Ruakiwi Road Reservoir
Hamilton City
Landscape and Visual Impact Assessment

Date: 11th August 2025
Status: FINAL

Adrian Morton **Landscape Architects Ltd**
Landscape Architecture :: Urban Design :: Environmental Planning

Ruakiwi Road Reservoir, Hamilton City

Landscape Visual Impact Assessment

Prepared By

Adrian Morton
Landscape Architect

Adrian Morton Landscape Architects Ltd
Raglan 3295
Waikato
New Zealand

Reviewed By

Georgina Hailwood
Brodie Hailwood

Telephone: +64 021 55 7881

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Appendices

1 Introduction

1.1 Scope and Background

This landscape and visual assessment (LVIA) has been commissioned by Hamilton City Council (HCC) and comprises an independent assessment of the landscape and visual effects of the proposed expansion of the Hamilton City Reservoir, located off Ruakiwi Road and within Hamilton Lake Domain.

1.2 Background

In November 2022, HCC secured Government Infrastructure Acceleration Fund (IAF) support for specific infrastructure projects. The purpose of the IAF agreement is to enable infrastructure development that facilitates the delivery of residential housing in the central city. The Reservoirs and Pump Station project (Project) is a critical infrastructure initiative aimed at improving the efficiency of water supply from the reservoir into the central city, thereby supporting residential and commercial/office development along with fire fighting water pressure requirements.

This Project is essential to meet the demands of a growing population. Current growth projections and modelling indicate that the 25 megalitre reservoir will be sufficient to meet population needs until at least 2041. Beyond that point, a second 25 megalitre water reservoir will be required to ensure continued service capacity.

HCC in its capacity as a Requiring Authority (HCC) will undertake the planning work for both reservoirs at this time but will only construct one reservoir under the Agreement. The design and construction of the second reservoir will be determined at a later date based on existing and forecast population growth in the central city.

HCC has conducted a comprehensive investigation and site assessment to identify a preferred location for the new reservoir and an associated booster pump station. The evaluation considered 30 potential sites situated between the existing Waiora Water Treatment Plant (WTP) and the Ruakiwi Road Reservoir (RRR). Each site was assessed based on several key criteria, including land ownership, site size, elevation, proximity to the bulk water network and the WTP, energy efficiency (a critical factor for resilience and operations), distance to the central city, and underlying geological conditions.

Based on the outcomes of the investigation and site assessment, HCC has identified the Ruakiwi Road Reserve site as the preferred location. As a result, further investigation and concept design work have been initiated for this site to support the next phase of project development.

A further options analysis was undertaken for the Ruakiwi Road site to refine the site layout to best meet the project objectives while striving to address effects on the Lake Domain Reserve and the surrounding residential area as much as possible, with the concept site layout reflecting that balance.

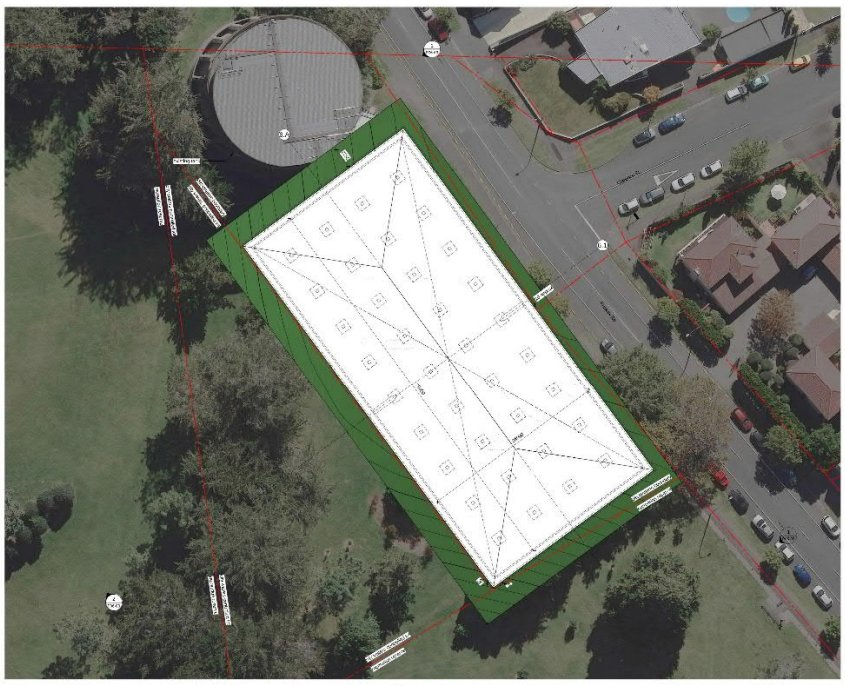
The purpose of this report is to provide sufficient technical information in relation to landscape and visual effects to support the Notice of Requirement for an Alteration to Designation.

