the urban-rural interface approximately 500m to the north for the western PPC area, and 700m to the north for the eastern PPC area. The resulting land uses remain compatible with the surrounding development patterns of the area and will be anchored by the existing residential subdivisions. The PPC will consolidate development on the northern edge of Taupō, avoiding sporadic, ad hoc and sprawling development. The result is a structured transition between Rangatira Park, Nukuhau and the rural landscape.

The PPC area will be seen as a logical extension of the existing urban edge and will achieve a degree of visual coherence. Therefore, the PPC area will have a **Moderate - Low** effect on the immediate land use patterns.

In the wider context, the changes arising from the PPC will result in a change to landform, landcover and landuse. Again, the proposed PPC area is already surrounded on two sides by residential land use activities and represents a continuation of the existing uses in the immediate area. The landscape value of the rural hinterland to the north is limited and not unique within the surrounding landscape and region. The close proximity to these residential environments, the broad scale of the rural pastoral farm land, combined with a low to moderate landscape sensitivity provides good opportunities for the surrounding environment to absorb the PPC area. Overall, the effect of the residential development on landscape character and landscape values will be limited and is therefore given a rating of **Moderate - Low**.

6.2 Effects on Views and Visual Amenity

Five typical viewpoint locations have been identified as being the most representative within the surrounding landscape. Photographs were taken from locations accessible by the public. The representative viewpoints were chosen according to the following:

- Location and context of a specific viewpoint (how the proposed changes will conflict or contrast with its context)
- Number of potential viewers (for example, the rural hinterland will have a small number of sensitive viewpoints spread throughout a large area)
- Degree of visibility (whether there are screening effects or not)
- Distance from the PPC area (for viewpoints over 1 km from the PPC area the perceived visual changes will diminish rapidly), and
- Where most change is anticipated as well as the sensitivity of the viewpoint.

These representative viewpoints were chosen where the PPC area is judged to be most obvious in the landscape by people from roads, recreation spaces or residential areas. These viewpoints have been used as the basis for analysing the extent of potential visual effects of the PPC area.

It should be noted that within the wider landscape there are very few sensitive viewpoints, limited primarily to only close-proximity viewpoints such as residential properties and road users along the periphery and/or in close proximity to the PPC area. This is largely due to the screening effect of intervening buildings, vegetation and landform. Therefore, views which were determined to be not visible from any sensitive viewpoint or where the effects were judged to be low to negligible at the time of the site visit were not assessed further.

The location of the representative viewpoints is illustrated in **Figure 6-2**.

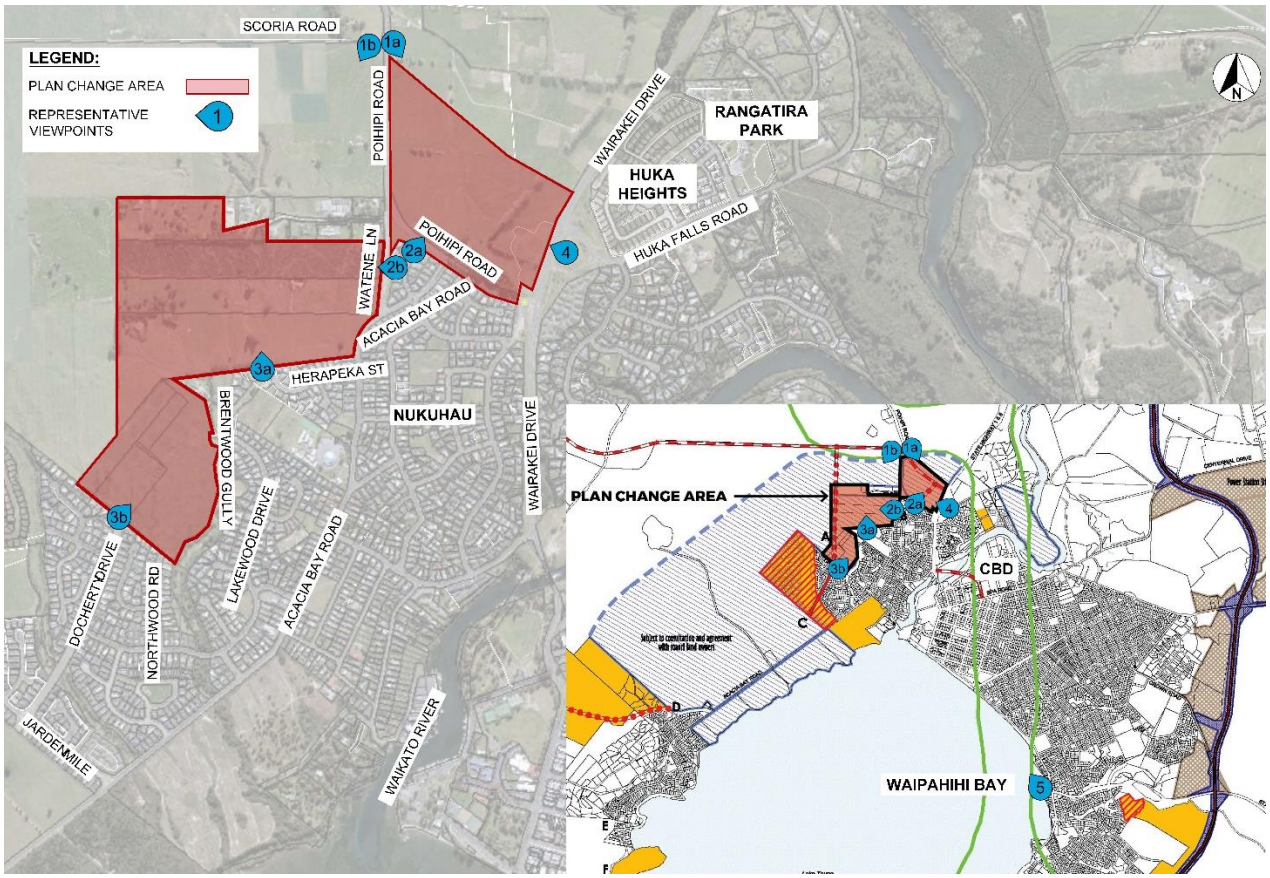


Figure 6.2 Photo viewpoint locations

In terms of the analysis of the visual effects and the assessment of the change to the views, this section of the LVA provides the following:

- A description of the visual audience and existing view
- An assessment of the sensitivity of each viewpoint
- A description of the changes that will occur to each view, and
- An assessment of the level of effect (magnitude of change) on each of the representative viewpoints.

6.3 The Site

The PPC area is irregular in shape and split into two parts, a rectangular piece of land to the east of Poihipi Road (eastern PPC area) and a larger tract of land to the west (western PPC area, See **Figure 6.2**).

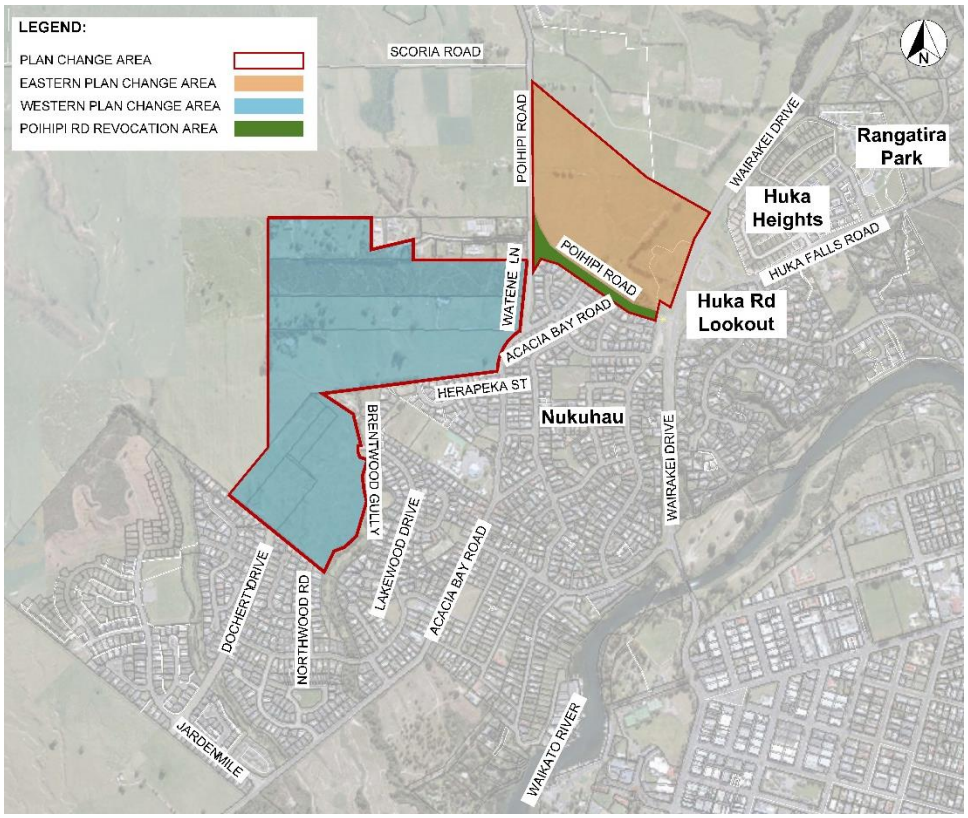


Figure 6.2 Eastern and Western PPC Area

Similar to the wider landscape, the PPC area is flat to gently rolling with a moderate slope which falls in a north-south direction towards the lake. In both the western and eastern portions of the PPC area, the most elevated area is near to its northern edge and the least elevated being near to the southern edge. Given the sloping landform, the area comprises several shallow gullies running through the western PPC area from north to south which include hollows, depressions and low rises. Most of the PPC area is used for grazing; some of which is horse paddocks. The boundaries of many paddocks are defined by post and wire fences, hedges and mature shelterbelts. A disused homestead set amongst a large stand of mature native and exotic vegetation is located within the eastern portion of the PPC area on its southern boundary. To the east of the stand of trees, a stormwater detention area is located within road reserve on the corner of Poihipi Road and Wairakei Drive.

The PPC area is bounded by the rural landscape to the north and west, Wairakei Drive and Rangatira Park subdivision to the east and the urban edge to the south. The southern boundary adjoins Nukuhau subdivision and a small number of rural-residential properties and streets which terminate along this interface. These residential streets extend from Poihipi Road through to Chelsea Rise. The four streets include Herapeka Street, Lakewood Drive, Northwood Road and Docherty Drive. All end at the existing rural boundary with a formation that suggests possible future extension.

Brentwood Gully is a TDC Stormwater Reserve which runs from Herapeka Street southwards toward the lake (with the exception of Acacia Bay Road cutting across it, but without a culvert). The gully passes close to the western PPC area where it abuts the residential edge of Nukuhau and forms a managed green buffer between the urban and rural environment. From here Brentwood Gully and a small number of shallow, grazed swales extends north across the western PPC area and beyond. The western part of the PPC area includes a small number of rural-residential lifestyle properties. The Huka Falls Road lookout and carpark is located on the corner of Wairakei Drive and Huka Falls Road to the east of the PPC area. The lookout is located on a mound to take advantage of the views of the lake and mountains in the distance.

6.3.1 *Viewpoint 1 – Rural Landscape to the North and West*

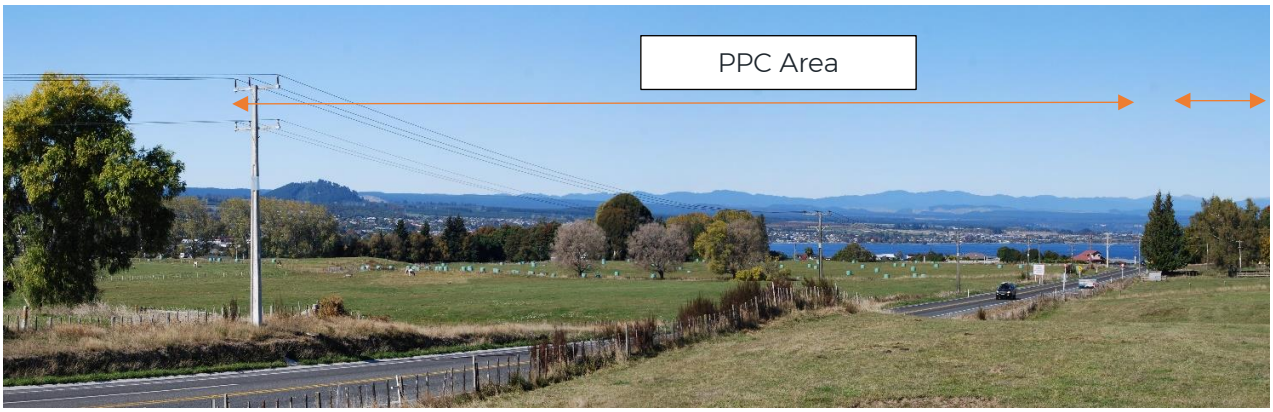


Figure 6.3 Representative view 1a looking south from Scoria Road towards the eastern PPC area in the mid-distance.

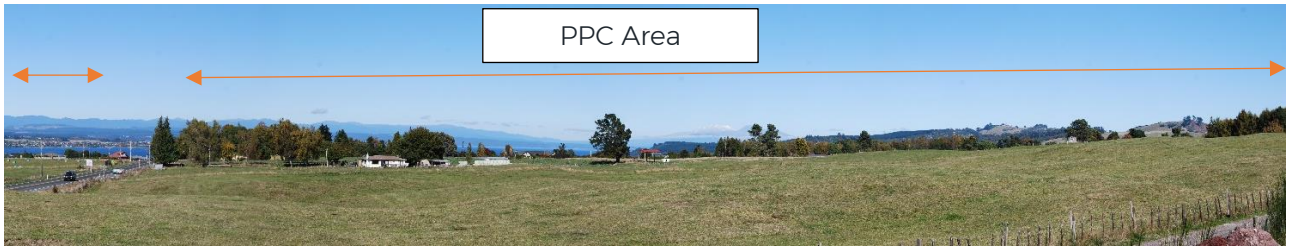


Figure 6.3a Representative view 1b looking south from Scoria Road towards the western PPC area.

Viewpoint 1a and 1b is representative of a range of viewpoints scattered throughout the rural landscape which comprises a small number of farm and rural residential dwellings and users of Poihipi Road (See **Figure 6.3 and Figure 6.3a)**.

Rural residents will have varying views of the PPC area determined by landform, vegetation and their own proximity and orientation. Effects on residents range from those who are further afield and may discern a slight change, through to dwellings in close proximity, for whom the development will be a visible and recognisable new element within the landscape. However, where the PPC area is partially screened by amenity plants located around the boundary of each of the rural properties, the residents will be less sensitive to change.

Visual changes will include removal of pasture, earthworks and changes to landform, construction of new residential dwellings, roads, street lights, fences and vegetation.

Views towards the eastern portion of the PPC area are rural in outlook and include a local road, shelter belts, small stands of trees, paddocks and occasional farm buildings and sheds. For most of these residents, their current view of the PPC area is therefore partially obstructed by vegetation, landform or distance.

The western PPC area will not be visible when viewed from this direction due to its position below the horizon and intervening vegetation on the northern boundary of the PPC area.

As outlined above, the overall sensitivity and visual effect is dependent on the proximity of these properties to the PPC area. Viewer sensitivity from dwellings throughout the wider rural landscape will be low due to the screening effect of the intervening vegetation, small viewing audience and the distance from the PPC area. However, for 73 Poihipi Road (Rangatira E land) viewer sensitivity will be high. This is because the dwelling is in close proximity to the PPC area and the future residential development will be readily visible in the foreground.

Apart from 73 Poihipi Road, which is in close proximity to the PPC area, the urban residential backdrop to this view will be able to absorb the future residential development. This will ensure that

the PPC area is not viewed as a dominant feature but as part of the residential fringe in the background. Given the limited number of viewers scattered throughout the rural landscape, the screening effect of intervening vegetation, and views of existing residential dwellings spread along Poihipi Road and the rural-residential interface in the mid-distance the overall degree of change for these viewpoints is **Moderate - Low**.

While it is conceivable that the proposed dwellings could partly or fully block views of the lake it is unlikely the new structures will block views of the volcanic cones. These elevated viewpoints will generally be high enough to retain small glimpses of the lake and full views of the volcanic cones. Therefore, visual effects on viewshaft to the lake and mountains are **Moderate - Low**.

The residential development of the PPC area will be noticeable as a foreground feature, adding to the extent of existing residential development visible to road users. However, views of the new residential area will be only fleeting seeing that road users will typically be more focussed on the road corridor itself, a factor that ultimately reduces the overall sensitivity of these viewers. Therefore, visual effects associated with the proposed PPC area on road users will have a **Low** effect.

The proposed boundary treatment will mitigate against any potential dominance of residential development over the natural appearance of the rural environment.

6.3.2 Viewpoint 2 – Properties along Poihipi Road and Watene Lane

Figure 6.4 Representative view 2a looking east from Poihipi Road towards the eastern PPC area in the foreground

Figure 6.5 Representative view 2b looking west from Watene Lane and Acacia Bay Drive towards the western PPC area in the foreground. Apart from three properties on the corner of Watene Lane and Acacia Bay Drive the PPC area will be screened from residential properties by residential boundary fences (see images below).

Figure 6.6 Residential properties spread along Watene Lane (left) and Poihipi Road (right).

From this location, the viewing audience comprises existing residential properties spread along Poihipi Road and Watene Lane (See **Figure 6.4 and Figure 6.5**).

Although a large number of properties along Watene Lane back onto the road corridor and in some locations, the western PPC area and wider rural landscape beyond, most properties have solid boundary fences and hedges which screen views towards the road and the PPC area (See **Figure 6.6**). Consequently, views from these viewpoints will not be affected by the changes as the PPC area is already screened from view. Viewer sensitivity from these locations will be negligible and the development is deemed to have a **Very Low** visual effect. However, there are three properties on the corner of Watene Lane and Acacia Bay Drive that have clear open views of the PPC area due to low fences. As such, these viewpoints will be sensitive to development of the PPC area and the visual change will be noticeable due to the development's close proximity and unobstructed views towards the area. The degree of change for these viewpoints is **Moderate.**

6.3.3 Viewpoint 3 – Western PPC Area (Properties along the Southern Boundary, in the mid distance and lake edge)

Figure 6.7 Representative view 3a looking north from residential properties on the southern boundary between Herapeka Street and Lakewood Drive. The main gully is visible in the foreground.

Figure 6.8 Representative view 3b looking north from residential properties at the end of Docherty Drive towards the western PPC area in the foreground.

Figure 6.9 Typical view of residential properties spread along Watene Lane (left) and Acacia Bay Road (right) on the southern boundary of the western PPC area.

Figure 6.10 View looking south from the PPC area towards the CBD in the distance.

The viewing audience in close proximity to the PPC area comprises the row of residential properties spread along the southern boundary of the western PPC area, users of Brentwood Gully and users of local roads.

The views of the PPC area will be similar for most of the viewpoints identified on **Figure 6.7** and **Figure 6.8**. These residential properties are in close proximity to and look directly onto the PPC area. The existing views towards the PPC area are rural in outlook and include paddocks, shelter belts, amenity plants along the property boundaries and the occasional farm shed and/or residential dwelling in the distance. The rural landscape is predominantly free of development and when combined with the grazed slopes and vegetated ridgeline (caldera rim) provides a strong rural backdrop. The PPC area is partially screened by amenity plants located along the northern boundary of each of the residential properties. This vegetation reduces the visibility of the PPC area and the degree effect on neighbouring properties.

In terms of visual sensitivity, the residences will be sensitive to development of the PPC area and the visual change will be noticeable due to the close proximity. Where the PPC area is visible through gaps in the boundary plantings, fences and topography, the development and the visual changes

associated with this development will become a discernible feature within these views (See **Figure 6.9**). From these representative viewpoints the potential visual changes will include screening of the rural backdrop and the introduction of new residential dwellings, roads, streetlights, fences and vegetation. The overall degree of change for these viewpoints is **Moderate.** As a result, the potential combined effects on the rural-residential interface will need to be addressed. Buffer planting along the southern boundary of the PPC area is recommended to assist with the mitigation of the landscape and visual effects. However, in order to preserve and enhance more distant views of the lake and volcanic cones, intrusions into viewshafts, such as large trees and shrubs should be avoided.

For the row of residential properties fronting Brentwood Gully extending between the Lakewood Drive Cul-de-Sac and Chase Grove Cul-de-Sac the PPC area is partially to fully screened by existing vegetation located throughout the gully. Viewer sensitivity from these locations will be low due to the screening effect of the intervening vegetation. Views from these viewpoints will not be affected by the changes as the PPC area is screened from the properties by intervening vegetation. As such, viewer sensitivity from these locations will be negligible and the development is deemed to have a **Very Low** visual effect. Where the PPC area is visible between gaps in the gully and boundary planting, viewers will see the PPC area in the mid-distance and have a moderate to low sensitivity to change. As such the overall visual effect for these residents is **Moderate**.

Similar to the residential properties described above, recreational users of Brentwood Gully will be sensitive to development of the PPC area and the visual change will be noticeable due to the development's close proximity and unobstructed views towards the area. The PPC area will increase the visual presence of development associated with the area and these elements will appear more dominant than currently is the case. The degree of change for these viewpoints is **Moderate.** However, it is important to highlight that the recreational element of the gully will also extend resulting in a potentially positive change.

Brentwood Gully and the main onsite gully system provides cues in relation to landscape integration, recreational use and linkages. As such, the effect on these viewpoints and the main gully landform within the PPC area will be mitigated through the retention and enhancement of the gully system with pockets of native planting in strategic locations to improve it as a vegetated landform feature, 'green corridor' and ecological link. In addition, the gully will provide an important organising element for the proposed road corridor. The proposed alignment of the road corridor parallel along the gully will provide an opportunity to create an active edge to the future residential area. This will not only encourage residential dwellings to orientate themselves towards the open space thereby potentially avoiding solid back fences but also improve passive surveillance and higher value outlook for these residential properties.

Mid to long distance viewpoints further to the east on the lower slopes below the PPC area comprise residential areas, the lake edge, reserves, local roads and the CBD (See **Figure 6.10**). Due to this low viewing angle and the screening effect of intervening buildings and vegetation most of the PPC area will be screened from view. As can be seen in **Figure 6.9** (right) only small parts of the lake is visible from this location which makes it apparent that the PPC area will similarly not be visible from these viewpoints. Residential and lakefront viewpoints are generally orientated away from the PPC area and focused on the lake. Viewpoints throughout the CBD are 1.5 km at its closest point. These views are dominated by the urban development in the foreground and mid distance with partial and glimpsed views of the PPC area visible between the commercial buildings. It is an urban view with busy roads and commercial buildings back dropped by the surrounding hill slopes and ridgelines. Viewer sensitivity from these viewpoints are therefore low. Development of the PPC area will be visually recessive and viewed in context of the surrounding residential developments. This combined with the distance from the PPC area means visual effects on mid to long distance views will be **Low**.

The overall visual appearance and character of this southern outlook will change from rural to urban residential. The initial visual effect from this location without screen planting is **Moderate**. However, the recommended landscape mitigation measures have been developed to mitigate adverse visual

effects for sensitive viewpoints in close proximity to the PPC area. These measures will minimise adverse effects on the visual environment and reduce the overall effect on both residential and recreational activities and users of the gully to **Moderate - Low**.