1.3 Purpose of Report

This report has been prepared by Adrian Morton Landscape Architects Ltd (AMLA) as part of the supporting documentation for the Assessment of Environmental Effects (AEE) in relation to the Notice of Requirement for an alteration to designation for the Project.

The focus of this report is the assessment of potential landscape and visual effects of the proposed development of the Project in relation to the existing landscape character and visual amenity.

There is currently an existing water reservoir designation, which extends to the south of the heritage water tower. On this basis, the existing site could be further developed to incorporate additional reservoir capacity with designs including either a single large rectangular tank or two smaller circular reservoir units. Both options provide potential development options that are deemed non fanciful (as per the RMA caselaw) and could be constructed, as shown on the plans below.



The rectangular design (Option 6) shown above would be 34.0m wide and 75.0m in length and would be offset from the heritage tower by 3.75m. The reservoir would be partially buried by approximately 5.44m and 6.0m above ground (relative to the existing footpath level).

The circular reservoir design (Option 5) shown above would include two 35.0m diameter tanks and would be offset from the heritage tower by 5.3m. The reservoirs would be partially buried by approximately 5.49m and rise 9.0m above ground (relative to the existing footpath level).

Although the two options could technically fit into the designation, practically they would be difficult to make work given the need to have a valve station below ground (it would end up in the Ruakiwi Road reserve) and some parts of the project would end up outside the designation.

From a landscape and visual point of view, both options would be very close structurally and visually to the heritage water tower, and would also completely block views through to the open space and views beyond, particularly from Ruakiwi Road/Clarence Street intersection. By virtue of the reservoirs being in close proximity to the footpath, the structures would dominant the environment and it would be difficult to provide an architectural response to reduce the bulk and form that would assist in integrating the reservoirs into the landscape.

Although the baseline development could be achieved the outcomes would be less desirable than the proposed alteration to designation proposed scheme, where they are

moved away from the heritage tower, which in turn provides a view shaft through to the open space and views beyond. In addition, the proposed alteration to designation arrangement moves the structures away from Ruakiwi Road and adjacent residents and provides space for integrating a public path/viewing point. It also allows the architectural treatment to help reduce the bulk and appearance of the structures, which in turn provides an improved visual appearance that can better contribute to the area's character.

Therefore, the LVIA will assess the concept design elements and form (based on the Architectural and Landscape Design Strategy (Refer to Appendices F and G) of the Project to determine the potential landscape and visual effects and whether the proposals manage and mitigate those effects against the existing environment.

1.4 Site Location and Description

The Site is located along Ruakiwi Road opposite the Clarence Street intersection and is situated approximately 700m to the south-west of Hamilton Central Business District (CBD) as shown in Appendix B, Fig 1.0 and 1.1. The current designation[1] of water storage and supply is located in the Destination Open Space Zone (HCCODP, Chapter 15) situated in the Hamilton Domain Reserve (Domain). The open space area of the Domain also contains the existing historic water tower[2], which is an important heritage feature within the landscape.

The Site is situated along the natural ridgeline that runs in a north to south direction along the eastern side of the Domain. To the west of the ridgeline within the Domain is Hamilton Lake and on the western side of the Domain are extensive areas of open space with sporting facilities and sports pitches with residential housing located on the surrounding rolling topography. To the east of the Project site is Ruakiwi Road with the High-Density Residential Zone (refer to Figure 1.0) containing residential properties flanking the eastern slope. Beyond Pembroke Street are commercial buildings located with the Business Zone 4 and to the north of Thackery Street is the Central City Zone - Precinct 2 - City Living.

The immediate area surrounding the Project site is the undulating grassed open space with groups of mature trees and more recently planted immature trees scattered across the ridgeline slopes. To the southwest of the Project site the steep ground contains predominantly native planting. Within the designation is the heritage rated water tower, that sits prominently on the higher ridge, that will be decommissioned on the completion of the first new reservoir.

[1] Hamilton City Council Operative District Plan, Designations (Schedule 26.3 - Volume 1), Reference No: A67. Lot 2 DP 16167

[2] Hamilton City Council Operative District Plan, Schedule 8A: Built Heritage (structures, buildings and associated sites), Heritage Item Reference 27, Ranking A

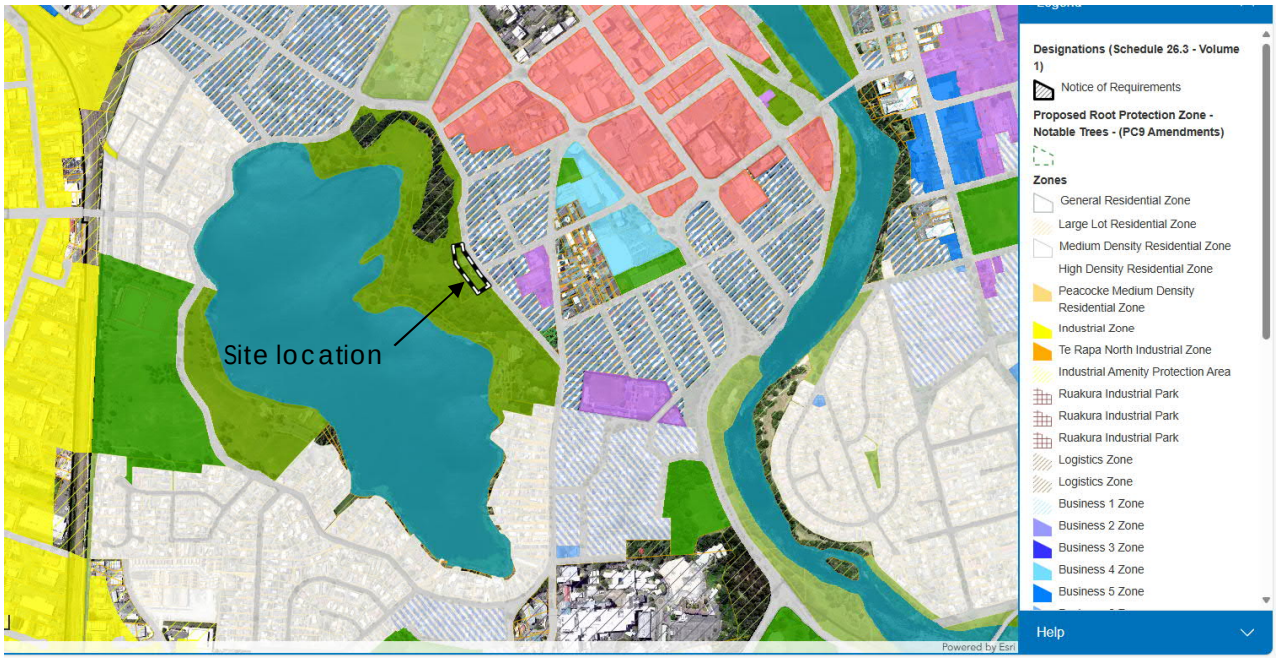


Figure 1.0 – Hamilton City Council Operative District Plan Zoning Map

1.5 Project Description/Design Response

Baseline Design

The existing water reservoir designation would enable the development of two potential reservoir options and these must be considered as part of the existing environment.

A circular tank option, would allow the construction of two 35 m diameter tanks that would fit within the designation boundary, however, they are very close to Ruakiwi Road and only 5.3 m from the existing heritage ranked water tower. They would result in being too close structurally and visually to the heritage water tower and would also completely block views of the distant hills from the houses across Ruakiwi Road from the site. While they could technically fit into the designation, practically they would be difficult to make work given the need to have a valve station below ground and potentially other parts of the project would end up outside the designation, including the longer term reservoir.

Alternatively, a Rectangular tank option would provide a single rectangular tank option fitting into the existing designation boundary. However, the same issues as described for the circular tank option above would also apply to the rectangular tank option, resulting in poor landscape and visual amenity outcomes.