6.3.4 Viewpoint 4 – Wairakei Drive

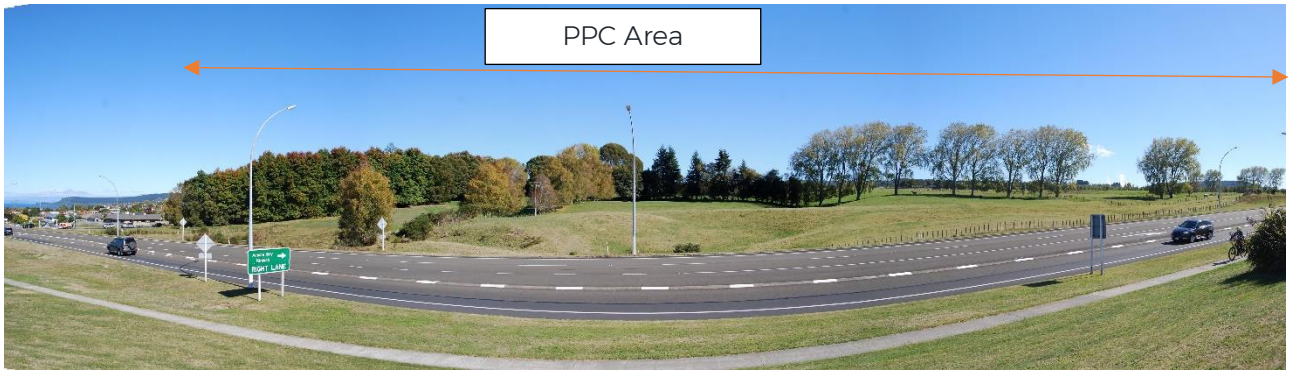


Figure 6.11 Representative view 4 looking west from the Huka Falls Road lookout towards the eastern PPC area. The existing stand of mature trees and stormwater detention area can be seen in the foreground.

Figure 6.12 Typical view of residential properties located along Wairakei Drive.

The viewing audience comprises road users, residential properties located along the western boundary of Rangatira Park and Huka Heights immediately adjacent to Wairakei Drive and users of the Huka Falls Road lookout in close proximity to the proposed PPC area (See **Figure 6.11**).

Views from these dwellings will not be affected by the PPC area as the properties within the residential environment are screened from the future residential development by intervening boundary fences and existing earth bunds planted with shrubs (See **Figure 6.12**). As such, viewer sensitivity from these locations will be negligible and the development is deemed to have **a Very Low** visual effect.

Southbound motorists approaching the outskirts of Taupō will experience the PPC area in their foreground view when they transition between the rural landscape and the urban-residential edge. It is important to note, however that views of the PPC area will be fleeting and the future residential development will be seen for a short timeframe which reduces the overall sensitivity of the road user's view to low. The motorists will also see changes in the context of both the existing rural landscape to the west and modified 'urban residential' landscape to the east and south. The

residential environment of Nukuhau and Rangatira Park forms a distinct residential backdrop to this view. Due to this urban backdrop and the wider residential setting, the ability of the landscape to accommodate new residential development is high.

Whilst the PPC area is residential and therefore consistent with the residential environment to the east, south and south-west, the lasting visual effects of the development on passing motorists, if left unmitigated, may result in adverse visual effects. However, the Wairakei Drive frontage design (See **Section 7.1: Wairakei Drive Frontage and Stormwater Reserve**) will minimise the resultant visual effects upon this viewing audience to create an appropriate transition between the rural and urban landscape. The proposed landscape treatment will improve the visual appearance of the road frontage in this prominent location. Appropriate road frontage setbacks and landscaped boundary treatments will maintain the sense of open space associated with the rural environment and address visual screening and acoustic issues.

The only noteworthy feature is the stand of mature native and exotic vegetation associated with the disused homestead which is located within the eastern PPC area. Removal of this stand of vegetation for residential development will impact on the amenity of the area and increase the prominence of the built environment.

Overall, the PPC will have a **Moderate - Low** effect, primarily due to the fleeting nature of the views; the urban setting which will be able to absorb the changes and the proposed road frontage treatments which will break up the bulk of the new zone.

The Huka Falls Road lookout is orientated away from the PPC area with its principal views to the south. These southern viewing opportunities are highly valued panoramic views, extending across the residential environment in the foreground towards the town centre, Lake Taupō and volcanic cones in the background. Views to the west include the PPC area and rural landscape, with the existing residential environment of Nukuhau and Rangatira Park forming the main backdrop for views immediately to the north and east. Given that the main view is orientated to the south away from the PPC area, and that the period of exposure to the view is limited, it is clear the viewing audience will have a moderate to low sensitivity to change. Any new development to the west will be less intrusive from this location and the existing outlooks across the landscape to prominent landscape features in the south will be maintained. The PPC area will not have a marked effect on the overall quality and amenity of the lookout view and will therefore have an overall **Low** visual effect.

6.3.5 Viewpoint 5 – Lake Edge (Lowell Place, Waipahihi Bay,)

Figure 6.13 Representative view 5 looking north from Lowell Place on the lake edge towards the eastern PPC area.

The PPC area is visible from a number of viewpoints along the northern lake edge extending from Waipahihi Bay / Two Mile Bay southwards (See **Figure 6.13**). Viewpoints to the north of this point are generally screened by intervening landform, vegetation and the CBD. The viewing audience comprises users of the lake, road users, pedestrians, cyclist and residential properties including elevated viewpoints on the gently rising hill slopes to the east.

These distant viewpoints are located approximately 3.9 km south of the PPC area and views are generally focused on the lake in the foreground, CBD in the mid distance and to a lesser degree the distant slopes on which the PPC area is located. From this location views include residential developments and the CBD below the PPC area, the rural hinterland and ridgelines in the distance. Within this view the PPC area will be viewed as a thin ribbon of residential housing above the existing urban edge and thus forms a small part of an overall large panoramic view. Therefore, the prominence is reduced by the distance and the wider landscape context. Ultimately, any proposed residential development will be perceived as a small visual extension of the existing residential developments immediately below the PPC area. The extent to the change in these views will be limited and any adverse visual effects will be **Low**.

6.3.6 Poihipi Road Revocation

Poihipi Road will change from a busy road corridor and two intersections to a new residential development and recreation reserve. The main effect will be the removal of vehicle and pedestrian traffic, demolition of the existing road surface and the installation of new grass and landscape planting. (See **Figure 6.1,** photo on the left).

Views from Wairakei Drive and Watene Lane to Poihipi Road and the new development will be viewed as a logical extension of the surrounding residential developments. These views will be fleeting, and the future residential development and recreation reserve will be seen for a short timeframe which reduces the overall sensitivity of the road user's view to low. The new PPC area will sit appropriately within the landscape and will therefore have a **Low** effect on visual amenity.

Views from residences to the south of the proposed PPC area will not be affected by the proposed development as these properties are screened from the PPC area by intervening boundary fences. It should also be noted that the new reserve will provide additional separation in the form of a green buffer between the residential properties. This will not only soften the view but ultimately reduce the perceived effect that new fences and residential dwellings will have on the visual amenity of these views. As such, viewer sensitivity from these locations will be low and the development is deemed to have an overall **Low** visual effect.

7 Mitigation

Further to the landscape and urban design principles (See **Section 2**) that were incorporated into the Layout Plan, this section provides an additional level of detail to assist in understanding and addressing the potential adverse effects. These landscape measures will help to minimise or alleviate potential landscape change, anticipated negative visual effects that the proposed PPC area may have on the existing landscape and to integrate the development into the wider environment.

The measures are explained in more detail below and include planting, building setbacks, boundary treatments, road design and orientation of buildings. These design proposals will be further developed in accordance with the TDC District Plan: Appendix 7 - Taupō and Centennial Industrial Environments landscaping requirements, September 2019, in particular selection and positioning of street trees. A number of cross sections have also been produced to better illustrate these measures.

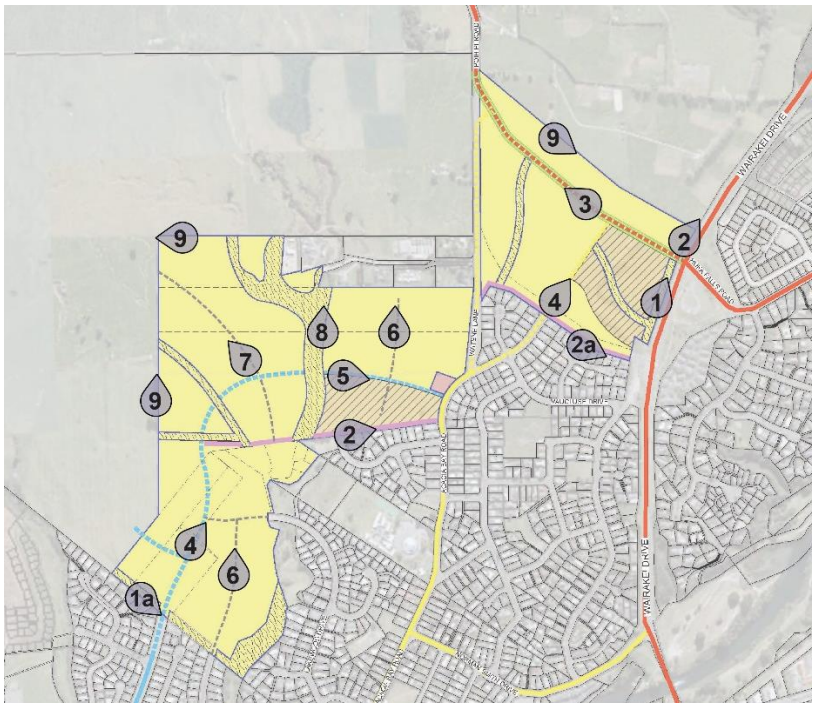


Figure 7.1 Plan showing cross section locations

7.1 Wairakei Drive Frontage and Stormwater Reserve – Section 1 and Section 1a

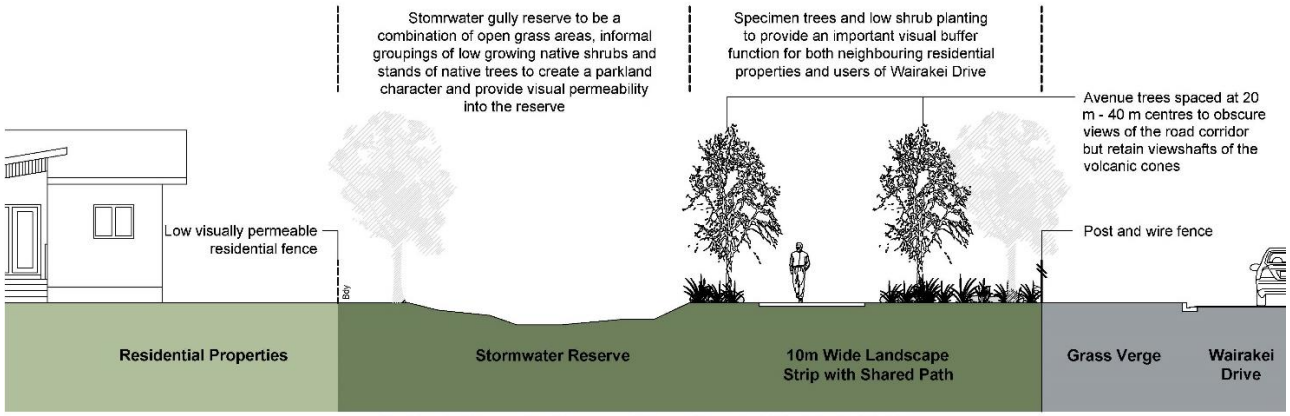
The below cross section illustrates the Wairakei Drive frontage design. The 20-metre-wide stormwater reserve area is divided into a stormwater detention corridor and a planting buffer strip.

The 10-metre-wide native planting strip is proposed immediately adjacent Wairakei Drive to obscure views from the road towards the PPC area, whilst protecting viewshafts from the pathway and dwellings towards the volcanic cones. In terms of tree planting, an avenue of specimen trees is suggested, with a height requirement of 10 – 20 metres at maturity. Trees should be spaced at 20 metre intervals and lower native shrubs with a maximum height of 1 metre. This softens the interface

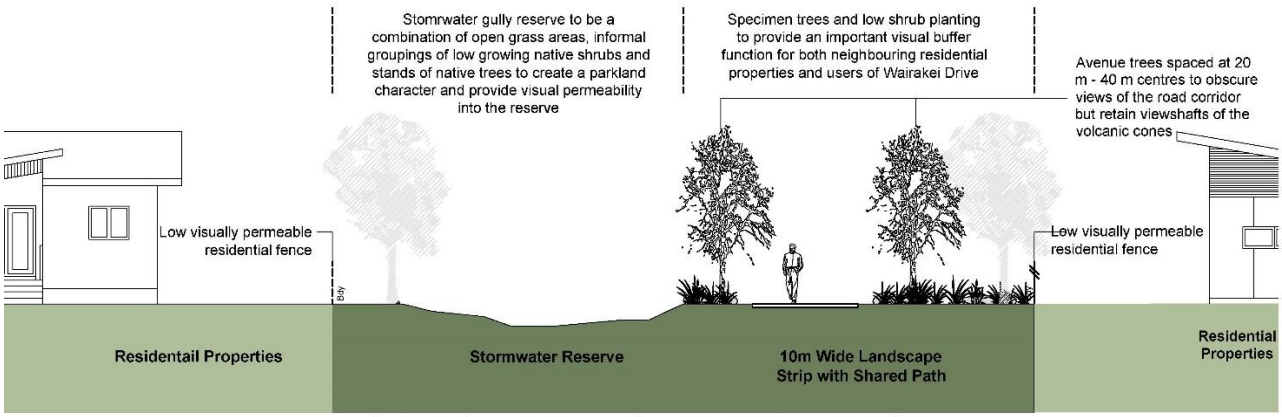
between proposed residential development and the Wairakei Drive corridor and retains the existing sense of openness, avoiding the 'wall' effect that would occur from more dense planting.

A pedestrian and cycle path will extend down the centre of the reserve, with a clear planting envelope around the path for safety. Either grass or low planting to 400 mm is acceptable within this envelope. Plant selection is important as it will create a sense of arrival, provides the first impressions and create a positive visual environment for the community, travelling public and tourists.

The area between the screen planting strip and property boundaries will be utilised for stormwater treatment. Within the stormwater reserve grass areas are combined with informal groups of clear stem specimen trees (native and exotic) to provide a parkland-aesthetic for residential properties backing onto the reserve. This will encourage dwellings to have internal or external living spaces that overlook the reserve. Fencing should therefore be restricted to be as low and as visually permeable as possible. The reserve can be used for informal recreation activities such as walking.



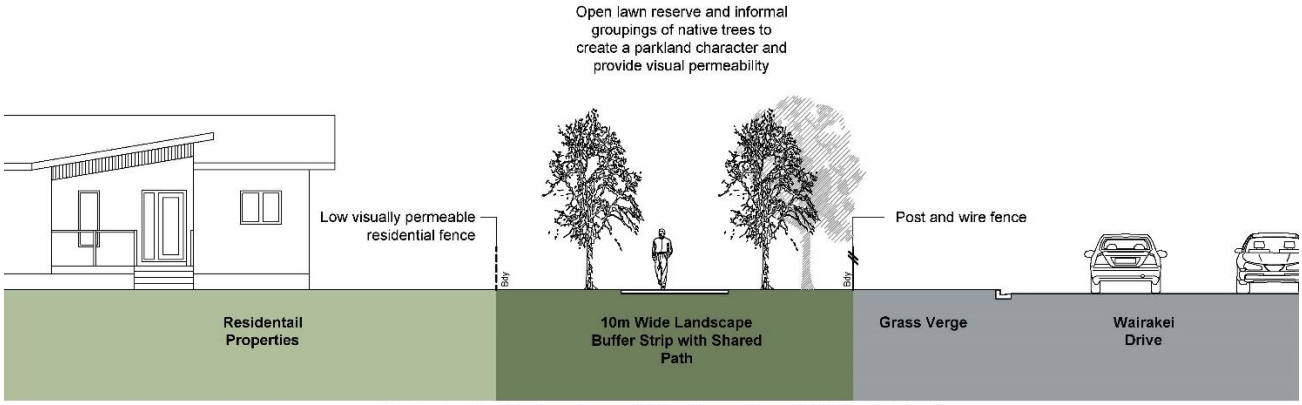
Section 1: Stormwater Reserve - General Density (20m Planted Buffer)
Not to Scale



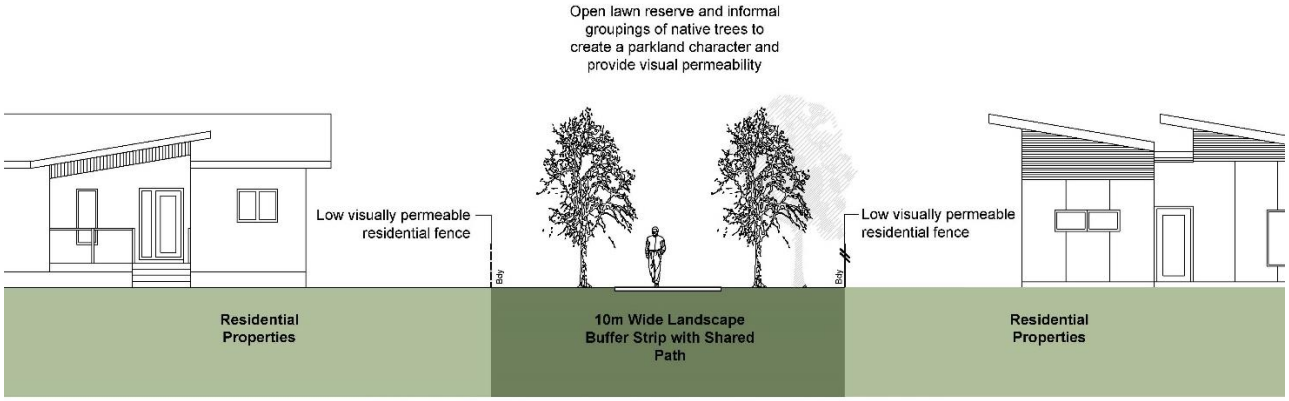
Section 1a: Stormwater Reserve - General Density (20m Planted Buffer)
Not to Scale

7.2 Landscape Strip / Recreation Reserve – Section 2 and Section 2a

A 10-metre-wide native and exotic planting strip is proposed to screen and buffer views from the road corridor towards the PPC area. A mixture of native shrubs and trees are suggested, with a height requirement of 10 – 20 metres at maturity. Where a shared path is used, a clear planting envelope should be achieved. Either grass or low planting to 400 mm is acceptable within this envelope.



Section 2: 10m Wide Landscape Strip - General Density (Buffer Planting)
Not to Scale

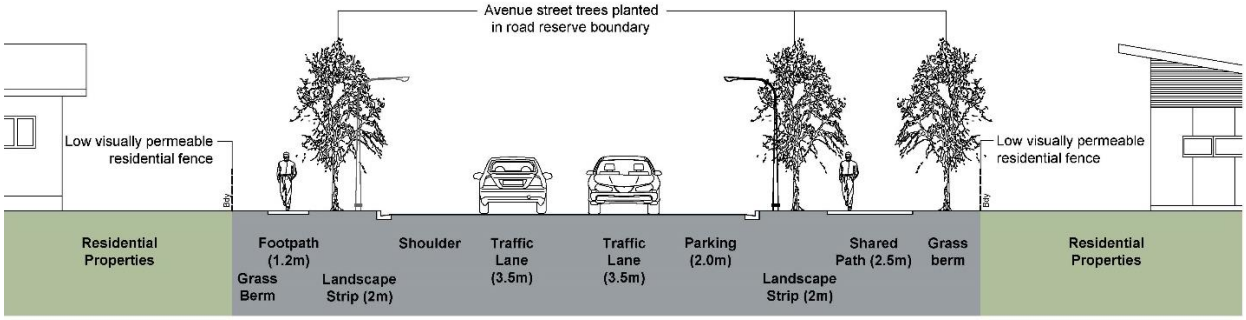


Section 2a: 10m Wide Landscape Strip - General Density (Buffer Planting)
Not to Scale

7.3 Arterial Roads – Section 3

These corridors comprise grass berms, pedestrian footpaths and shrub planting on both sides of the corridor. It is intended that a 2.5 metre shared path be set between two rows of trees on one side of the road and a standard footpath on the other side of the road. A 2-metre-wide planting strip will extend along the length of the corridor on both sides of the road to give character and definition to the arterial. Shrub planting should be a combination of low growing (400 mm), low maintenance native shrubs. An avenue of clear stem native specimen trees has been included within the planting strip to provide visual continuity with surrounding residential developments and to provide safety benefits through increased passive surveillance.

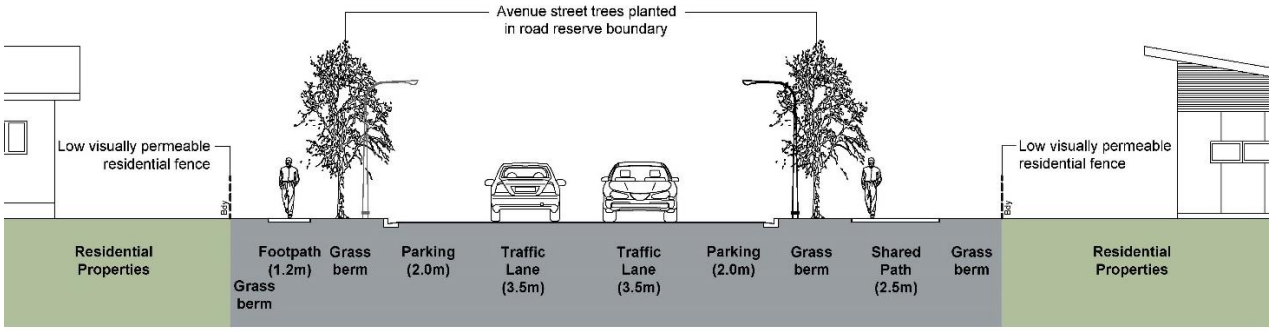
Ultimately, tree selection for arterial and collector roads should ensure the PPC area is well connected physically and visually to the open space framework and streetscape network and surrounding residential developments.



Section 3: Arterial Road - General Density (22m Road Reserve)
Not to Scale

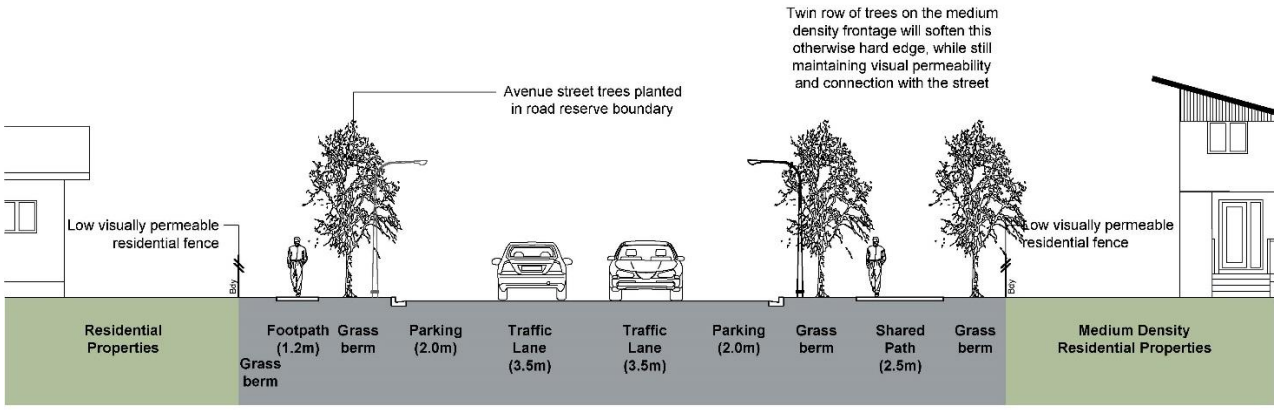
7.4 Collector and Secondary Collector Roads – Section 4 (General Density) and Section 5 (Medium Density)

Collector and Secondary Collector Roads comprise grass berms, pedestrian footpaths and on street carparks on both sides of the corridor. To provide visual continuity with surrounding residential developments and soften the streetscape an avenue of clear stem specimen trees has been included in the grass berms. Trees should be well spaced so as not to obstruct viewshafts to the volcanic cones.



Section 4: Collector and Secondary Collector Road - General Density (22m Road Reserve)
Not to Scale

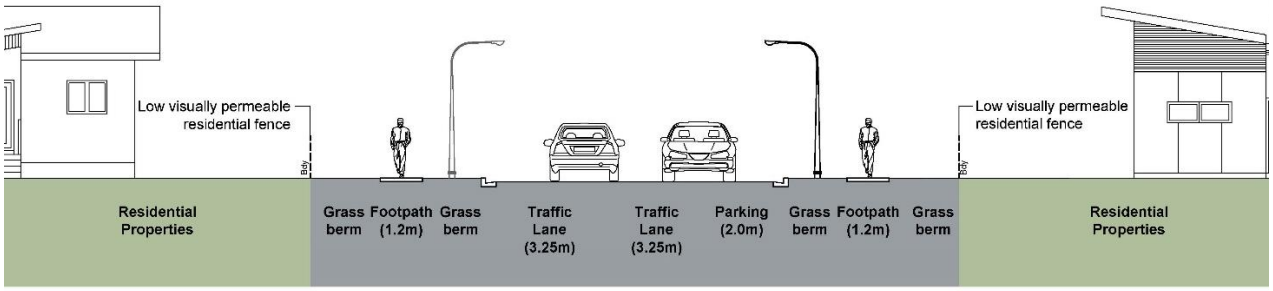
The harder edge of medium density development and likelihood of greater use given its location is softened by repeating the twin rows of trees used on the Principal roads. This also recognises that great development density and proximity to gully reserves areas and the commercial node is likely to result in this corridor having the potential to be more significant for cyclists and pedestrians than other Collector or Secondary Collector roads.



Section 5: Collector and Secondary Collector Road - Medium Density (22m Road Reserve)
Not to Scale

7.5 Low Volume Roads – View 6

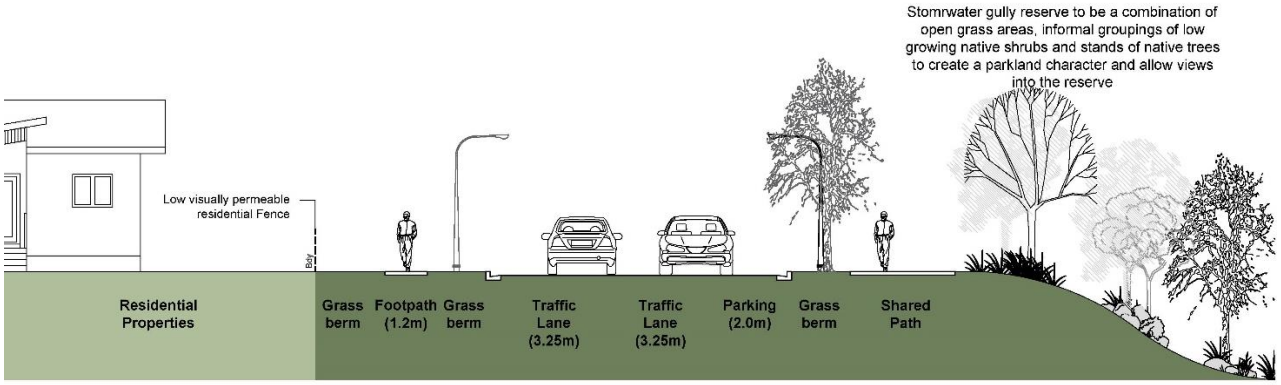
The cross section for Low Volume Roads show grass berms and pedestrian footpaths and both sides of the corridor. Carparking is provide on one side of the road. No street trees are suggested within the road reserve to maintain visual continuity with surrounding residential developments.



Section 6: Low Volume Road - General Density (19m Road Reserve)
Not to Scale

7.6 Low Volume Roads (Residential Edge Fronting Gully Reserve) – Section 7

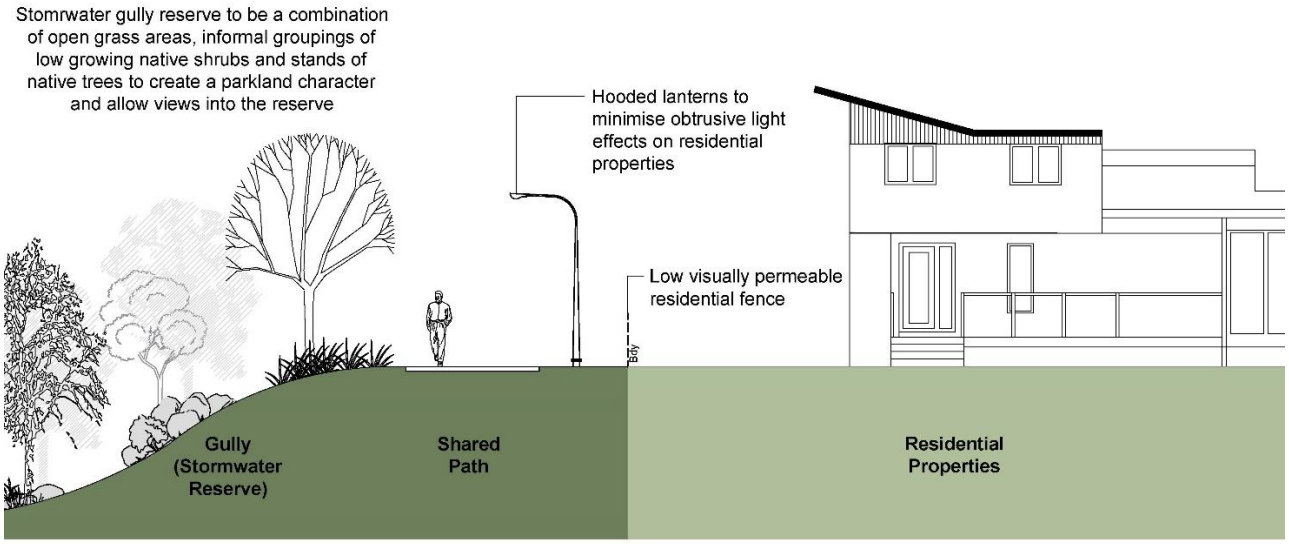
The below cross-section section seeks to optimise benefits and value from the aesthetic opportunities of this recreational open space reserve, and the retention of the natural gully landscape. The gully will lend a more individual and unique character to these streets (benefitting residents and other users). Through design and location this ensures visual and physical access for all the residential properties throughout the site and neighbouring areas. This optimises and reinforces opportunities for the gully network to deliver a more unique identity to the subdivision and to act as the hub for recreational activities. To achieve this, residential properties will be set back from the gully and buffered by a Low Volume Road. This will encourage dwellings to overlook the reserve through positive layout and orientation, delivering both amenity and safety benefits. The upper reaches of the gully will be used for stormwater management in the form of detention ponds. It is suggested that front fences along these streets should be limited to no more than 1.1m in height.



Section 7: Low Volume Road and Gully Reserve - General Density (19m Road Reserve)
Not to Scale

7.7 Residential Edge Fronting Gully Reserve – Section 8

Similarly, residential properties on the opposite side of the gully will be set back to accommodate a shared path and to benefits from the relationship with the green open space (See **Section 8**). Again, this will encourage dwellings to overlook the reserve, provide passive surveillance and at the same time encouraging low fences thus avoiding unattractive 'tunnel' like effects arising from long lines of tall front fences. It is recommended that fences above 1.1m in height are prevented from establishment along the back of properties that face the reserve. A pedestrian and cycle path will extend along the road reserve boundary, with a clear grass envelope around the path. Dwellings should be encouraged to 'front' the reserve and have habitable rooms oriented towards it. All lighting must be shielded to minimise light spillage.

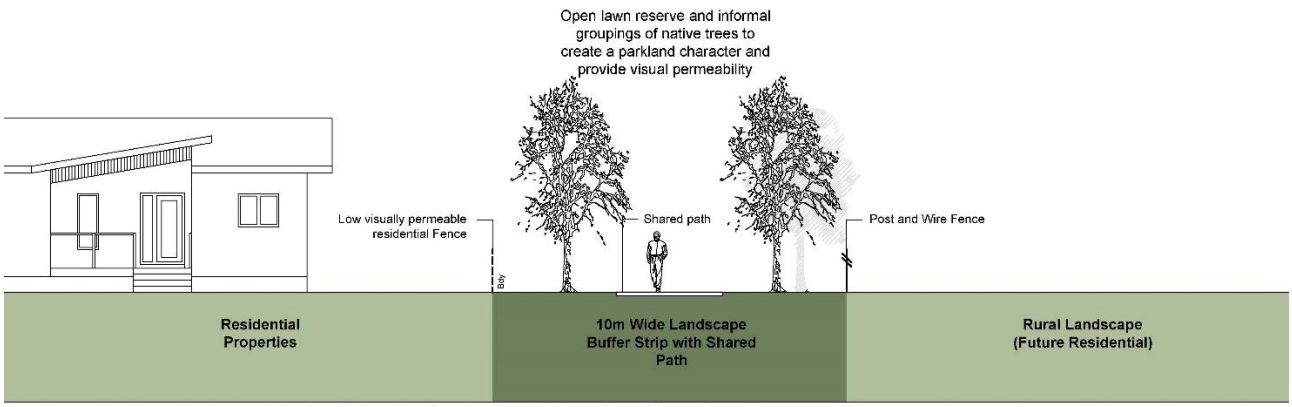


Section 8: Gully Reserve Residential Edge
Not to Scale

In terms of planting layout and selection, a combination of large open lawn areas, informal groups of low growing native and exotic shrubs to 500 mm height and stands of native and exotic trees will support the existing parkland character of Brentwood Gully and other stormwater reserves in the area. The cross sections below illustrate the various combinations of stormwater detentions areas, open lawn areas and groupings of low shrubs and stands of trees. Riparian planting along the base of the gully should be hardy and tolerant of dry conditions. It is recommended that landscape planting be low to preserve overlooking and passive surveillance opportunities from adjacent residential dwellings and road users.

7.8 Rural-Urban Edge (Recreational Reserve) – Section 9

The cross section illustrates the interface between the rural and urban edge along the northern and western boundaries of the PPC area and typical treatment of the Recreational Reserves. A 10-metre-wide grass strip is proposed with informal groupings of native and exotic trees to mitigate adverse effects on the rural landscape. The aim of the edge treatment is to create a parkland setting that will deliver a defined but soft urban edge, with visual permeability. This will facilitate the use of the urban edge rural aesthetic and for recreation activities such as walking. It also establishes a positive backdrop for the residential properties backing onto the rural landscape. Again, low fences that are visually permeable are encouraged. A further advantage of this interface design is that it facilitates future stages of development to be more adaptable for a range of future options related to residential dwelling, pedestrian-cycle and vehicle corridors.



Section 9: General Density Rural - Urban Edge (Recreational Reserve - 10m Landscape Interface)
Not to Scale

7.9 Landscape Planting Plan

A landscape planting plan and specification should be prepared by a suitably qualified professional for the entire PPC area. The specification should not only cover plant installation but ongoing maintenance. The planting plan should specify the type and final location of new plant species, grades, densities, stock size, quantities and location of vegetation to be planted and maintained on site.

8 Conclusion

Residential development and associated urban-residential activities dominate the land to the east and south of the PPC area. The zone change will permit residential development of the PPC area to expand on the existing urban development patterns by shifting the residential edge 500 m to 700 m further north into the rural environment.

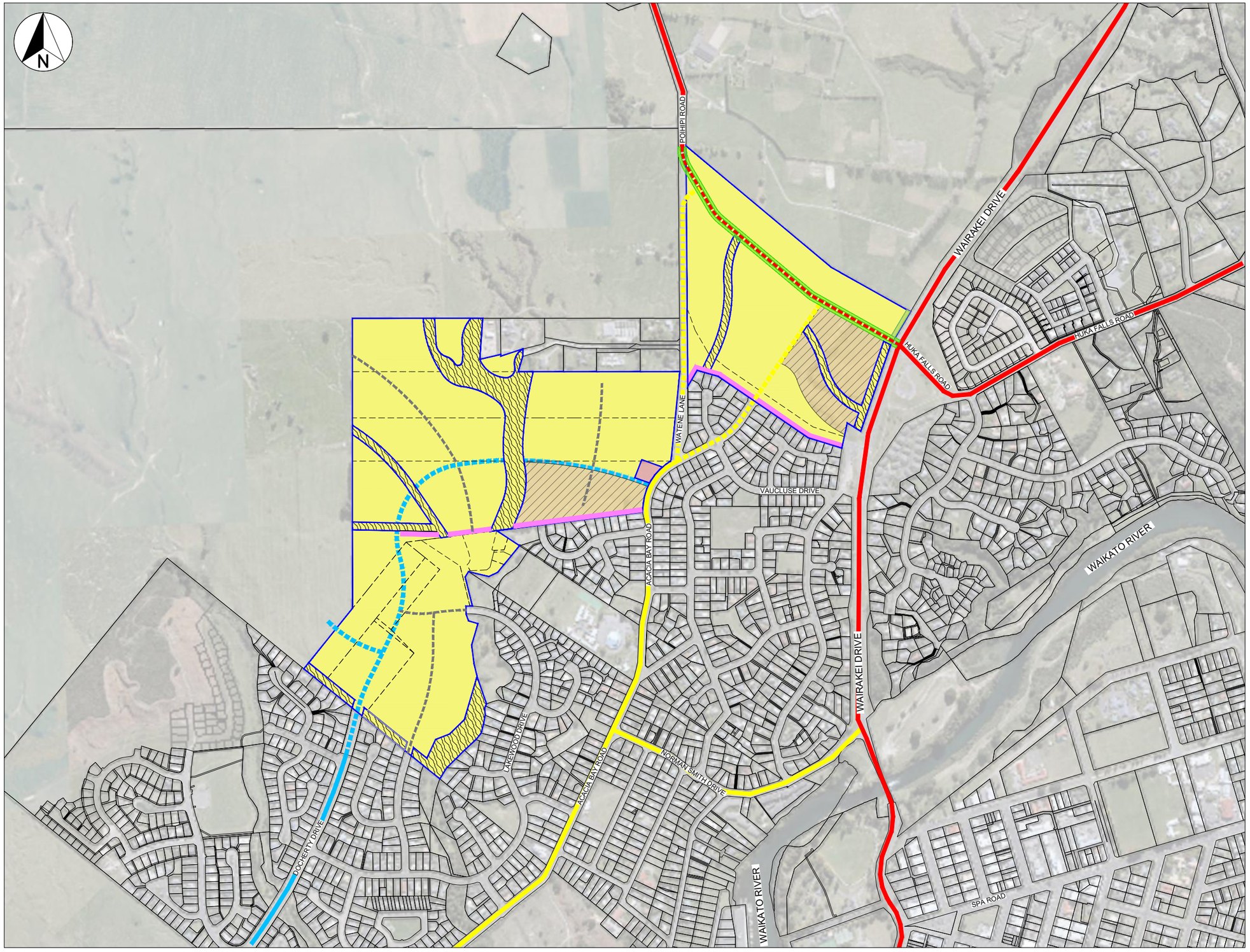
The intention of the PPC through its design, layout and landscaping provisions is to enable a residential development that is visually and physically part of the existing residential land use patterns whilst ensuring a harmonious integration with the wider rural landscape. The layout of the PPC area including the proposed mitigation measures have paid attention to ensuring that the future development of the area will reduce landscape and visual change to the wider landscape context, add to local landscape amenity whilst enhancing the wider natural environment.

The location, layout and concentration of the proposed development will have a noticeable landscape and visual effect. This will be due to the expansion of building structures and roading elements into this urban periphery rural landscape, and the contour changes that will be necessary to accommodate the subdivision development.

Whilst there will be a noticeable change in landscape character from rural to urban-residential resulting from the proposed rezoning, this change will be compensated through context sensitive design, bringing the existing urban development patterns and rural attributes into the development of the PPC area proposal. As such, the PPC will enable a development that will be in keeping with existing residential environment to the east and south, allowing for a coherent integration into this development pattern. It will provide the opportunity to replicate the building density, building envelopes, streetscape patterns, open space and boundary treatments. In addition, it provides opportunities to protect and enhance the drainage gullies and natural flow paths which is important natural character values and features of the site.

The PPC area is not considered to have any significantly adverse landscape or visual effects because of urban expansion on the surrounding landscape character or visual environment and is therefore considered to be consistent with the wider landscape context. Overall, the proposed PPC, if developed as proposed with the suggested mitigation, into a residential subdivision with a majority mix of general to medium density properties and smaller areas of reserves and commercial activity, will result in landscape and visual effects that can be considered to be **Moderate - Low.**

Appendix A
Structure Plan Map



LEGEND

- PROPOSED MEDIUM DENSITY RESIDENTIAL ZONE
- PROPOSED GENERAL RESIDENTIAL ZONE
- PROPOSED NEIGHBOURHOOD SHOPPING CENTRE (SHOPS)

URBAN ROAD HIERARCHY

- ARTERIAL
- PROPOSED ARTERIAL
- PRIMARY COLLECTOR
- PROPOSED PRIMARY ARTERIAL
- SECONDARY COLLECTOR
- PROPOSED SECONDARY COLLECTOR
- PROPOSED ACCESS AND LOW VOLUME

PROPOSED OVERLAYS

- PROPOSED STORMWATER RESERVE WITH PEDESTRIAN ACCESS, CYCLEWAY, AND PLANTING
- RECREATION RESERVE, 10-12m WIDE, WITH PEDESTRIAN ACCESS, CYCLEWAY AND PLANTING
- 3m WIDE LANDSCAPING STRIP - NO DRIVEWAY ACCESS
- 10m WIDE LANDSCAPING STRIP

NOTES

FIXED FEATURES:

1. GENERAL LOCATION OF VARIOUS ZONES.
2. LOCATION OF PROPOSED AND EXISTING ROAD INTERSECTIONS, WITH THE EXCEPTION OF THE PRECISE LOCATION OF THE PROPOSED ARTERIAL ROAD / POIHIPI ROAD INTERSECTION.
3. ROAD CLASS FOR PROPOSED ROADS.
4. POSITION OF LANDSCAPING STRIPS.

ARBITRARY FEATURES:

1. POSITION/ NUMBER OF INTERNAL ROADS.
2. LOCATION OF PROPOSED ARTERIAL ROAD / POIHIPI ROAD INTERSECTION .
3. PRECISE LOCATION AND SIZE OF VARIOUS ZONES.
4. PRECISE LOCATION AND SIZE OF STORMWATER RESERVES.
5. PRECISE LOCATION OF WHERE PROPOSED ROADS WILL INTERSECT WITH NEIGHBOURING LAND.
6. WIDTHS OF LANDSCAPING STRIPS.

FOR CONCEPT

Revision	Amendment	Approved	Revision Date
I	SW RESERVE, CENTRE ZONE, LEGEND	HC	22/11/2019
J	REPLACED RECREATION WITH SW RESERVE	HC	27/11/2019
K	OVERLAYS AND SW RESERVE HATCH REVISED	T.R.	31/07/2020
L	PROPOSED LOCAL CENTRE ZONE REVISED	T.R.	10/08/2020
M	SHOPPING CENTRE RESIZED, NOTES ADDED	H.C.	27/10/2020
F	AMENDED PEDESTRIAN AND CYCLEWAYS	HC	01/10/2019
G	EXISTING & PROPOSED SW GULLYIES ADDED	HC	18/11/2019
H	ROADS REVISED	HC	19/11/2019

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Designed	Approved	Approved Date
H. CRAWFORD	T. RUNNING	27/10/2020
Drawn	Scales	
P. FIEREK	1:5,000 @ A1, 1:10,000 @ A3	

Project: TAUPO DISTRICT PLAN

Sheet: PRIVATE PLAN CHANGE
NUKUHAU PROJECT

Project No.	Sheet. No.	Revision
2-37400.00	L001	M

1:5000@ A1
1:10000@ A3
0 50 100 150 200 250 300 350 400 450 500 m

300 mm 200 100 50 10 mm 0

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Appendix B
Statutory and Non-Statutory Documents

Policy Documents

The policy documents that are relevant to the context of the proposed site and have been considered are:

- The Taupō District Plan (2018);
- Taupō Urban Structure Plan (2004);
- Landscape Types and Units of the Taupō District (2000); and
- Outstanding and Amenity Landscapes of the Taupō District (Isthmus, 2009).

These policy documents have provided a baseline for the issues, objectives, policies and outcomes sought for Taupō's landscape. They are also helpful to provide guidance of the appropriateness of development within this environment. In particular, the preservation of the landscape, natural character and visual amenity values of the landscape is of importance.

Great Lake Taupō District Plan

The PPC area is located within the Rural Environment. The Objectives and Policies of the Rural Environment comprise:

OBJECTIVE:

3b.2.1
The management of the Rural Environment to maintain and enhance rural amenity and character.

POLICIES

(i) Maintain and enhance the amenity and character of the Rural Environment by providing land use performance standards and subdivision rules to manage the scale and density of development.
(ii) Avoid urban development in the Rural Environment unless through a TD2050 Structure Plan Process and associated PPC.
(iii) Maintain the open space and dispersed building character.
(iv) Provide for a range of productive land use activities within the Rural Environment while ensuring any adverse effects are avoided, remedied or mitigated.
(v) Protect the District's lakes and river margins from buildings that are visually obtrusive and/or result in a decline of the amenity of the margin area.
(vi) Avoid, remedy or mitigate adverse effects of subdivision, use and development of land on areas or features of cultural, historical, landscape or ecological value.
(vii) Recognise and provide for Infrastructure and Network Utilities in the Rural Environment, while ensuring any adverse effects on or arising from them are avoided, remedied or mitigated as far as practicable.
(viii) Recognise that the Rural Environment encompasses a range of landscape characteristics, amenity values and land use patterns and activities when considering the appropriateness of development within the zone.

OBJECTIVE

3b.2.2
Manage the subdivision of rural land to reflect rural amenity values, rural land use and appropriate levels of infrastructure.