Proposed Alteration to Designation Scheme

These options would result in poor outcomes and would be difficult to achieve, therefore the proposed alteration to designation design scheme has been advanced to help achieve better overall landscape and visual amenity outcomes. The proposed reservoir will hold 25 million litres of water each within two circular concrete structures with an external diameter of 62.65 metres each and height of 10.2 metres (external dimension). The covered reservoir will reach a maximum elevation of approximately 72.00 RL in its centre, with both reservoirs extending above ground, with heights varying relative to the sloping topography.

The reservoirs will be constructed from precast concrete panels supported by internal concrete columns to create a cylinder with a domed top. The reservoirs will be clad with a 'curtain wall' of corten steel slats and will incorporate a concrete block retaining wall at the base of each of the reservoirs with integrated access path and safety railings.

Associated with the reservoirs will be a valve chamber building which will be encompassed by the corten steel curtain wall system enclosure. Hard standing pavement and paths, plus an access path around the reservoirs are incorporated into the project, with landscape planting to help soften and integrate the facility into the open space of the Domain.

Urban Design Strategy (Architectural and Landscape Design)

The urban design approach provides an integrated landscape and architectural design response to the development of the reservoirs with the aim to visually enhance the utilitarian facilities and contribute to the public realm and open space of the Domain.

The Architectural Design approach is illustrated in Appendix F and illustrates the concept design for the layout of the reservoirs and the proposed architectural and hardstanding treatments. The Landscape plans in Appendix G indicate the extent of the open spaces, the vegetation to be retained and the proposed landscape mitigation planting that will help maintain the character of the site and surrounding area, while softening the appearance of the built form.

Landscape and Architectural Objectives

The design response seeks to accommodate the valve chamber and two reservoirs within the existing vegetated open space context of the Domain and includes the following objectives:

- Reduce the visual impact on the natural landscape (Domain open space), neighbouring properties and the adjacent heritage reservoir
- Moderate the scale,
- The use of durable and an attractive materials palette,
- Develop opportunities to increase public amenity and safety,
- Provide opportunities for cultural expression,
- Support the functional operation of this infrastructure asset,
- Create a final landform that supports a 'smooth' integration with adjacent areas of topography to minimise landscape effects,
- Retain and highlight views, particularly of features to the south, and
- Establish native vegetation, amenity trees and areas of grass which assist the final landform becoming assimilated within its surrounding open space setting and maintains the broader 'green' character of the Domain, and

To help achieve the objectives the design has had a design focus on the following:

- Positioning and the massing of the built forms
- Containment and screening
- The creation of public access and enhancement of the Domain's open space
- Establishing space to highlight the heritage tower

Staging

Stage 1

Construction will provide a 62.65m (external) diameter circular reservoir at 72.0m RL and base of wall of 61m RL and an external wall height of 10.2m, plus the construction of the valve chamber unit and stage 1 steel wall cladding, which will be completed by 2028. A cut and fill earthworks requirement will result in a maximum cut depth of 7.86m with a volume of 10,910m³ and the fill depth of 3.5m with a volume of 5,745m³. Associated with the works will be the removal

Stage 2

Construction will be a duplication of the first reservoir, forming a 62.65m external diameter circular reservoir with a wall height of 10.2m and is programmed for completion by 2040, depending on demand. A cut and fill earthworks requirement will result in a maximum cut depth of 5.55m with a volume of 6,692m³ and the fill depth of 5.4m with a volume of 5,858m³.

As part of the Stage 1 Reservoir, a valve chamber will be constructed for housing the inlet/outlet and bypass valves, plus pipework for the two reservoirs. A building is proposed to house the valve chamber so that a gantry crane can be provided for removal of valves when required for maintenance purposes. Vehicles will be able to drive to the top of the valve chamber and from this point maintenance will be via pedestrian access with the gantry crane available for larger less manoeuvrable items. The reservoir facility will incorporate pipework to manage discharges of rainwater, drain down of the reservoir and to manage overflow events, with an outlet point into the Hamilton Lake.

The use of a steel façade will be incorporated into the Project to encompass the concrete reservoirs for safety purposes and to provide aesthetic value. At the base of the reservoirs a textured concrete block retaining wall will help minimise the extent of earthworks while providing a 6m wide access maintenance path with safety railings, which will function as a public walkway and look out platform.