POLICIES

i. *Enable the subdivision of rural land in a manner that encourages a diversity of lot sizes that reflects the rural amenity and character of the area, and the landform.*

ii. *Allow subdivision of rural land only where there is adequate rural infrastructure.*

iii. *Allow as a controlled activity, the creation of allotments and nominal allotments with an area of 10 hectares or more as a means of maintaining rural amenity and character, managing rural infrastructure and allowing for a diversification of rural land uses.*

iv. *Prevent urbanisation of the rural environment except as provided through the TD2050 Structure Plan Process and associated PPC process to prevent a dispersed pattern of settlement and the resulting inefficiencies in the management of resources.*

v. *Avoid the subdivision of rural land where there are hazards, in particular, land affected by geothermal hazards and where land is unstable or prone to erosion or flooding.*

vi. *Manage the subdivision of rural land overlying Geothermal Areas to avoid conflict with the resource use and development associated with geothermal electricity generation on identified Development and Limited Development Geothermal Systems.*

vii. *Encourage the retirement of steep land where such land is not appropriate for more intensive farming or further development including buildings, earthworks or clearance of vegetation.*

viii. *Provide for the creation of Papakainga housing where any adverse effects on amenity and rural character are internalised within the parent allotment; and where any other adverse effects on the wider Rural Environment are avoided, remedied, or mitigated.*

ix. *Provide for the creation of smaller lots to provide for the development of infrastructure, or access lots.*

x. *Any relevant guidelines should be taken into account in the design of any subdivision in the Rural Environment. In particular sensitive rural design should seek to achieve the following principles:*

    a) *Maintain significant open space area and increase net environmental gain – Encourage sensitive rural design in subdivision, use or development where areas of continuous open space predominate. In particular protect and enhance topographical, water, and vegetation features that contribute to the character of the Rural Environment.*
    b) *Areas or features of cultural, historical, landscape or ecological value are protected and enhanced.*
    c) *Appropriate Overall Density based on the level of development anticipated for the Rural Environment – Maintain the expected level of*

built character in the Rural Environment, as anticipated by the District Plan.

d) Site analysis – Undertake a design process and rationale that includes, but is not limited to identification of sensitive areas such as dominant ridgelines, water courses (constant and ephemeral), existing vegetation that contributes to the rural character, and any important cultural, historical, natural or landscape values.

e) Appropriate Building Design and Location – Site and design buildings appropriately in a manner that is well integrated with the surrounding landform, maintains continuous areas of open space, and reduces any potentially adverse visual effects. Levels of infrastructure are minimised through appropriate siting of buildings and structures.

xi. Recognise that development of land in the Rural Environment at higher densities may be appropriate where associated with recreation, commercial accommodation and tourism activities provided that adverse effects are avoided, remedied or mitigated and that granting consent will not lead to patterns of urbanisation and reverse sensitivity issues.

OBJECTIVE

3e.2.5
Ensure land development does not detract from the amenity value or qualities of the local environment.

POLICIES

(i) Ensure that proposals for the subdivision and development of land assess the particular amenity values of the area including the physical characteristics of the land and avoids, remedies or mitigates any adverse effects.

(ii) Subdivision and subsequent development shall either maintain or enhance, but not detract from, the significance of features or areas of cultural, spiritual, historical, landscape or natural value, (as identified through the provisions of this Plan).

(iii) Enable the creation of allotments below any minimum allotment size identified as a controlled activity in this Plan for the exclusive purpose of providing or enhancing public or private access, or to exclusively accommodate a complying network utility activity and infrastructure.

Taupō Urban Structure Plan 2004

The Taupō Urban Structure Plan 2004 (TUSP 2004) is a broad-based growth management strategy designed to identify the growth management issues within the Taupō area. The primary focus of the TUSP 2004 is to provide a high-level 20 to 50 year sustainable urban growth management strategy which identifies sustainable urban growth management outcomes for Taupō. Within the TUSP 2004, the PPC area is identified as a Proposed Future Residential Opportunities 2023 to 2053. The high-level Objectives of the Proposed Future Residential Opportunities 2023 to 2053 comprise:

Objective 2

a) Maintain Urban Amenity and Compact Urban Form
To maintain and enhance urban amenity in accordance with the environmental baseline set by the Proposed Taupō District Plan.

Appendix C
Methodology

A seven-point scale of effects was used. This scale of effects (based on the Boffa Miskell scale of effects) was defined and agreed at the NZILA assessment methodology workshop (Christchurch), Dec 4, 2017 (part of a national roadshow facilitated by the late Environment Court Judge Gordon Whiting). Results are currently being compiled. The below seven-point scale is used to describe effects.

- Very High: Total loss to the key attributes of the receiving environment and/or visual context amounting to a complete change of landscape character
- High: Major change to the characteristics or key attributes of the receiving environment and/or visual context within which it is seen; and/or a major effect on the perceived amenity derived from it.
- Moderate-High: A moderate to high level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate-high level of effect on the perceived amenity derived from it.
- Moderate: A moderate level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate level of effect on the perceived amenity derived from it. (Oxford English Dictionary Definition: Moderate: adjective-average in amount, intensity or degree).
- Moderate-Low: A moderate to low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate to low level of effect on the perceived amenity derived from it.
- Low: A low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a low level of effect on the perceived amenity derived from it. (Oxford English Dictionary Definition: Low: adjective-below average in amount, extent, or intensity).
- Very Low: Very low or no modification to key elements/features/characteristics of the baseline or available views, i.e. approximating a 'no-change' situation .It is generally understood that 'Very Low' and 'Low' are equivalent to the 'Less than minor' threshold.

Sensitivity

The sensitivity of the visual amenity is based upon a sliding scale of importance, ranging from "Very High/International" to "Low/Local". The sensitivity of these depends upon the level of modification (pristine natural versus modified engineered) and how sensitive the environment is to change. The factors that contribute to the sensitivity of the viewing audience are:

- *Level of modification (pristine or highly modified);*
- *Quality and condition (coherence/variability);*
- *Number of viewers and frequency; and*
- *Distance from the Project.*

Viewing audience	Definition
High	Viewed within internationally and nationally designated landscape, the setting of historic buildings and their setting. Viewed using: Public walkways/tracks, reserve walkways, national parks and botanical gardens. Viewed within residential settings.
Moderate	Viewed within:

	Locally important landscapes, outdoor sports and recreation, passengers travelling on trains, people within cars on local roads.
Low	People using motorways and major roads, workers within business premises.
Negligible	Viewed within non-designated landscapes, workers within industrial premises.

Distance

The distance from the Project influences the visual sensitivity of the viewing audience:

Viewing audience	Distance
Foreground views (High)	Views within 500 metres of the viewer (high level of detail will be visible).
Mid-distance views (Moderate)	Views between 500 metres and 800 metres of the viewer (medium level of detail will be visible).
Background views (long distance views - Low)	Views 800 metres and further (viewers will see the object but will find it difficult to distinguish detail.

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CN Top Ltd, Lexus Trustees 11 Ltd and Rajasingham Family Trust

Nukuhau Private Plan Change

Urban Design Assessment

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Contents

List of Figures

Document History and Status

Revision	Date	Author	Reviewed by	Approved by	Status
Draft 1	16 June 2020	Nick Aiken	David McKenzie		DRAFT
Final	14 August 2020	Nick Aiken	Stefan Steyn		FINAL (superseded)
Final Rev 2	10 November 2020	Nick Aiken	Stefan Steyn		FINAL

Revision Details

Revision	Details
Draft 1	Updated 2019 Preliminary Draft developed in conjunction with 2019-2020 LVA
Final	Adjustments developed in conjunction with and aligned with Final LVA
Final Rev 2	Adjustment in relation to staging and amended Plan Change provisions

1 Introduction

WSP was commissioned by three private landowners, CN Top Ltd, Lexus Trustees 11 Ltd and Rajasingham Family Trust, to prepare a Structure Plan (SP) and lodge an application for a Private Plan Change (PPC) to Taupō District Council (TDC). The intention of the Plan Change is to rezone 77.78 hectares of land and enable residential development for approximately 800 new residential lots, a small commercial area, and areas of open space, the latter principally centred around a gully system.

The PPC also includes the notification for the future re-routing and therefore revoking of an area of existing Road Reserve, being part of Poihipi Road, at the applicable time.

This urban design assessment of necessity focusses at a high level; principally on landform and natural features such as the local gully network and topography, the wider landscape, adjacent land uses and urban form. It considers how the PPC development might be arranged spatially to minimise impacts on the existing environment, and to enhance or create an improved built environment and a local sense of place.

It is not the purpose of this assessment to provide detailed development of design concepts, these are best developed as part of the more detailed design of the subdivision itself. It does however discuss opportunities for an enhanced movement network, enhanced relationships between private (residential and commercial lots) and public open space, improved amenity and character, and for a gateway at the northern entrance to Taupō.

2 Description of the Project

It is intended that the new PPC area once developed will be an attractive low-medium density residential subdivision. Section sizes will predominantly be approximately 500 m^2, not dissimilar to surrounding residential areas. A small localised area of higher 'medium' density residential of around one dwelling unit per 300 m^2 is also proposed, as is a small local commercial zoned area. The medium density residential area and a small local commercial area would be in proximity to one another. The medium density area would also have good proximity to open space.

Much of the opportunity to incorporate urban design principles into a new subdivision to optimise good urban design outcomes comes at the concept and detailed design stage. However a failure to incorporate these principles at an early stage can compromise the ability to later design-in and secure better urban design outcomes The purpose of this assessment (and its recommendations) is to identify a high level urban design philosophy and outcomes and a corresponding design responses, (in essence a framework) at the structure plan stage. This will better guide and enable delivery of those outcomes at a later stage. This approach also assists to retain the legibility and coherence of the overall development of the PPC area in the event that the development is staged.

The urban design principles, philosophy and outcomes identified to help inform and enhance the layout and design of the future development of the site, and to mitigate any adverse effects are addressed through a series of design 'responses'. These design responses have been developed jointly with and are common to both this urban design assessment (UDA) and the corresponding landscape and visual assessment (LVA). They are illustrated in **Section 4** – Urban Design Responses, ad in the recommendations in **Section 5.**

The urban design measures along with the LVA have informed the Structure Plan and the LVA should be read in conjunction with this assessment.

The PPC area application has been identified as including the following:

- Proposed residential zones of two types; being predominantly general density, but with a small area of medium density.
- Proposed Neighbourhood Shopping Centre (Shops) (centre enabling commercial activity such as local convenience needs).
- Proposed stormwater reserves, varying widths, with pedestrian access, cycleway, shallow detention ponds and planting. The stormwater reserves will soften the interface between proposed residential development, existing urban edge and road corridor. Tree and shrub planting will retain the existing sense of openness, avoiding the 'wall' effect that would occur from more dense planting. Within the reserves, grass areas are combined with informal groups of clear stem specimen trees to provide a parkland-aesthetic for residential properties backing onto the reserve. The reserves can be used for informal recreation activities such as walking and cycling. Longer grass may suit most areas, with shorter mown grass restricted to areas adjacent to streets and pathways.
- Proposed recreation reserves of typically narrow widths for the main purpose of pedestrian and cycleway access, and with amenity planting. They provide alternative access between roads and to the mixed-use stormwater reserves. Similar to stormwater reserves, recreation reserves comprise trees and shrubs to obscure and buffer views from road corridors towards the PPC area. Mown lawns are combined with informal groups of clear stem specimen trees to provide a parkland-aesthetic for residential properties backing onto the reserve. This includes the rural-urban interface between the rural and urban edge along the northern and western boundaries of the PPC area. The aim of the edge treatment is to create a parkland setting that will deliver a defined but soft urban edge, with visual permeability. This will facilitate the use of the urban edge rural aesthetic and for recreation activities such as walking. It also establishes a positive backdrop for the residential properties backing onto the rural landscape.
- Proposed gully reserves, varying widths, with pedestrian access, cycleway and planting. Where low volume roads and / or residential properties front gullies the reserves seek to optimise benefits and value from the aesthetic opportunities of this recreational open space amenity, and the retention of the natural gully landscape. The gully will lend a more individual and unique character to these streets (benefitting residents and other users). Through design and location this ensures visual and physical access for all the residential properties throughout the site and neighbouring areas. This optimises and reinforces opportunities for the gully network to deliver a more unique identity to the subdivision and to act as the hub for recreational activities. Longer grass may suit most areas, with shorter mown grass restricted to areas adjacent to streets and pathways.
- Proposed urban roads (arterial, collector and low volume) comprising kerb and channel, grass berms, pedestrian footpaths, planted strips, street trees and streetlights (for more detail See Section 5).
- Access points are proposed to the roading network to provide connections to traffic from the PPC area. Five access points are via the continuation of an existing road and the remaining three access points are new intersections. The proposed PPC proposes to close the current Poihipi Road and Wairākei Drive Intersection and realign Poihipi Road to form a new roundabout with Wairākei Drive and Huka Falls Road. This will include a recreation reserve comprising grass and landscape planting. Additionally, a series of on and off-road pedestrian-cycleway connections are proposed, for the most part these are alongside roading connections and/or along the stormwater gully network.

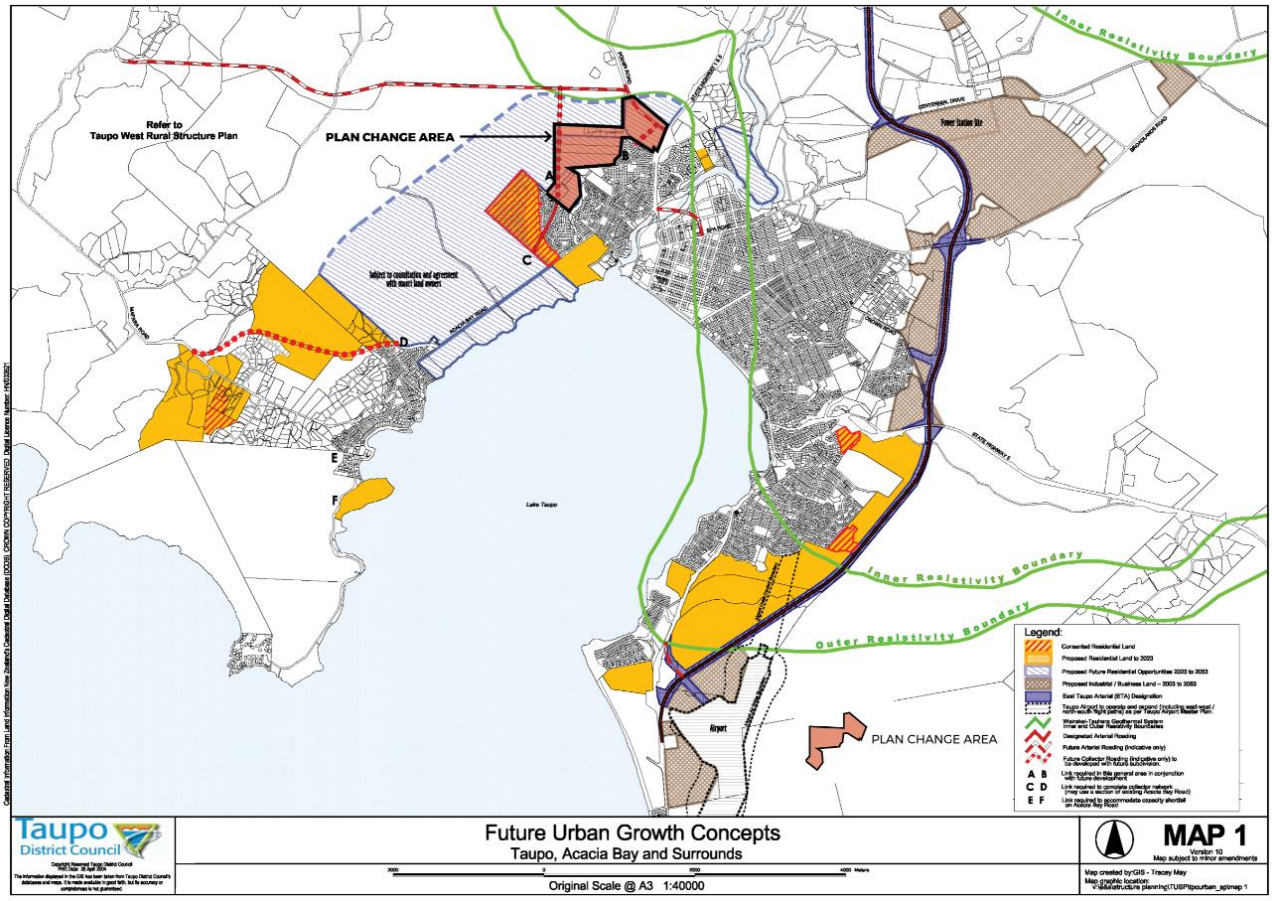


Figure. 2.1 Location of the Plan Change area (see Appendix A for a larger copy of this plan)

3 Location and Context

This UDA has been informed by a visit to the site in February 2019, and by the LVA. The site visit was undertaken jointly with the author of the LVA.

The structure plan area is located on rural land adjacent to the existing north-west urban edge of Taupō, approximately 1.5 km north of the Central Business District. Immediately to the south of the structure plan area is the existing Nukuhau residential area. The development arising from this PPC would in effect form an urban extension of that area. The structure plan area is also bounded to the east by the wide Wairākei Drive corridor and beyond that the typical (in the New Zealand context) low-medium density residential areas of Rangatira Park and Huka Heights. To the north and west are rural landscapes and rural land uses.

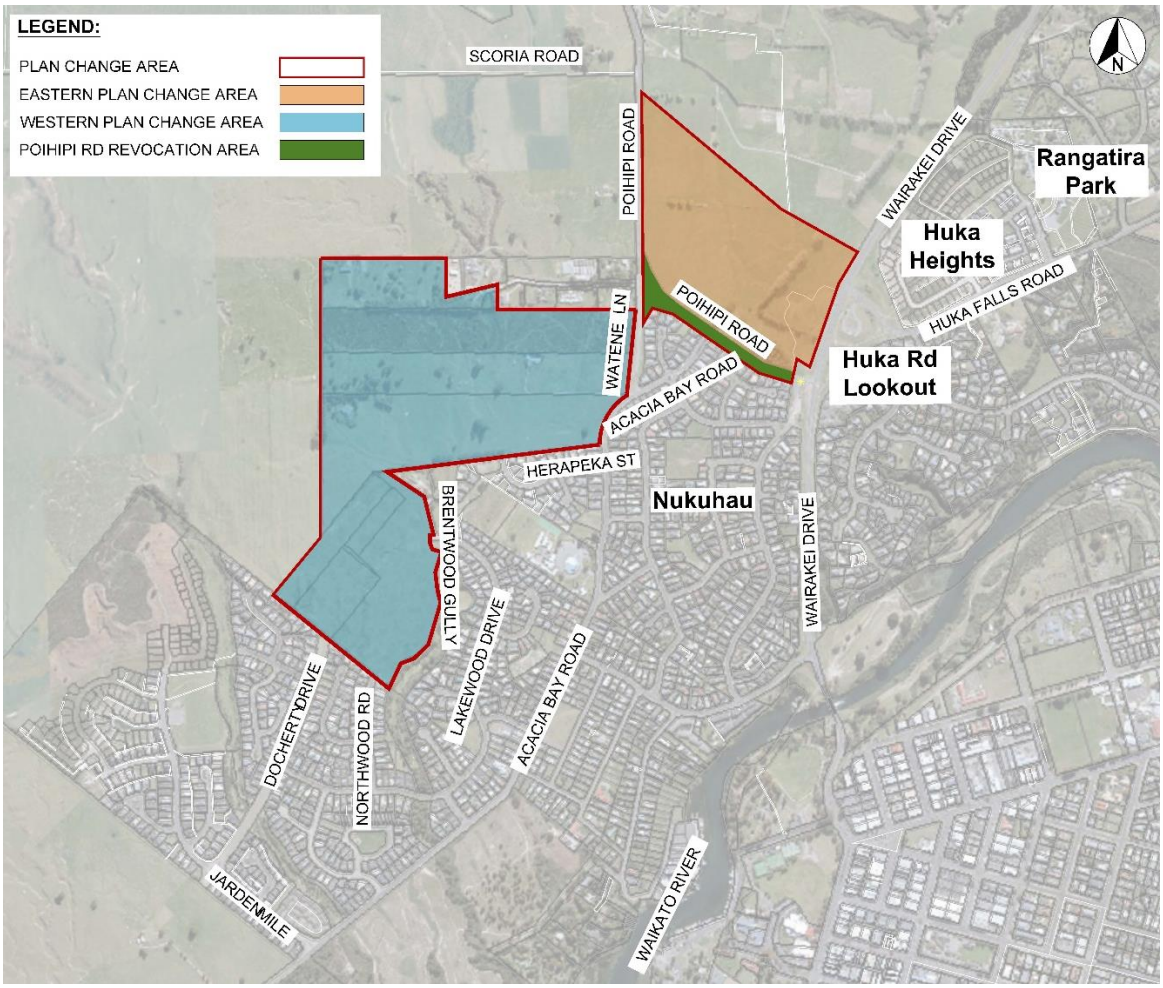


Figure. 3.1 Eastern and Western areas in the Plan Change Area and their surrounds

Key elements of existing landscape, landuse and heritage (natural and human/built) contribute to the existing characteristics of the site and its surrounds. These types of characteristics sometimes require protection or can add value through their incorporation into new development such as by contributing to sense of 'place', uniqueness, identity and amenity.

The PPC area is severed into two halves by Poihipi Road; resulting in a south-east facing area (orange in the plan above), and a larger south-west facing area (blue in the plan above). The south-east facing eastern portion of the structure plan area is located at the prominent Wairākei Drive entry point into Taupō from the north. It also forms part of a peripheral part of the view from the busy Huka lookout towards Lake Taupō and the volcanic peaks of Mt Tongariro, Mt Ngāuruhoe and Mt Ruapehu (the Volcanic Peaks) beyond. This means that this eastern part of the structure plan area is particularly visually prominent, both for passing motorists entering or leaving Taupō, and users of the lookout.

A small length of Poihipi Road extending north from the intersection with Watene Lane represents the only contiguous area between the two sections of the Structure Plan area. Both are for the most part only gently undulating, and slope in different directions. The western area slopes south-west and the eastern area south-east respectively. This gives both quite differing aspects and differentiates their current and potential future character.

A southern section of Poihipi Road extending south-east from Watene Lane to Wairākei Drive currently provides the principal access to the western portion of Taupō township and rural areas off Poihipi Road. This section of road is to be revoked. This revocation gives rise to opportunities for an area of open space that will improve amenity for existing nearby properties, coupled with higher

amenity pedestrian and cycle connection opportunities for those properties and others in both existing and PPC areas. These are discussed further in **Section 5** Urban Design Responses.

Further differentiating the setting of the halves of the development, the eastern section is bounded by relatively busy roads on two sides (Wairākei Drive and Poihipi Road), while the western area to a very large extent is not bounded by any roads, with only a short section of Watene Lane (between Poihipi Road and Acacia Bay Road) offering any relatively busy road frontage.

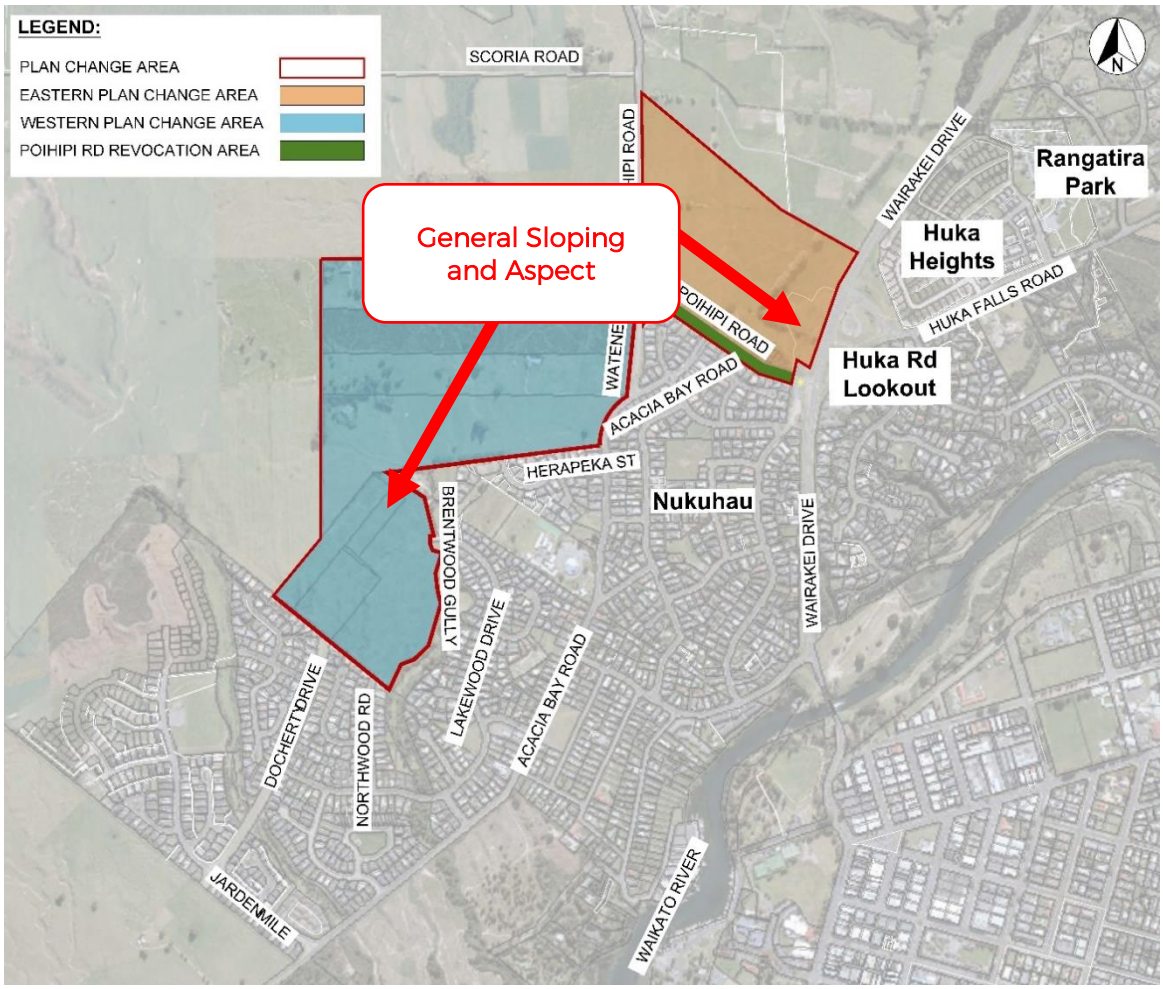


Figure. 3.2 Differening orientations of the Western and Eastern PPC areas

The western south-west facing are is much larger but partly enveloped on two sides by existing residential neighbourhoods. It is less visible from areas of public open space. Being principally only visible from from a quite short section of Watene Lane, and existing road ends such as Docherty Drive and Herapeka Street.

3.1 Landscape, Landform and Open Space

The LVA includes a description of the landscape that the structure plan sits within. Key points from that assessment of relevance to this UDA are discussed here.

The broad landscape context is that of the Taupō Volcanic Zone, which stretches from White Island in the north to Mt Ruapehu in the south. This area encompasses the Taupō caldera, Lake and the three active Volcanic Peaks, which are amongst the highest summits in the North Island. At a local scale the landscape is defined by Lake Taupō gentle sloping to steep hills of the crater and caldera rim, and smaller summits such as the Punatekahi hills. The PPC area likely sits on the lower slopes of the Punatekahi hills. These give an understanding of position and 'place' of the PPC area within a wider landscape context.

Several small gully systems are located within the site and extend beyond into rural and adjacent urban areas. The gullies make a significant contribution to the character of the PPC area, particularly at a localised scale.

Recent subdivisions adjacent to the PPC area have typically modified the landform, easing more abrupt slopes but still leaving a generally sloping (towards the Lake) and rolling area of neighbourhoods. Streams and gullies are still present in some areas and remain connected to less modified rolling landform in the adjacent plan change area. These spaces add to uniqueness of character and place at a local level within existing residential streets.

Both the eastern and western portions of the structure plan area are presently very open, comprising mostly farmed grassland. Adjacent to the western structure plan area several open reserve areas accommodate extensions of the gully system, and walking-cycling pathways. These features contribute to local amenity, though in places aesthetic value and opportunity is compromised by tall (over 1.8 m) fences.

Overall the character of the area is more defined by the activities and spectacular landscapes that surround or are visible from it, than for any features within the structure plan area itself. The principal exception being the gully system within the western area of the site. It is clear that all of the surrounding land, both urban and rural has been modified by human activity. In some areas open space in part of the gully network are present alongside the street network, see **Section 3.3** Connectivity, Movement and Street Layout below.

Although not always visible from publicly accessible areas; existing landscape, landform and open space characteristics make a significant contribution to local sense of 'place' in Nukuhau.

3.2 Landuse

Much of the present character of the PPC area is currently determined by its rural landuse and setting in a largely flat but gently rolling topography; the latter interrupted by shallow but at times quite steeply sided gullies in the western area. Aside from rural activity, the western part of the PPC area is mostly influenced by adjacent residential landuse to the south, together with the expansive long-views to the caldera rim and the lake that along some view shafts. The most notable of these are along existing road alignments and across residential development.

The eastern PPC area is also influenced by adjacent residential development but currently to a much lesser extent owing to a belt of tall trees between the area and existing residential development south of the existing southern section of Poihipi Road (to be revoked). The belt of trees also interrupts opportunities longer views to the caldera or lake to the south. It is expected that the belt of trees would be removed as part of subdivision development.

Photo 3.1 (left): View across the Wairākei Drive corridor and PPC eastern area from the Huka Lookout. Photo 3.2 (right): A typical view across residential and open space use at Wairākei Drive to the Lake and caldera rim beyond.

The eastern edge of this eastern PPC area is defined by a shallow gully at its southern end and by the busy Wairākei Drive corridor. Residential development on the other side of that road corridor has less influence on character owing to the busy and dominant road corridor, as well as distance, and the presence of vegetation and fences. As the eastern area is physically separated from the western area by Poihipi Road and Watene Lane, and from residential development to the east by Wairākei Drive, it feels relatively isolated or set apart from these areas.

Most of the rural farmland to the north and west of the areas in the PPC is occupied by pastoral farming, small scale forestry woodlots and rural lifestyle activities with rectilinear shelterbelts. Apart from a small number or lifestyle properties this rural area is characterised by minimal built development. Also to the north and west the low density residential subdivision of Rangatira Park creates a 'soft' urban-rural interface. Other land uses that contribute to some mix of land use include some minor commercial activity, a religious building, and green open space. Open space reserves and stormwater management areas follow existing gullies and provide important recreational opportunities.

No natural or cultural heritage features of significance are evident or recorded in either the western or eastern portions of the structure plan area. However the views toward the lake, volcanic cones and Mount Tauhara and the Punatekahi hills may be significant.

3.3 Connectivity, Movement and Street Layout

The PPC area is presently predominantly in rural use and has no formed connections through it or to adjacent street and pathway networks. Several streets in adjacent residential developments in the western area terminate (sometimes in grassed street-width links) at the boundary, indicating an earlier anticipated extension into the PPC area. These include Docherty Drive, Northwood Road and Lakewood Drive.

The adjacent street pattern can be considered typical to its era of development, with wide but often winding collectors and a number of smaller often short cul-de-sacs. This type of network was often intended to slow traffic or discourage through-traffic and in places lacks legibility. No formed dedicated pathway networks were identified that connect to or through the structure plan area. In some areas the gully system has been developed as open green space with road frontage and gives significant amenity to surrounding properties.

In places most notably Northwood Road Reserve, and also at Docherty drive, existing green space abuts the western portion of the structure plan. The Northwood Road Reserve also connects off-road to the Lakewood Drive Reserve.

Two reserves provide connections to the structure plan area that could support walking-cycling movement. These are the Docherty Drive Reserve and the Northwood Reserve. The former has the appearance of an unformed street and would make a logical road connection point into the structure plan area.

Photos 3.3 and 3.4: Residential properties spread along Watene Lane (left) and Poihipi Road (right).

Photo 3.5: View looking west from Watene Lane and Acacia Bay Drive towards the western PPC area in the foreground. Apart from three properties on the corner of Watene Lane and Acacia Bay Drive the PPC area will be screened from residential properties by residential boundary fences (see images below). (Source: View perspective 2b from the Landscape Assessment)

4 Urban Design Principles, Philosophy, and Intended Outcomes

4.1 Relevant Urban Design Principles

Identifying urban design principles relevant to the structure plan area assists in the identification and understanding of key features and opportunities for development, and their inclusion in the spatial layout and arrangement of the PPC structure plan and its street corridors.

Having regard to the nature of the proposed development and its site context, the following key urban design principles have been identified as appropriate to better inform and achieve outcomes for the structure plan area. These are:

- Environmental custodianship (respect for landscape, flora, fauna and use of low impact design, encouraged passive surveillance, feelings of ownership).
- Character and sense of place (responds to unique features, physical and cultural, and to intended landuse) and Sense of 'Place' to be established and reinforced throughout.
- Open Space and Recreation (green open space).
- Connectivity (movement, visual).

- Comfort and Safety (Crime Prevention Through Environmental Design (CPTED), passive surveillance, custodianship, line-of-site, legibility, concealment opportunities, defensible space).
- Collaboration, insofar as the ability to facilitate greater opportunity for collaboration in subsequent phases of design, for example to appropriately incorporate or reference heritage features.

The purpose of applying good urban design principles is to establish the underlying design parameters and goals for the form and spatial arrangement of the eventual new subdivision development. An advantage of this approach is that it allows necessary flexibility for the final design of the subdivision, while helping to ensure key design goals and outcomes are understood and delivered.

It is common for urban design principles to overlap, and this assessment has considered several principles collectively where this seems most practicable. Often addressing one principle will contribute towards achieving others.

4.2 Urban Design Philosophy

It is intended that the PPC' structure plan respond to commonly accepted principles of good urban design, and in particular those most relevant as identified in **Section 4.1**.

Within this framework of flexibility, and taking into account the context identified in **Section 3** of this report, the following urban design philosophy for has been identified.

Encourage development that respects and takes advantage of the amenity, legibility and identity opportunities offered by existing topography and long-view opportunities. Key amongst these opportunities are the relationships between residential properties and the gully-open space network, and the long views towards the Lake and volcanic cones, views of the Punatekahi hills.

4.3 Intended Urban Design Outcomes

Having regard to the Urban Design Philosophy, the following Urban Design Outcomes have been developed for the structure plan area. These desired Outcomes have in turn resulted in the development of the Urban Design Responses in **Section 5** as indicated by **Figure. 4.1** below.

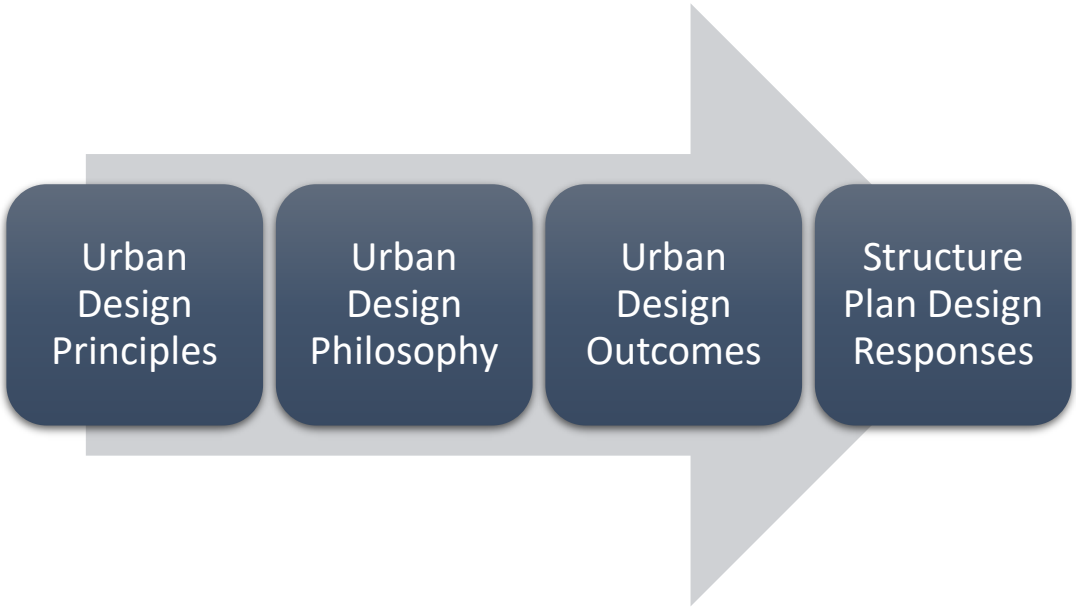


Figure. 4.1: Development of Urban Design Outcomes and Responses for the Nukuhau Structure Plan

The Desired Outcomes and Responses were revisited for completeness and implement ability at the completion of this assessment.

In a wider sense the intended design-outcome for the PPC structure plan is to deliver a subdivision that respects and largely works with the landscape to deliver local amenity, a sense of 'place' and unique local identity.

Deeper natural gullies will be retained and incorporated into an amenity-movement and stormwater network of green open spaces overlooked by streets or pathways and residential development. These spaces will contribute to a local sense of 'place' and legibility. Streets will also form part of the open space network, and be positioned and aligned to relate to gullies and optimise long-views towards Lake Taupō and high volcanic peaks beyond, and nearby Mount Tauhara. Pockets of higher density residential and commercial development will be located and oriented to optimise benefits from busier movement corridors and the amenity afforded by nearby open space.

Specific intended outcomes include:

- Positive relationship between residential properties, natural features of the site and the street network;
- Positive contribution to the arrival into Taupō from the north (transitioning between rural and urban), gateway opportunities for Taupō and Nukuhau realised;
- Outdoor activity spaces provided for a range of ages, especially near where there may be smaller lot sizes, both within the reserve (passive play) and connections to it (walk-cycle path connections as safe as possible for a range of ages);
- Provide attractive, convenient and legible walking and cycling connections through and around the plan change area, and to adjacent streets and open spaces;
- Long view opportunities from within the structure plan area to Lake Taupō, the crater rim, and Mount Tauhara are optimised, such as along street and open space alignments and from higher points;
- Commercial centre and higher density development, walk-cycle connections, and open space amenity are located to take advantage of proximity to one another;
- CPTED themes are designed-in to the location and layout of activity types, and in particular achieve strong sight-lines from adjacent street and residential property for passive surveillance throughout the subdivision and across the proposed amenity areas; and
- Create strong edge definition for the subdivision to give a sense of community and neighbourhood while not precluding future residential expansion opportunities.

5 Urban Design Responses

Specific Structure Plan Design Responses have been developed and incorporated into the structure plan to enable delivery of the Outcomes identified in **Section 4.**

These design responses have been developed concurrently with landscape and visual effects mitigation identified in the LVA, and should be read in conjunction with that document. As indicated in **Section 3** of this UDA these responses are intended to be read and applied as a guiding framework, assisting in the cohesive achievement of the desired outcomes across the subdivision development; while retaining elements of flexibility and enabling development in a single or multiple stages. Sufficient flexibility is intended to allow more detailed evolution of a subdivision design and features at a later date to suit the developer and Taupō District Council.

Measures identified in development of both the LVA and this UDA include landscape planting, front-yard building setbacks, boundary treatments, streetscape design, orientation of buildings, treatment of open space, and the spatial arrangement of land uses and their interface/s. As indicated in the

LVA, these design proposals should be further developed in accordance with the TDC District Plan: Appendix 7 - Taupō and Centennial Industrial Environments landscaping requirements, September 2019, in particular with selection and positioning of street trees.

The UDA goes beyond the LVA in that it identifies a rationale behind the spatial arrangement and positioning of key land uses and features. Consistent with the LVA it also addresses streetscape, and in particular the allocation of space within streets with a view towards delivery of a coherent multi-modal movement network that also includes open space.

A number of streetscape cross sections (Refer Section 5.6) have also been produced to better illustrate these measures where they relate to street typology and the interface between streets, residential land, and public open space. This reflects the overarching principle of optimising the amenity afforded by open space, particularly around the gully system, and the opportunity to locate walk-cycle facilities and networks in areas of open space.

These are presented and their specific relevance to urban design principles are explained below. The cross-sections are common to both the LVA and UDA.

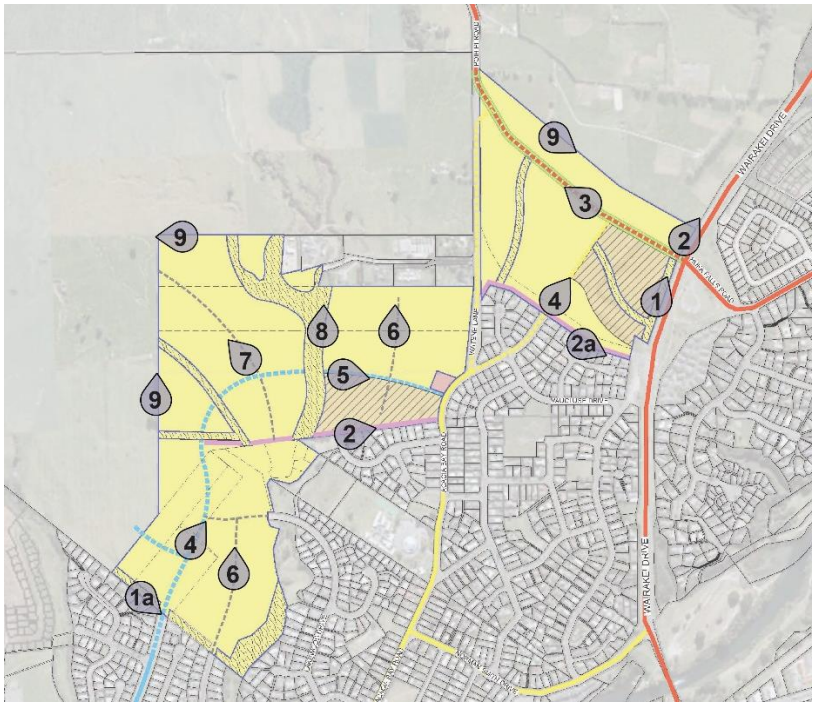


Figure 5.1 Plan showing cross section locations (Source: LVA, see Appendix A for larger scale plans).

5.1 Environmental Custodianship, Character and Sense of Place

The PPC area will involve areas of earthworks, built activities, new road layouts and other infrastructure. Notwithstanding that residential development already exists in this locality, the eventual development of a new residential subdivision will shift the urban boundary and transform a rural land character to an urban one. However, to some extent the existing characteristics of this place can be retained and used in the development of a local identity.

It is intended that existing physical landscape elements, particularly deeper gullies are retained, and views of this gully network from publicly accessible spaces such as streets emphasised. Opportunities for longer views across the gullies, PPC area and adjacent areas to the lake and various mountains will also be emphasised. This will assist the subdivision to be more sympathetic to the local landscape and its place within that landscape and enhance its own local unique character

and sense of 'place'. The later design and orientation of new residential lots will be able to take advantage of these elements as a result of enhanced amenity from short and longer views.

Utilising existing gullies to deliver open space with a parkland character will give a sense of definition, scale and a unique character to the new neighbourhoods. The connected nature of the existing gully system beyond just conveying stormwater means there is an excellent ability to deliver a connected walkway-cycleway network within an open space environment with significant passive recreation and visual amenity benefits. This also enables elements of the stormwater network to remain 'daylit' rather than piped. This is addressed further in **Section 5.6** below.

An opportunity also exists to develop an interesting and highly legible entrance feature, gateway or sign for Taupō along the Wairākei Drive frontage. This could both assist in retaining/enhancing local identity and in better highlighting the entrance to Taupō with corresponding safety benefits. Entrance signage can be developed in such a way that it becomes public art itself, providing a new landmark and distinctive means of further reinforcing local identity.

A smaller lower-key 'Nukuhau' entrance feature could also be established on the new arterial to the west if desired. In the case of the latter this would work best with the principal Taupō gateway located to the north of the new arterial, and a secondary smaller entrance for Nukuhau set a short distance along the new arterial heading west, as indicated in **Figure 5.2**.

The improved legibility afforded by the new gateway features would assist with post-revocation way-finding particularly for visitors to or transiting the township and District.

The location of a small commercial zone at the intersection of Poihipi Drive and a proposed new secondary collector road, and in close proximity to proposed medium density housing in Stage 2A, will assist in the development of a local sense of place and identity for this area of Nukuhau.

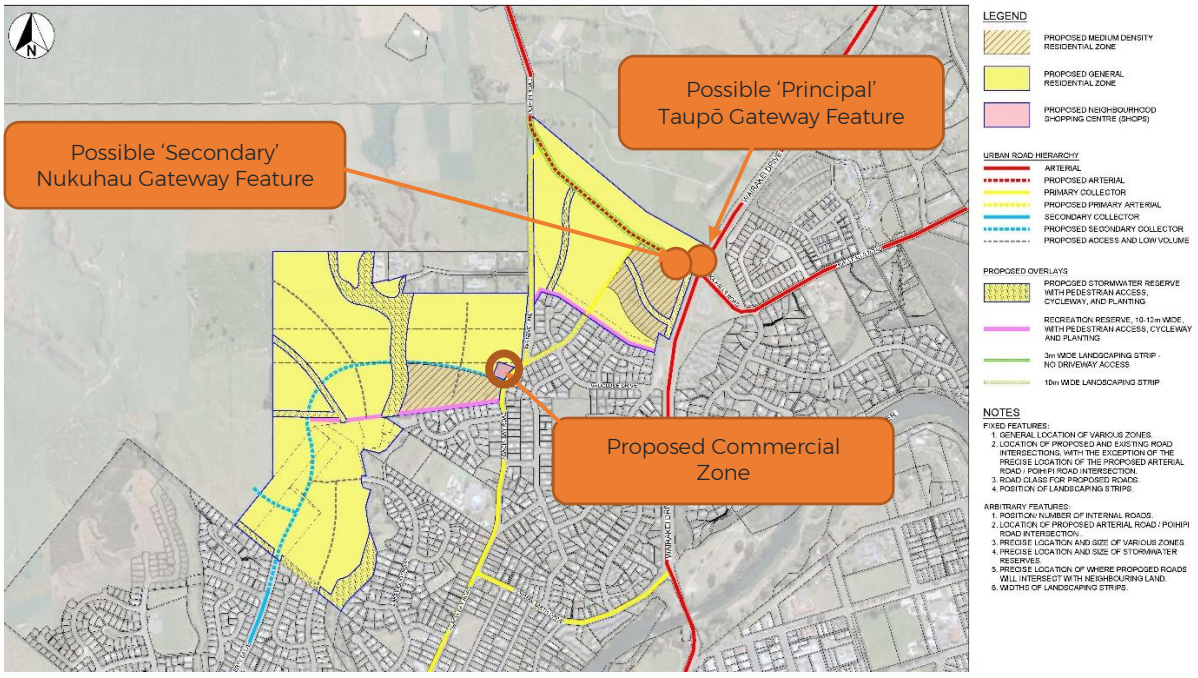


Figure 5.2: Suggested Taupō and Nukuhau Urban Gateway Locations

5.2 Recreation and Open Space Amenity

By designing with the gully network, there is considerable opportunity to gain benefit from reduced effects on landscape while enhancing open space amenity and recreation opportunity. Benefits will extend to the new structure plan area development, and to existing adjacent residential development.

Brentwood Gully is a TDC Stormwater Reserve with a footpath which runs from Herapeka Street southwards to the lake. The gully passes through the immediate vicinity of the western PPC area where it abuts the residential edge of Nukuhau subdivision and forms a managed green buffer between the urban and rural environment. From here Brentwood Gully and a small number of shallow, grazed tributaries extend north across the western plan change area and beyond. Brentwood Gully also connects to the gully network within the structure plan area, as indicated by **Figure 5.3**

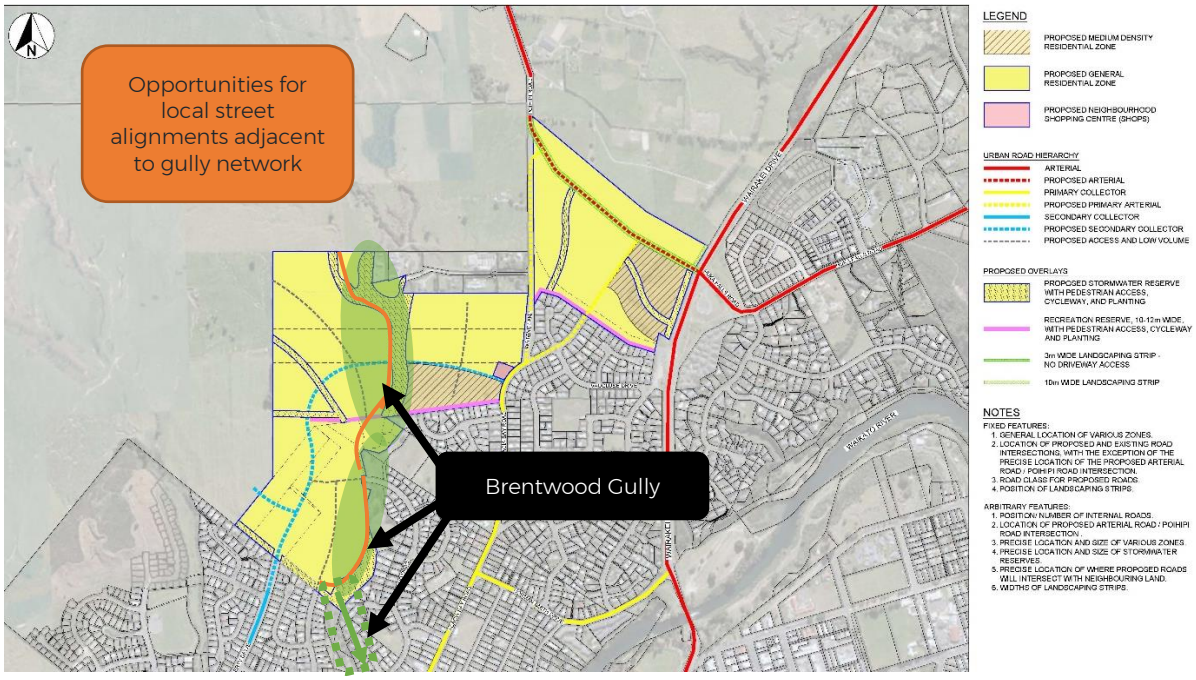


Figure. 5.3: Brentwood Gully and the local roading network (see Appendix for larger Plan)

The proposed stormwater reserve and proposed amenity parkland can together have an important public open space amenity and passive recreation function. The development of amenity parkland provides opportunities to eradicate exotic species and to establish a range of native plant species to reinforce the existing vegetative patterns and enhancement planting in the area. Enhancement of these space either as mown or planted 'parkland' or as longer-grass stormwater reserve will provide a strong positive visual amenity for the plan change area if visual access is optimised.

The parkland and stormwater reserve areas are intended to provide active and passive outdoor space to support adjacent residential activity, as well as to provide a high level of visual amenity supporting an attractive subdivision development. Location of medium density residential adjacent to this open space achieves mutual benefits of proximity access to open space for medium density residents, and greater degree of overlooking from those properties, achieving both visual amenity and CPTED benefits.

These natural features offer 'place-making' opportunities to emphasise or develop local identity and character and avoid the 'could-be anywhere' blandness that can typify many new residential subdivisions. Adding to their immediate amenity value for adjacent properties, these spaces also align with longer views towards the lake and volcanic cones, further benefitting users and adjacent properties. There would be opportunities for future landscape planting enhancements. However, these should take care to avoid, respect and/or frame long views to features such as the lake and volcanic cones. Addressing 'Place' and contributing to character and the movement network these spaces are a very important feature of the structure plan.

In addition to amenity, recreation and identity/place-making benefits, the reserve areas also offer functional benefits. Use of the existing gully network to treat at least some stormwater derived from the new subdivision, will provide opportunities for land treatment of stormwater prior to entering Lake Taupo.

The open space network generated by the gully system will be central throughout the structure plan and its location ensures that is accessible to all the residential properties throughout the site and neighbouring areas. It can be designed to act as the hub for pedestrian activities and lower-speed cycle activities through the subdivision.

The functional use of these spaces for movement and stormwater treatment within a more natural and unique landscape will further reinforce a unique local identity for this part of Nukuhau. Such environmentally responsive features when visible and accessible can in themselves become highly valued features of subdivisions in New Zealand urban subdivisions.

5.3 Land Use

Proposed land use within the structure plan area is generally low density residential, consistent with adjacent development. As such it is anticipated new residential development will sit well within the exiting development character of the area.

The location of smaller areas of medium density residential and commercial activity in the western and eastern PPC are between the gully network and Poihipi Drive mean that both uses can benefit from proximity to higher capacity transport corridors (with increased passing trade for commercial uses and better facilities for cycling) and amenity through proximity to the higher amenity gully network.

It is intended that proposed new PPC zoning be as contiguous and compatible as possible with adjacent areas. This means residential abutting residential, and open space abutting open space. In some locations residential may abut open space, recognising the mutual benefits to both. The commercial area can be buffered from residential by street corridors and open space (in the form of small setbacks), enabling an appropriate interface to be provided, and activities to 'front' rather than 'back-onto' one another.

The layout of the subdivision and the uses within it are deliberately intended to provide a continuation of the existing character of lower density residential development in Nukuhau, and an enhanced continuation of access to the gully network, in particular Brentwood Gully. Also intended is a beneficial inter-relationship between parkland and stormwater reserve open space and movement corridors (on and off-road – see also **Section 5.3** and **Figure 5.5**) with smaller pockets of higher density residential and commercial development.

5.4 Connectivity, Movement and Street Layout

Adequate connectivity for vehicles, cyclist and pedestrians is important to the success of a new residential subdivision. This applies to movement within new development in the structure plan area, and to adjacent neighbourhoods. Many New Zealand subdivisions since the 1970's have catered well for the private motor car, but much less well for other modes.

The proposed movement network of the concept design is shown **in Figure 5.54**. The network is aligned to relate to the key natural features of the site and to link with the surrounding street pattern.

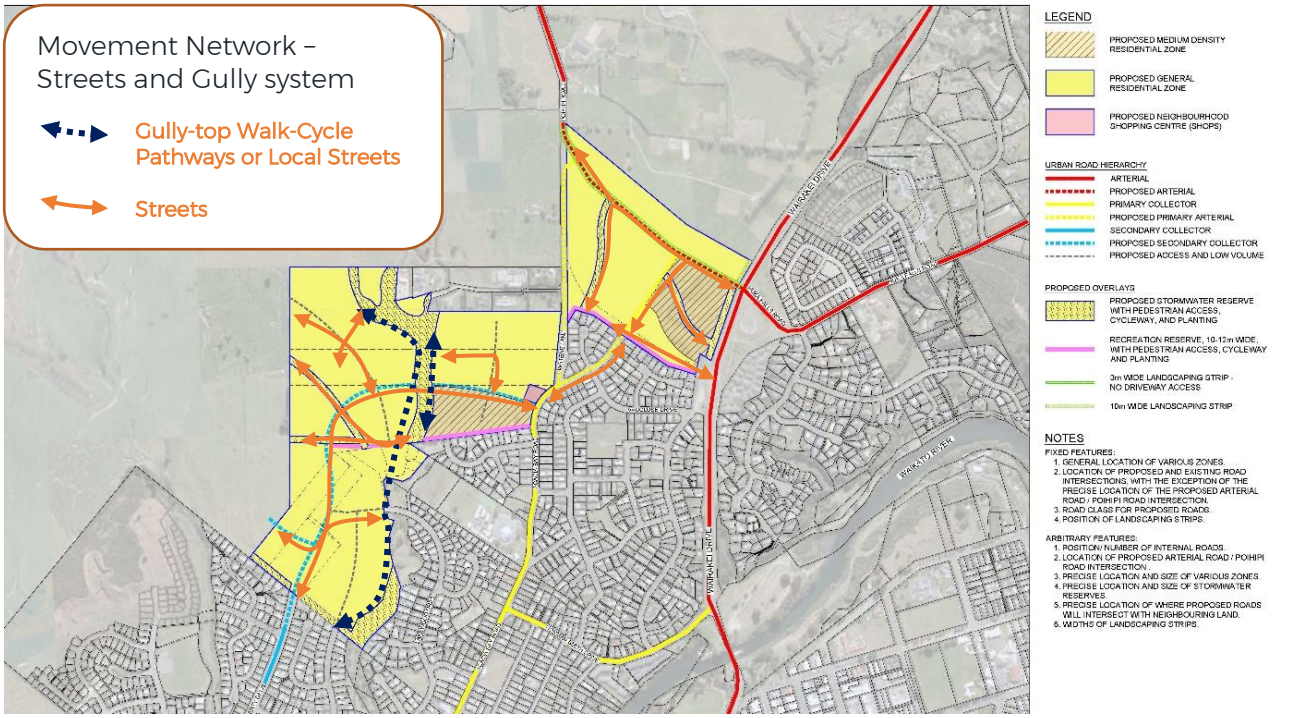


Figure: 5.4 Proposed Movement Network (all modes)

The main entrances (connections) to the new subdivision will be from Wairākei Drive and Poihipi Drive. The new collector road in the eastern PPC area would benefit from a lower-key 'gateway' feature (see **Section 5.1** as the primary access from Wairākei Drive. The location of a small commercial zone aligns well with the movement network, being at an intersection of Poihipi Drive and a proposed new secondary collector road, and in close proximity to proposed medium density housing.

Collector roads extend to the boundary of the structure plan area, to facilitate later staged development of adjacent areas. Collector roads are as straight as possible for legibility while still respect existing landform and in particularly the gully network. The main north-south collectors as much as possible are be aligned to take strategic advantage of long-views to the lake and volcanic cones, including taking advantage of such views existing in the adjacent street network such as Docherty Drive and Northwood Street.

The main north-south and east-west alignments of existing streets (Docherty Drive, Acacia Bay Road and Huka Falls Road) allow for future development of the TUSP Structure Plan area to be integrated with the PPC area. In the western PPC area this pattern will also enable future development of an interconnected, legible network structure which provides a choice of routes, both pedestrian, vehicular. In terms of the coherence, residential streets will follow the gully thereby respecting the natural pattern and characteristics of the site, and minimising rear lots.

A local access (or secondary collector road) is identified to run along the western side of the gully system. This will facilitate easier access between the new structure plan area, two adjacent suburbs and the existing and proposed open space gully network, and enable important connections within a wider pedestrian-cycle movement network.

Street frontage or walk-cycle pathway infrastructure adjacent to the gully will significantly contribute to enhanced visual amenity from a system with walkways, enhance the safety of that walkway infrastructure, and contribute to a unique sense of character and place for a higher amenity subdivision development.

A connected off-road walk-cycleway network running alongside roads and green areas (including the stormwater gully network) will provide a choice of transport options and connect to adjacent neighbourhoods and infrastructure, see **Figure 5.5**. Extending the network along the western collector road will enable future connection at the later stage or urban development. Positioning of the walk-cycleway adjacent to both the road and open space network achieve CPTED (safety) objectives and contributes to the amenity of residential and open space areas.

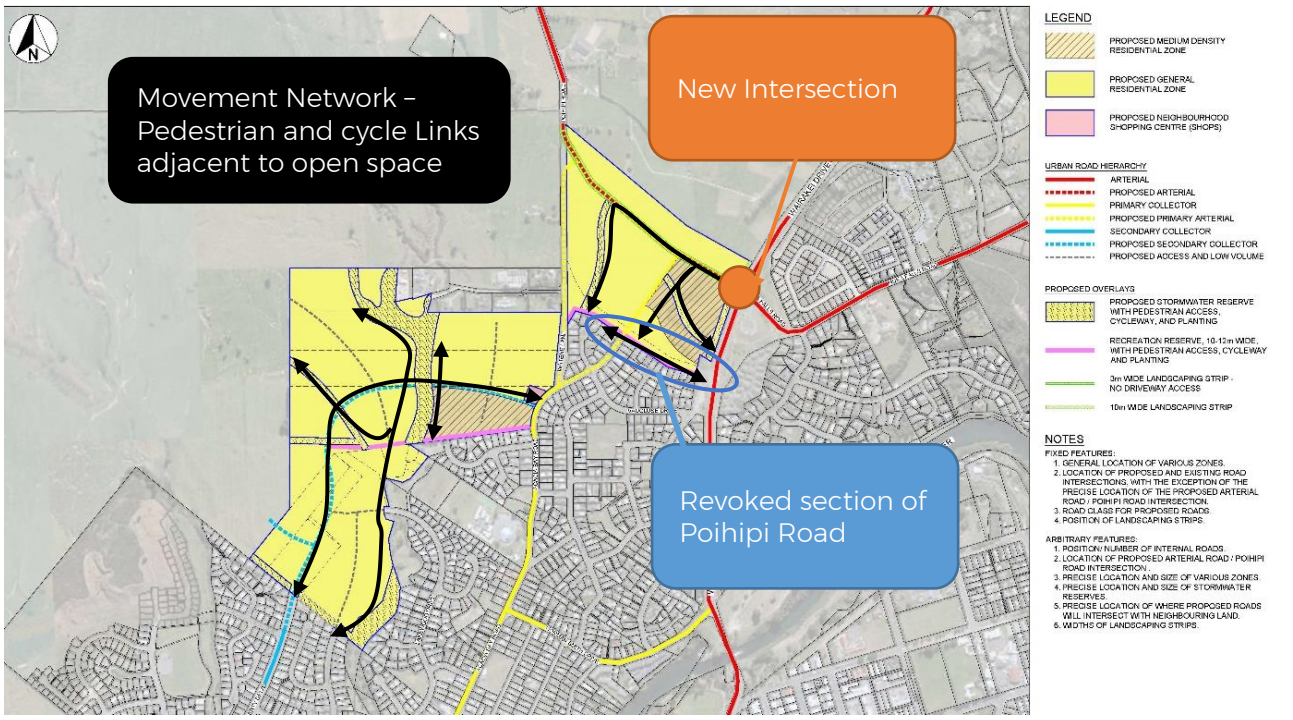


Figure: 5.5 Proposed Walk-Cycle Links adjacent to or crossing open space as part of the Movement Network (all modes)

Revocation of Poihipi Road will eventually contribute to providing a much more efficient route for local traffic heading to or from the north. A new connection and intersection is a major benefit of the PPC, offering improved safety, legibility and efficiency on the network. Part of the space occupied by the existing Poihipi Road corridor will remain as an open space corridor with a pathway choice for pedestrians and cyclists.

Specific streetscape types will reflect the intended use of the corridors for all modes. These will utilise narrower carriageway widths and variations in the allocation of space within those corridors. Typically visual connectivity at the interface between private lots and streets will be encouraged, the exception being the new Arterial corridor between Wairākei Drive and Poihipi Road. The latter designed as a wider higher speed corridor with dedicated off-road cycle-highway style facilities.

5.5 Collaboration

Development of the concept plan and proposed mitigation such as landscape plans and gully enhancements should be done in consultation with the Taupō District Council, tangata whenua and the local community.

5.6 Specific Responses

5.6.1 Common to Eastern and Western Areas

- Retention of natural landforms such as the gully system running through the western portion of the site and their incorporation within an inter-connected network of publicly accessible

open space within the structure plan areas, and connecting to similar areas where these adjoin the structure plan area.

- Enhancement of the gully system with low native landscape planting and walkway-cycleway connections and enhance it for visual amenity, recreation and stormwater capture and treatment.
- Incorporate elements of design uniqueness to develop a sense of 'place' and aesthetic for the area, drawing as much as possible from the gully network and long-views towards the Lake Taupo, caldera, volcanic peaks and Mount Tauhara and the Punatekahi hills.
- Protection of views across the site, particularly those of Lake Taupō and the volcanic cones in the south, to Mount Tauhara and the Punatekahi hills and to the rest of Taupo; particularly where these can be attained along the open space or roading network.
- Optimise visual amenity benefits through visual connection to green open spaces and in particular the gully system
- As much as practicable, retain existing stormwater drainage and landform patterns, and incorporate gullies into public open space reserve to reduce environmental footprint and amenity and recreation benefits.
- Ensure efficient connections to the existing roading network, and enabling future staged connections to adjacent areas that might be developed in the future.
- Encourage opportunities for walking and cycling opportunities within the area when developed both on and off-road through planted/grassed gully systems and connections to adjacent developed residential areas and the existing roading network, and with a connection between the eastern and western sections of the structure plan near Watene Lane.
- Provide strong vertical linear definition along the Arterial road and Collector roads using avenue-effect street trees and green buffer plantings.
- Collaborate with Iwi in the development of public art or gateway type features, and in the restoration of a higher amenity gully network;
- Ensure appropriate boundary treatments with a high degree is visual permeability and connection between residential sites and adjacent streets and open spaces.
- Develop a movement network and clear hierarchy of streets and pathways as indicated by the urban design responses contained in this report.
- Incorporate off-road pedestrian and shared walk-cycle facilities within the road reserve for Arterial and Collector roads, and off-road footpaths on low volume roads.

5.6.2 Targeted to Western Area

- Shared pathway frontage or local road connections along the significant majority of at least one and preferably both sides of the stormwater gully system and avoid the positioning of residential allotments between streets and green open space; and as much as possible align these roads to optimise views that take in both the gully/s and Lake at the same time.
- Efficient and logical street layout the supports obvious connections to adjacent roading network and subdivision, including a legible and logical connection between Docherty Drive and Lakewood Drive.
- Ensure collector roads extend to the western and northern boundaries of the structure plan area to facilitate future staged development of adjacent land parcels, and are able to accommodate the future provision of public transport.
- Locate the medium density residential and commercial zoned areas in close proximity to one another with enhanced shared walk-cycle facilities.
- Ensure the medium density residential area 'fronts' the open space gully network to maximise overlooking, passive surveillance and amenity benefits and prevent the development of high visually impermeable barriers along the interface of gully-medium density residential.

- Avoidance of dead-ends and cul-de-sacs in the street layout, and where such do exist that attractive walking and cycling connections are in place to enhance connectivity for these modes.
- Orient the Collector and low volume streets where possible to facilitate long views of Lake Taupo, the volcanic cones, Mount Tauhara and the Punatekahi hills for visual amenity, to help deliver a sense of 'place', and to enhance legibility.

5.6.3 Targeted to Eastern Area

- Develop a green planted buffer and walk-cycle friendly edge along the Wairākei Drive frontage for visual and noise amenity, and for privacy from the Huka Fall Road lookout, at the southern end encompassing stormwater detention facilities and encourage residential development to 'front' this space.
- Develop the old Poihipi Road corridor as an amenity parkland with a pathway connection. An opportunity also exists to enhance the nearby TDC stormwater detention area. The combined stormwater treatment area, amenity parkland and planted buffer will emphasise local space and identity, and secure unused land for amenity and recreation uses.
- Orient the principal collector and other streets where possible to facilitate long views of Mount Tauhara and the Punatekahi hills for visual amenity, to help deliver a sense of 'place', and to enhance legibility.
- Develop a main 'gateway' to Taupō and a secondary 'gateway' to Nukuhau at the intersection of Wairākei Drive and the new proposed arterial in the eastern PPC area.
- Provide for the development a secondary gateway for the western suburbs of Taupo on the new arterial at the eastern PPC area.

5.7 Streetscape Typologies

The following streetscape typologies have been developed jointly with the LVA to deliver the desired urban design responses, landscape as identified in **Sections 5.1-5.6**. Refer to the LVA for additional detail on planting and other landscape treatment.

5.7.1 Wairākei Drive Frontage and Stormwater Reserve – Section 1 and 1a

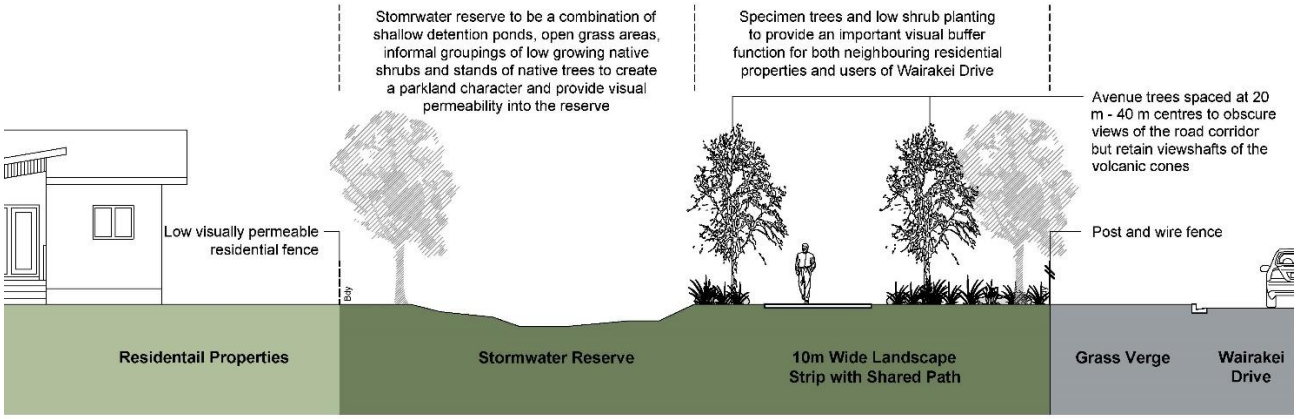
The cross sections below illustrates the Wairākei Drive frontage design near the northern edge of Taupō township. The 20 m wide stormwater reserve area is divided into a stormwater detention corridor and a planting buffer strip.

A 10 m wide native planting strip immediately adjacent Wairākei Drive will obscure views from the road towards the PPC area, whilst protecting viewshafts from the shared path and dwellings south towards the volcanic cones. An avenue of specimen trees with a height of 10 – 20 m at maturity is suggested in the LVA. To achieve urban design and landscape outcomes it is proposed that the trees be spaced at 20 m intervals and interspersed with lower growing native shrubs with a maximum height of 1 m. This will soften the interface between proposed residential development and the Wairākei Drive corridor while retaining the existing sense of openness. It is desirable to avoid the 'wall' effect that would occur from more dense planting.

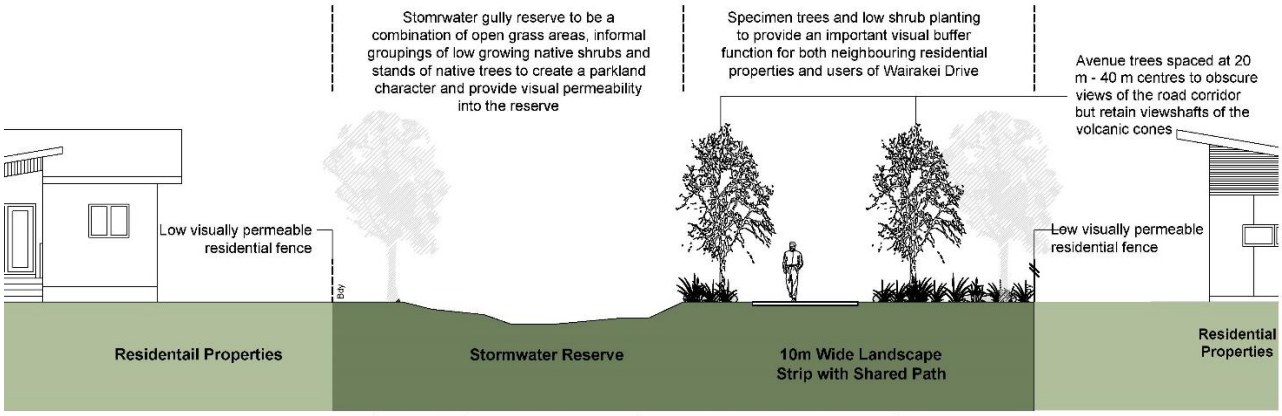
Pedestrian and cycle connectivity is an identified urban design outcome throughout the PPC area. Given the busy traffic nature of the Wairākei Drive corridor, this will extend off-road down the centre of the reserve, with a clear planting envelope (grass or low plantings up to 400 mm high) around the path for safety.

The area between the screen planting strip and property boundaries is intended to be utilised for stormwater treatment. To encourage dwellings to have internal or external living spaces that overlook the reserve, a mix of lawns and specimen trees will develop a parkland amenity outlook. Fencing should therefore be restricted to be as low and as visually permeable as possible. The reserve

can be used for informal recreation activities such as walking and benefit from passive surveillance and overlooking.



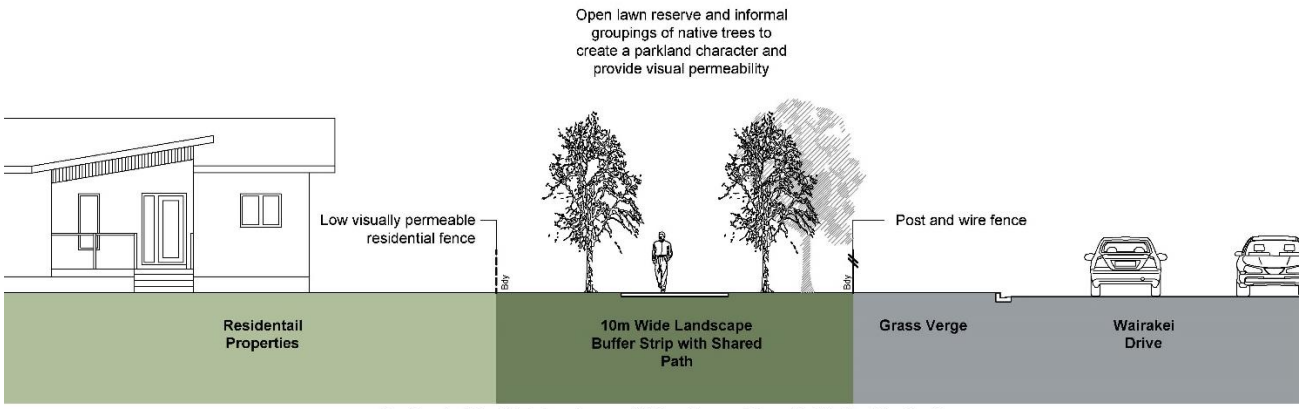
Section 1: Stormwater Reserve - General Density (20m Planted Buffer)
Not to Scale



Section 1a: Stormwater Reserve - General Density (20m Planted Buffer)
Not to Scale

5.7.2 Wairākei Drive Landscape Strip / Recreation Reserve – Section 2 and 2a

A 10 m wide native and exotic planting strip is proposed to screen and buffer views from the road corridor towards the plan change area. Similar to the stormwater reserve immediately to the south, for this space a mixture of native shrubs and trees are suggested, with a height requirement of 10 – 20 m for trees at maturity. Where a shared path is used, a clear planting envelope should be achieved, with either grass or low planting up to 400 mm high to achieve amenity buffering while retaining sightlines.



Section 2: 10m Wide Landscape Strip - General Density (Buffer Planting)
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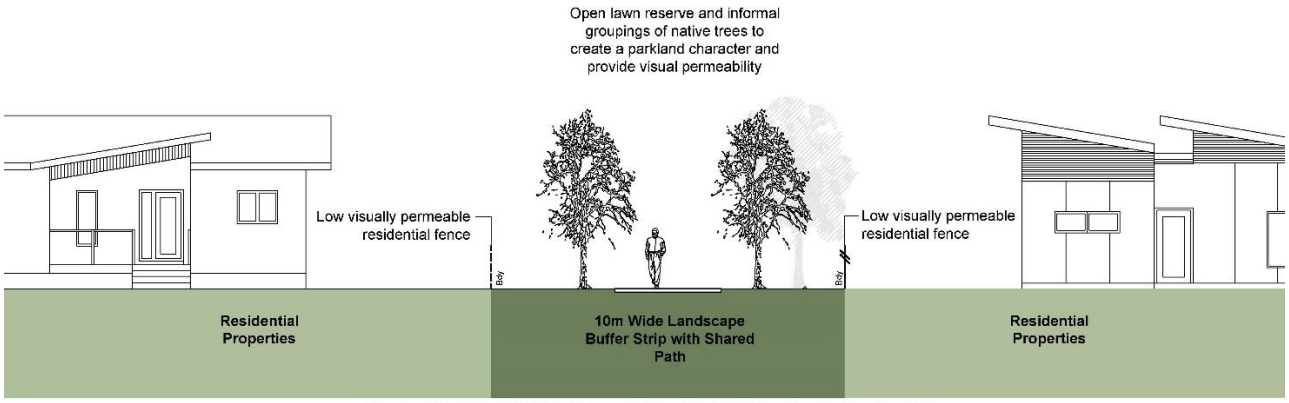


Section 2a: 10m Wide Landscape Strip - General Density (Buffer Planting)
Not to Scale

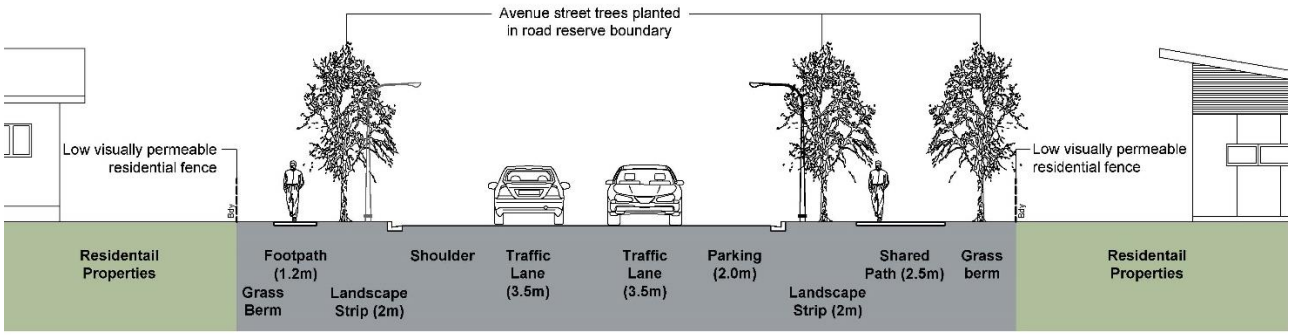
5.7.3 Arterial Roads – Section 3

The design and spatial arrangement of these corridors reflects their significance as movement corridors. Buffers between vehicle lanes and adjacent residential and pedestrian-cycle facilities are designed-in corridor design uses grass berms and plantings a physical and amenity buffers, in addition to pedestrian footpaths on both sides of the corridor. Recognising that most residential uses will not front the arterial, parking is only suggested for one side, with a shoulder on the other. The space is instead allocated to enhanced pedestrian cycle facilities.

The design includes a 2.5 m shared path set between two rows of trees on one side of the road and a standard footpath on the other side of the road. It is intended that the shared path is largely uninterrupted by vehicles and forms an attractive convenient option for users wishing to cycle between residential areas or into the town centre. Trees provide a vertical element into another wide-open space and are intended to highlight and emphasised the presence and attractiveness of the shared path. The tree-lined pattern is repeated on other corridors to varying degrees reflecting the nature of those corridors.

The 2 m wide planting strip extend along the length of the corridor on both sides of the road is suggested with the lines of trees to give character and definition to the arterial, in addition to buffering benefits. Shrub planting is suggested as a combination of low growing low maintenance native shrubs. An avenue of clear stem native specimen trees has been included within the planting strip to provide visual continuity with surrounding residential developments and to provide safety benefits through increased passive surveillance.

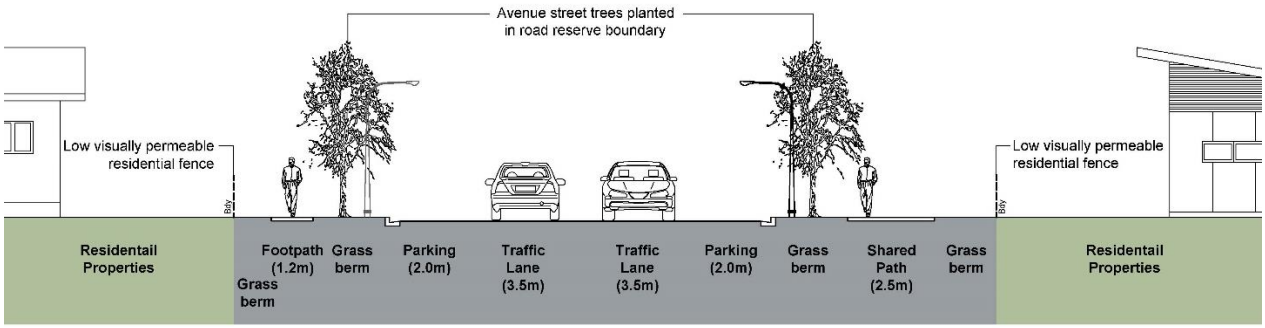
Ultimately, tree selection for arterial and collector roads should ensure the plan change area is well connected physically and visually to the open space framework and streetscape network and surrounding residential developments.



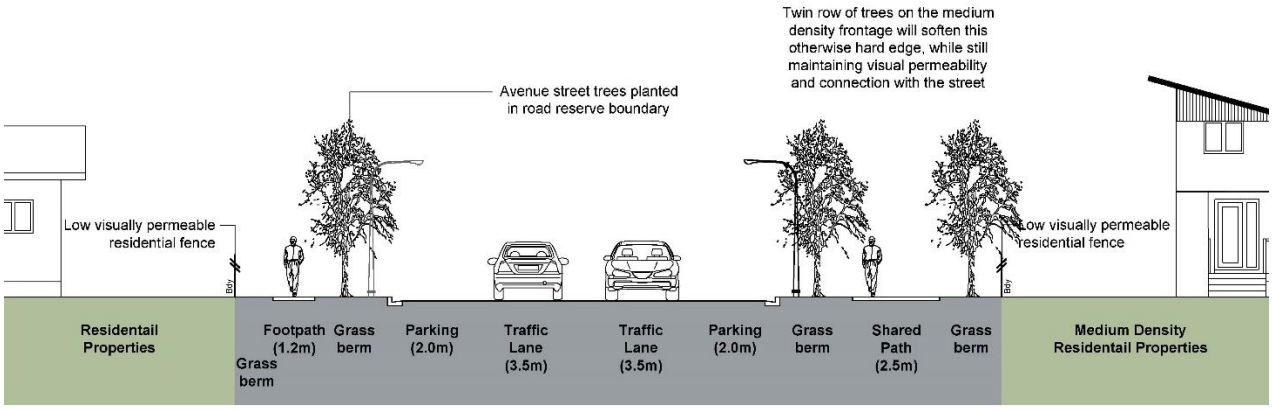
Section 3: Arterial Road - General Density (22m Road Reserve)
Not to Scale

5.7.4 Collector and Secondary Collector Roads – Section 4 (General Density) and Section 5 (Medium Density)

Collector and Secondary Collector Roads comprise grass berms, pedestrian footpaths and on street carparks on both sides of the corridor. To provide visual continuity with surrounding residential developments and soften the streetscape an avenue of clear stem specimen trees has been included in the grass berms. This avenue effect will provide a vertical element in the streetscape and assist with traffic calming. Trees are intended to be well spaced so as minimise visual effects on viewshafts to the volcanic cones.



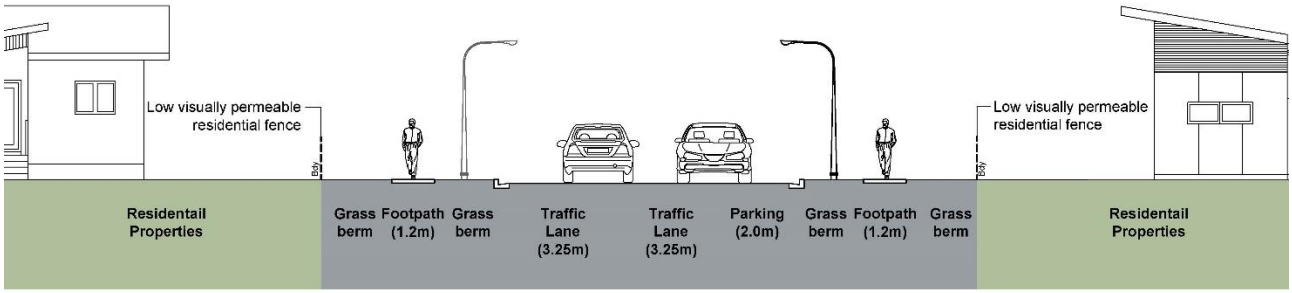
Section 4: Collector and Secondary Collector Road - General Density (22m Road Reserve)
Not to Scale



Section 5: Collector and Secondary Collector Road - Medium Density (22m Road Reserve)
Not to Scale

5.7.5 Low Volume Roads - Section 6

The cross section for Low Volume Roads show grass berms and pedestrian footpaths and both sides of the corridor. Carparking is provide on one side of the road. No street trees are suggested within the narrower 19 m wide road reserve and no off-road cycleway is provided. The design of these streets reinforces the lesser scale of movement of these quieter residential streets relative to Collectors and Arterials. A specific design for Low Volume Road fronting open space is provided below.



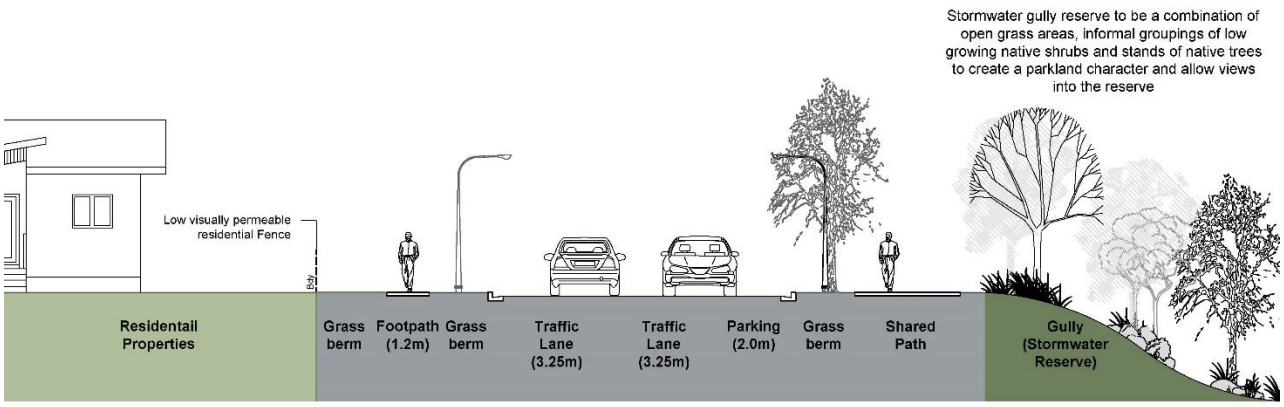
Section 6: Low Volume Road - General Density (19m Road Reserve)
Not to Scale

5.7.6 Low Volume Roads (Residential Edge Fronting Gully Reserve) - Section 7

The gully network within the PPC area provides a key opportunity to gain localised amenity and enhanced sense of place. The design for Low Volume roads fronting these spaces intends that benefits from the aesthetic values of recreational open space reserve are optimised. The stormwater gully network is relatively central to the PPC western areas. Providing a longer road frontage with a Low Volume Road optimises these benefits. Connecting this Low Volume Road with a central Collector Road traversing the gully ensures a high degree of accessibility and benefit to all the residential properties throughout the PPC; and via the PPC to neighbouring areas. With high connectedness and the provision of walkways/cycleways and landscape planting, the gully system has the potential to offer valuable local recreation amenity.

To achieve this outcome, residential properties on the western side of the central stormwater gully (Brentwood Gully) will be set back from the gully and buffered by the Low Volume Road. This will encourage dwellings to 'front' and overlook the reserve through positive layout and orientation. The upper reaches of the gully will be used for stormwater management in the form of detention ponds. The extension of the shared walkway-cycleway along the top (western) edge of the gully facilitates higher access and visibility of this amenity, and CPTED overlooking benefits.

Low Volume Roads could be substituted for walkway-cycleway infrastructure (or a combination) to achieve similar benefits. If walkway-cycleway infrastructure (shared pathway) were to be selected as part of the subdivision design stage then controls over fence heights to ensure visual connectivity and surveillance should be imposed. Fences should be highly visually permeable (similar to a pool fence) and/or restricted to not more than 1.5m in height.

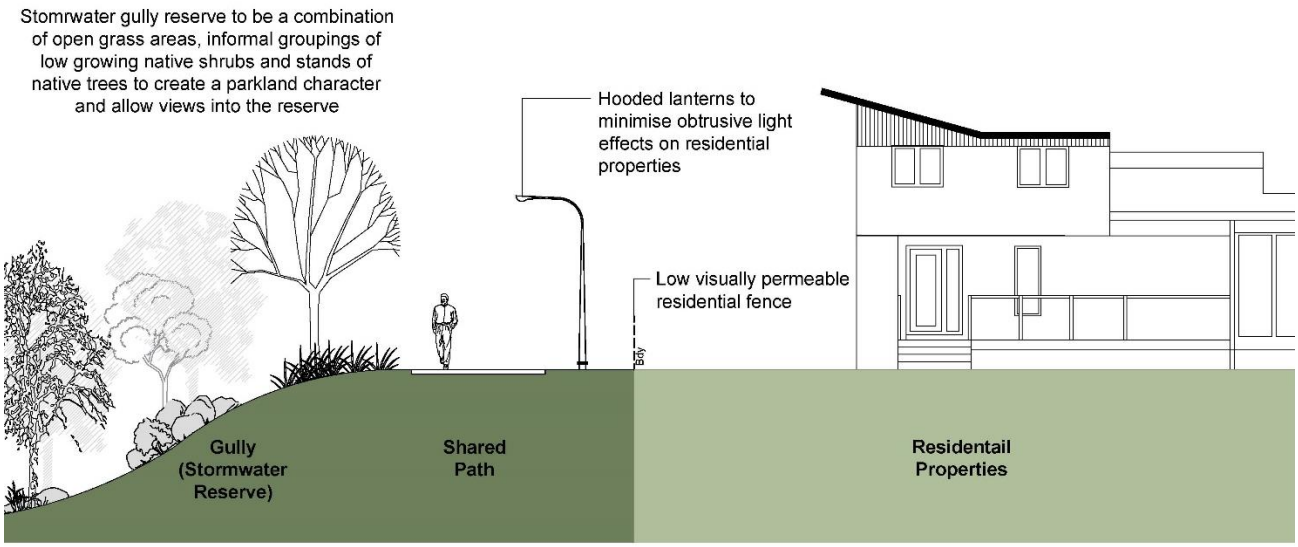


Section 7: Low Volume Road and Gully Reserve - General Density (19m Road Reserve)
Not to Scale

5.7.7 Residential Edge Fronting Gully Reserve – Section 8

Similarly, residential properties on the eastern side of the central stormwater gully will be set back to accommodate a shared pedestrian and cycle path will extend along the reserve boundary, with a clear grass envelope around the path. Dwellings should be strongly encouraged or required to 'front' the reserve with habitable rooms oriented towards it. All shared path lighting will be shielded to minimise light spillage.

This is intended to give CPTED benefits through passive surveillance; and at the same time encourage lower fences to avoid unattractive 'tunnel' or 'wall' effects. Non-visually permeable fences above 1.1 m in height should be strongly discouraged or prevented along the back of properties that face the reserve.



Section 8: Gully Reserve Residential Edge
Not to Scale

A combination of large open lawn areas, informal groups of low growing native and exotic shrubs to 500 mm height and stands of native and exotic trees will support the existing parkland character of Brentwood Gully and other stormwater reserves in the area. It is recommended that landscape planting be low to preserve overlooking and passive surveillance opportunities from adjacent residential dwellings and road users. Further details on planting are provided in the LVA.

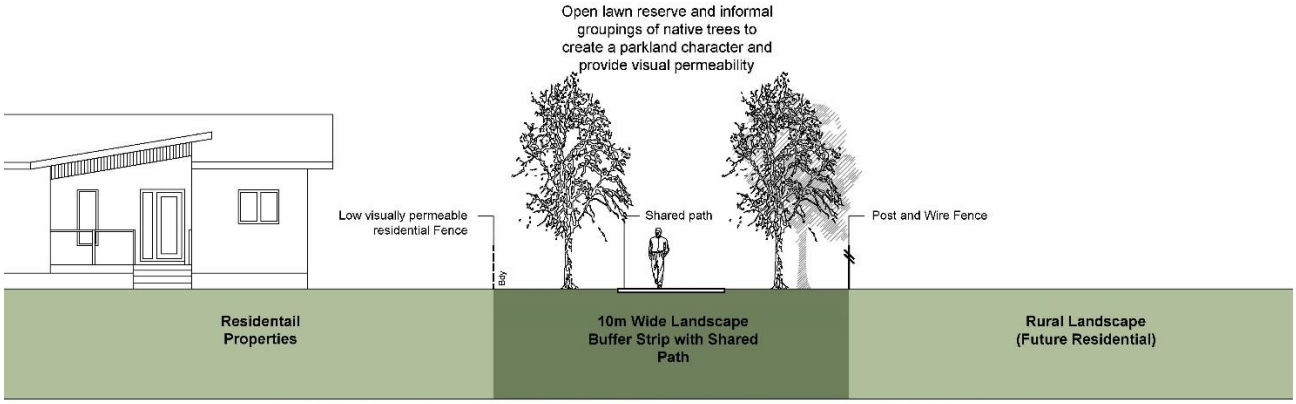
5.7.8 Rural-Urban Edge (Recreational Reserve) – Section 9

The PPC area will result in an extensive new urban-rural interface. At present this interface is primarily compromised of a mix of tall (approximately 1.8 m high) fences. There is relatively little visual connection between the urban and rural spaces, with neither the urban or rural areas benefitting from this interface. Recognising that further urban growth may occur, and that rural outlooks can offer significant amenity, it is suggested that a more positive urban-rural interface be an outcome of the PPC. The cross section below illustrates an interface treatment between the rural and urban edge along the northern and western boundaries of the plan change area and typical treatment of the Recreational Reserves.

A 10 m wide grass strip is proposed with informal groupings of native and exotic trees to mitigate adverse effects on the rural landscape. The aim of the edge treatment is to create a parkland setting that will deliver a defined but soft urban edge, with visual permeability. This will facilitate the use of the urban edge rural aesthetic and for recreation activities such as walking. It also establishes a positive backdrop for the residential properties backing onto the rural landscape. Again, low fences that are visually permeable are encouraged. A further advantage of this interface design is that it

facilitates future stages of development to be more adaptable for a range of future options related to residential dwelling, pedestrian-cycle and vehicle corridors.

Given the more rural character nature of the interface, a crushed lime or other more informal path surface is suggested and may be preferred over a concrete or sealed path.



Section 9: General Density Rural - Urban Edge (Recreational Reserve - 10m Landscape Interface)
Not to Scale

6 Recommendations

It is recommended that the desired urban design outcomes and responses as set out in this assessment are incorporated into the structure plan, with appropriate provisions to enable delivery of the structure plan included on the PPC. These provisions will ensure achievement of desired outcomes through development of the subdivision.

Adequate detail should be required as part of any subdivision consent process to ensure outcomes are achieved. In particular these should detail how the specific urban design responses identified in Section 5.6 and streetscapes identified in section 5.7 of this assessment will be achieved.

Additionally it is recommended that the PPC contain specific ongoing provisions (objectives, policies and rules) relating to boundary treatments, to ensure achievement of urban design outcomes post development of the initial subdivision development.

7 Effects on the Environment

The existing Nukuhau area is a primarily a low density residential area interspersed by open spaces largely part of a landscape gully network. Several small pockets of other land uses such as small retail activities are also present. The PPC propose a continuation of that urban form, with a low to medium density residential developed effectively continuing the residential development prevalent along streets such as Docherty Drive, Herapeka street and Lakewood Drive.

The continuation of the existing type residential development, the street network and open spaces in and around the gully network will not alter the character or form of Nukuhau but will extend it. While these will be some noticeable difference for exiting residents, this will largely be restricted to a smaller number of properties in closest proximity. Most of those properties are oriented away from the PPC area, particularly in the western half of the PPC.

The PPC will deliver several benefits to urban form and amenity for existing and new residents. It will improve access to a more extensive and connected network of open space, both in the eastern and western parts of the PPC. It will also deliver a more connected movement network, and significantly enhanced opportunities for walking and cycling relative to the existing network within Nukuhau. A further benefit is that the proposed walkway-cycleway network will improve physical access to the rural areas at the edges of the PPC structure plan area.

The relocation and revocation of the southerly section of Poihipi Road will also have the benefit of removing a busy road from close proximity to houses to the south (access largely from Luberon Way), replacing this with an area of open space and new pedestrian cycle connections. The new arterial access through the eastern portion of the PPC will be better designed to deliver an improved movement corridor for all modes, and better separation/buffer for adjacent resident from the road.

With the urban design responses proposed, the PPC is considered to overall deliver positive benefits to the local urban area, with any adverse effects on urban form being **no more than minor**.

8 Conclusion

This UDA has identified an Urban Design Philosophy, Desired Outcomes and Urban Design Responses for the development of a new residential and commercial subdivision at Nukuhau, on the north-western edge of Taupō township.

It has identified that key landscape features, include views of Lake Taupō, the caldera rim, volcanic peaks and lower adjacent summits are significant within the landscape. At a local context it has also identified that within the PPC area the existing stormwater gully network. The PPC can benefit from these features to deliver a unique local character and sense of 'place' for the development. To achieve these things, key viewshaft opportunities that exist within the PPC to these distant and near features need to be preserved and the relationships between residential and commercial sites and streets with the open space network is important. This UDA has also identified that an opportunity is available to enhance the gateway into Taupō, and to deliver a secondary gateway to the Nukuhau area.

A movement network focussed approach has identified strong opportunities to provide a legible network of vehicle, pedestrian and cycling corridors and facilities that benefit from views and proximity to open space and gully network. This network also offers benefits for the location of small localised medium density residential and commercial areas of development on business more central corridors.

A series of specific urban design responses, with further explanation from streetscape typology cross-sections indicates how these can be achieved.

As the eastern and western areas within the PPC have differing characteristics and are severed by Poihipi Road, a series of common or distinct recommended design responses are identified for both areas.

The PPC area is not considered to have any significant adverse impacts on the existing Nukuhau urban area. Overall, the proposed PPC, if developed as proposed with the suggested mitigation, into a residential subdivision with a majority mix of general to medium density properties and smaller areas of reserves and commercial activity, will result have a **no more than minor** adverse impact on the urban form and character of the Nukuhau area.

Appendix A
Plans

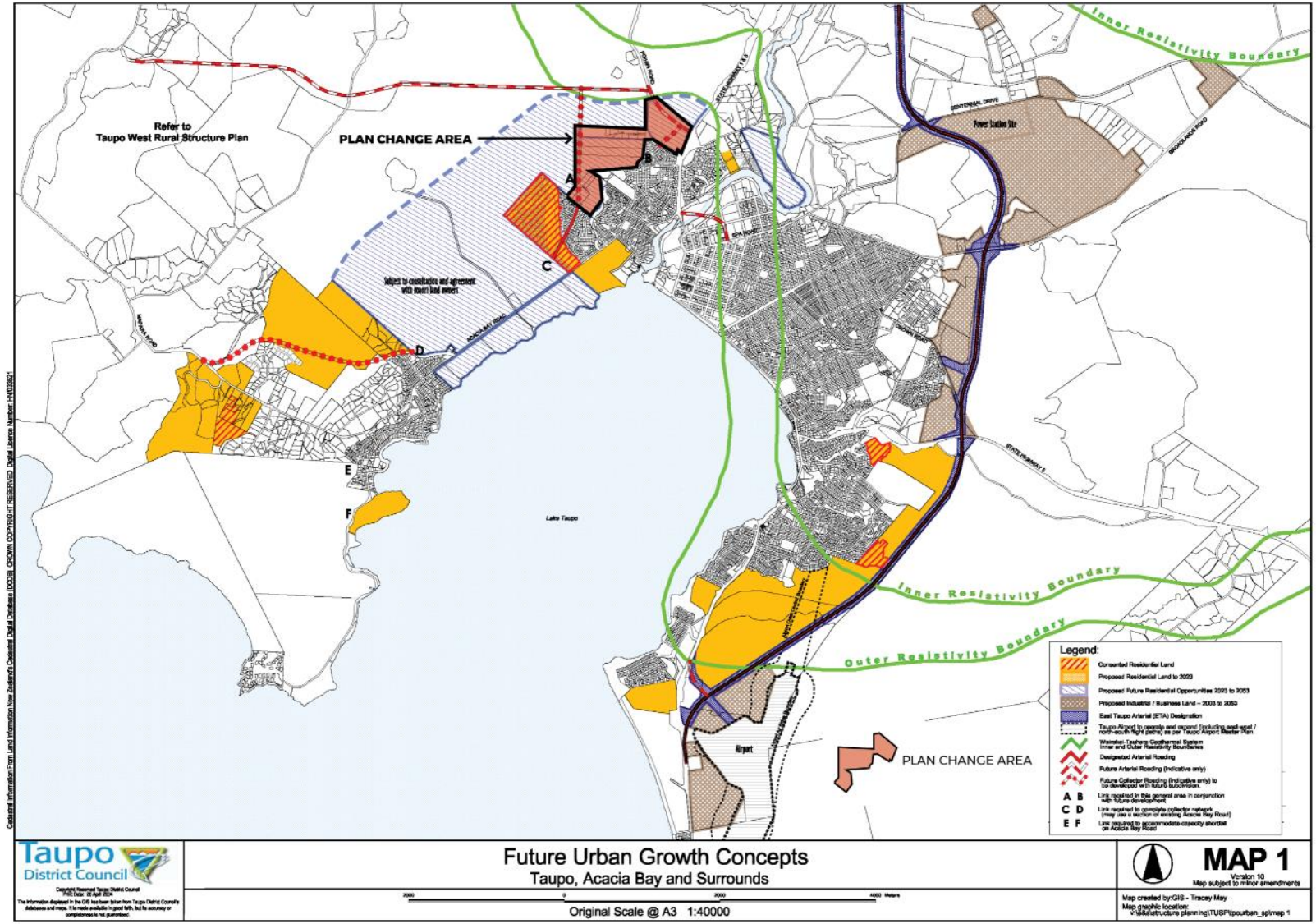


Fig. 2.1 Location of the Plan Change area

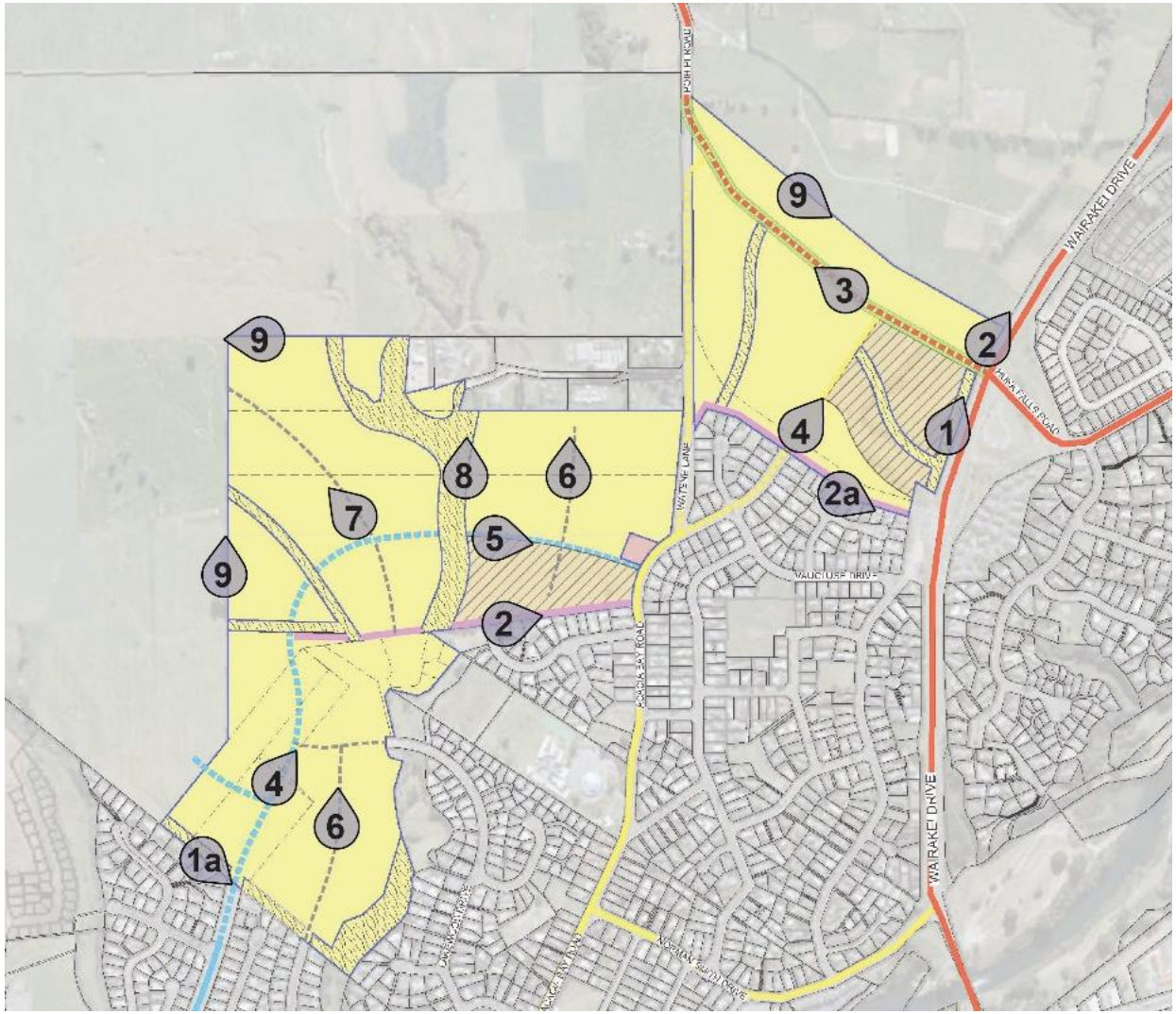
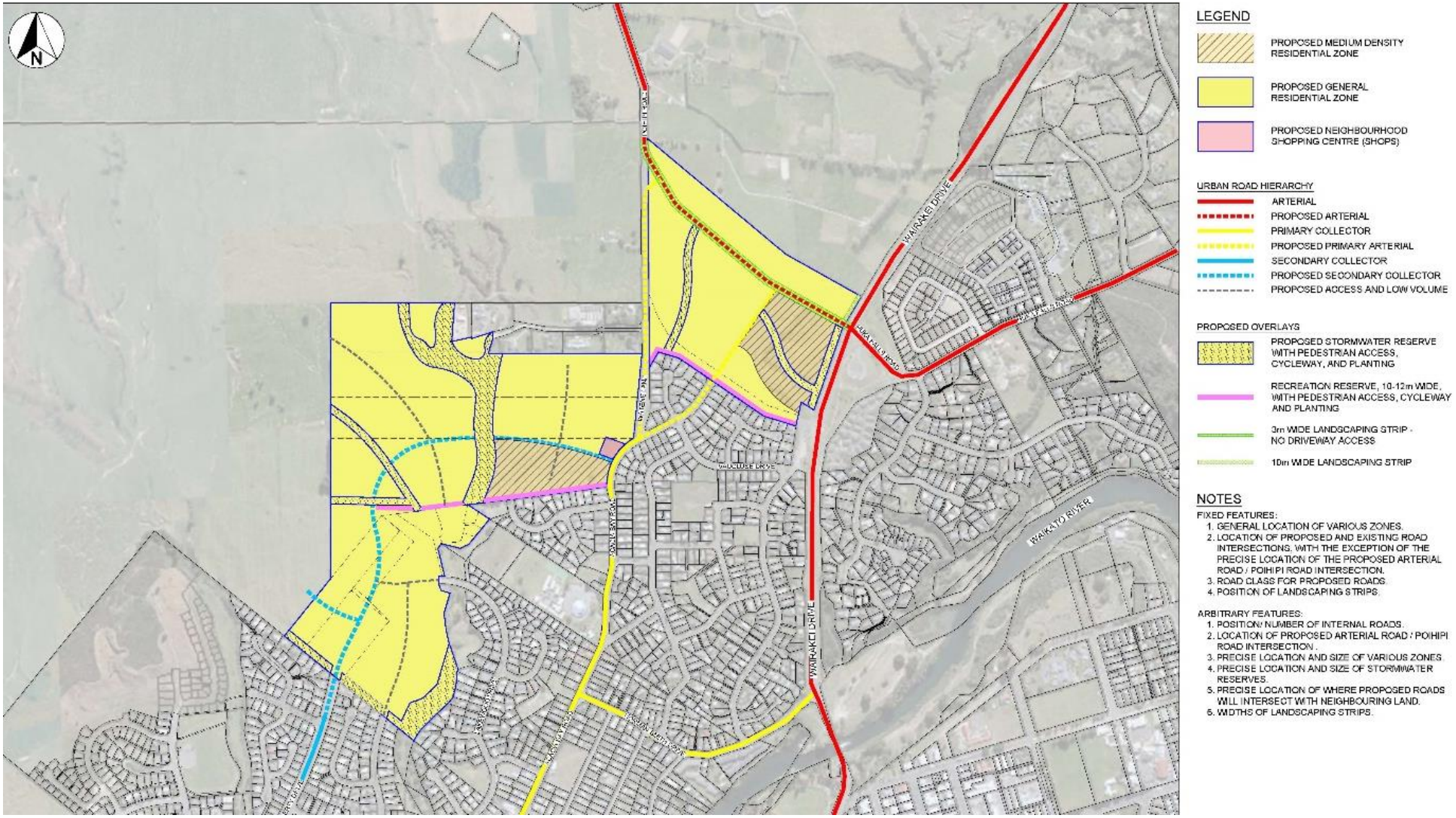


Figure 5.1 Plan showing cross section locations (Source: LVA,



Figures from Section 5: Stormwater and Recreation 'reserves' and the proposed PPC roading network

Appendix B
Statutory and Non-Statutory Documents

Policy Documents

The policy documents that are relevant to the context of the proposed site and have been considered are:

- The Taupō District Plan (2018);
- Taupō Urban Structure Plan (2004);
- Landscape Types and Units of the Taupō District (2000); and
- Outstanding and Amenity Landscapes of the Taupō District (Isthmus, 2009).

These policy documents have provided a baseline for the issues, objectives, policies and outcomes sought for Taupō's landscape. They are also helpful to provide guidance of the appropriateness of development within this environment. In particular, the preservation of the landscape, natural character and visual amenity values of the landscape is of importance.

Great Lake Taupō District Plan

The PPC area is located within the Rural Environment. The Objectives and Policies of the Rural Environment comprise:

OBJECTIVE:

3b.2.1
The management of the Rural Environment to maintain and enhance rural amenity and character.

POLICIES

(i) *Maintain and enhance the amenity and character of the Rural Environment by providing land use performance standards and subdivision rules to manage the scale and density of development.*
(ii) *Avoid urban development in the Rural Environment unless through a TD2050 Structure Plan Process and associated PPC.*
(iii) *Maintain the open space and dispersed building character.*
(iv) *Provide for a range of productive land use activities within the Rural Environment while ensuring any adverse effects are avoided, remedied or mitigated.*
(v) *Protect the District's lakes and river margins from buildings that are visually obtrusive and/or result in a decline of the amenity of the margin area.*
(vi) *Avoid, remedy or mitigate adverse effects of subdivision, use and development of land on areas or features of cultural, historical, landscape or ecological value.*
(vii) *Recognise and provide for Infrastructure and Network Utilities in the Rural Environment, while ensuring any adverse effects on or arising from them are avoided, remedied or mitigated as far as practicable.*
(viii) *Recognise that the Rural Environment encompasses a range of landscape characteristics, amenity values and land use patterns and activities when considering the appropriateness of development within the zone.*

OBJECTIVE

3b.2.2
Manage the subdivision of rural land to reflect rural amenity values, rural land use and appropriate levels of infrastructure.

POLICIES

i. *Enable the subdivision of rural land in a manner that encourages a diversity of lot sizes that reflects the rural amenity and character of the area, and the landform.*

ii. *Allow subdivision of rural land only where there is adequate rural infrastructure.*

iii. *Allow as a controlled activity, the creation of allotments and nominal allotments with an area of 10 hectares or more as a means of maintaining rural amenity and character, managing rural infrastructure and allowing for a diversification of rural land uses.*

iv. *Prevent urbanisation of the rural environment except as provided through the TD2050 Structure Plan Process and associated PPC process to prevent a dispersed pattern of settlement and the resulting inefficiencies in the management of resources.*

v. *Avoid the subdivision of rural land where there are hazards, in particular, land affected by geothermal hazards and where land is unstable or prone to erosion or flooding.*

vi. *Manage the subdivision of rural land overlying Geothermal Areas to avoid conflict with the resource use and development associated with geothermal electricity generation on identified Development and Limited Development Geothermal Systems.*

vii. *Encourage the retirement of steep land where such land is not appropriate for more intensive farming or further development including buildings, earthworks or clearance of vegetation.*

viii. *Provide for the creation of Papakainga housing where any adverse effects on amenity and rural character are internalised within the parent allotment; and where any other adverse effects on the wider Rural Environment are avoided, remedied, or mitigated.*

ix. *Provide for the creation of smaller lots to provide for the development of infrastructure, or access lots.*

x. *Any relevant guidelines should be taken into account in the design of any subdivision in the Rural Environment. In particular sensitive rural design should seek to achieve the following principles:*

a) *Maintain significant open space area and increase net environmental gain – Encourage sensitive rural design in subdivision, use or development where areas of continuous open space predominate. In particular protect and enhance topographical, water, and vegetation features that contribute to the character of the Rural Environment.*

b) *Areas or features of cultural, historical, landscape or ecological value are protected and enhanced.*

c) *Appropriate Overall Density based on the level of development anticipated for the Rural Environment – Maintain the expected level of built character in the Rural Environment, as anticipated by the District Plan.*

d) *Site analysis – Undertake a design process and rationale that includes, but is not limited to identification of sensitive areas such as dominant ridgelines, water courses (constant and ephemeral), existing vegetation that contributes to the rural character, and any important cultural, historical, natural or landscape values.*

e) *Appropriate Building Design and Location – Site and design buildings appropriately in a manner that is well integrated with the surrounding landform, maintains continuous areas of open space, and reduces any potentially adverse visual effects. Levels of infrastructure are minimised through appropriate siting of buildings and structures.*

xi. *Recognise that development of land in the Rural Environment at higher densities may be appropriate where associated with recreation, commercial accommodation and tourism activities provided that adverse effects are avoided, remedied or mitigated and that granting consent will not lead to patterns of urbanisation and reverse sensitivity issues.*

OBJECTIVE

3e.2.5
Ensure land development does not detract from the amenity value or qualities of the local environment.

POLICIES

(i) *Ensure that proposals for the subdivision and development of land assess the particular amenity values of the area including the physical characteristics of the land and avoids, remedies or mitigates any adverse effects.*

(ii) *Subdivision and subsequent development shall either maintain or enhance, but not detract from, the significance of features or areas of cultural, spiritual, historical, landscape or natural value, (as identified through the provisions of this Plan).*

(iii) *Enable the creation of allotments below any minimum allotment size identified as a controlled activity in this Plan for the exclusive purpose of providing or enhancing public or private access, or to exclusively accommodate a complying network utility activity and infrastructure.*

Taupō Urban Structure Plan 2004

The Taupō Urban Structure Plan 2004 (TUSP 2004) is a broad-based growth management strategy designed to identify the growth management issues within the Taupō area. The primary focus of the TUSP 2004 is to provide a high-level 20 to 50 year sustainable urban growth management strategy which identifies sustainable urban growth management outcomes for Taupō. Within the TUSP 2004, the PPC area is identified as a Proposed Future Residential Opportunities 2023 to 2053. The high-level Objectives of the Proposed Future Residential Opportunities 2023 to 2053 comprise:

Objective 2

a) Maintain Urban Amenity and Compact Urban Form
To maintain and enhance urban amenity in accordance with the environmental baseline set by the Proposed Taupō District Plan.

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