Lighting will be a combination of directional lens security lighting around key access points, with low directional feature lighting used to provide visual interest in relation to the corten steel façade, which will also provide 'safety' lighting as part of CEPTD considerations to help manage anti-social behaviour.

Landscape planting will be utilised to soften the structure, particularly along the Ruakiwi Road frontage. Tree planting will include large grade stock, that will occur in the Domain's open space surrounding the site to help will mitigate some of the loss of trees plus help define view shafts in relation to adjacent properties and from the viewing platform path. Appendix G provides concept landscape plans that illustrate the proposed layout and location of the water reservoir tanks and associated hard surfacing.

The design approach of the Project aims at achieving an appropriate design and aesthetic outcome to aid the structures integration within the landscape, while incorporating public facilities such as paths, viewing platform, seating, interpretive and wayfinding signage and lighting.

Construction Process

The proposed reservoir development will be carried out in two phases, with the initial (eastern) reservoir being constructed by 2028 (Stage 1) with an anticipated construction date of 2040 (Stage 2) for the second (western) unit.

Both reservoirs will be dug into the existing sloping landform to create level platforms. A total volume of approximately 17,602m3 of material (not all is suitable for structural fill) will be excavated during construction with a requirement for the importation of structural fill of 11,603m^3, with non-structural fill being removed from site . As the tanks will be benched into the slope, there will be a fill requirement of 11,603m^3, although the extent of earthworks will be contained by the use of the retaining wall at the base. The existing landforms will be reinstated up to and around the retaining wall base of the Reservoirs to minimise changes to the natural topography of the area.

For the Stage 1 construction an access point will be provided on the southern side of the reservoir, which will allow delivery truck access from Ruakiwi Road. This access will primarily be used for the delivery of pre-cast concrete panels and concrete trucks. A crane will be utilised for lifting pre-cast concrete panels and will be located on the reservoir base pad. All other associated construction will occur from a compound that will be located on the western side (within the Stage 2 footprint) of the reservoir.

As part of the construction process there will be a staged removal of trees. Tree removal associated with Stage 1 will be undertaken to accommodate the reservoir footprint, with the laydown site working area being minimised to reduce the potential impacts on trees and tree roots. The retention of the group of oak trees along the eastern boundary (back

of footpath along Ruakiwi Road) will utilise a tree retention strategy[3] that will utilise sheet piling to minimise the invasion into the root area. Further tree removal will occur when Stage 2 construction commences (approx. 10 years time) and will require further removal of trees.

2 Assessment Methodology

2.1 Overview

I have used a standard assessment approach to identify the existing landscape/urban character of the project corridor and its surroundings to enable the assessment of potential effects of the Project on landscape character and visual amenity.

My assessment has been undertaken in accordance with Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'[4] (Assessment Guidelines). In accord with the Assessment Guidelines, relevant policy and planning documents have also been considered and include the RMA, Regional Plans and District Plans.

As part of the initial investigations into the potential visibility of the Project, a ZTV analysis has been carried out, identifying potential areas where the Project would be visible. The ZTV utilised a simple model of contour lines derived from lidar data sets with subsequent site visits to field verify the desk top study from in and around the Project corridor. To this extent a ZTV map was produced (Appendix C), which is based on the visibility of the top of the stage 1 reservoir, being the highest point and due to it's certainty of being constructed. The extent of the ZTV map illustrates the visual influence based on *only* the topography that occurs within the surrounding landscape, noting that the potential effects diminish as the distance from the Project increases. Although the ZTV maps illustrate an extensive area, in reality, the extent of the ZTV is actually contained due to vegetation and to a lesser extent built forms, which contain the zone of visibility to a relatively small visual catchment including view points from around Hamilton Lake/Domain, areas of the Hamilton CBD, plus receptors in close proximity, who will observe the most noticeable change in the landscape.

A full methodology and flow charts are provided in Appendix A of this report. In summary the effects rating is based on a seven-point scale (refer to Appendix A, Table 2.0) which ranges from very low to very high.

In general terms my assessment consists of the identification of:

a. the key elements or attributes associated with the Project,

[3] Refer to Appendix E for tree removal staging plans and tree protection measures.

[4] *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.*

b. the landscape values, natural character, key attributes and cultural/social aspects of the Project corridor in context of the biophysical, associative and perceptional/visual landscape interpretation; and

c. relevant assessment criteria in relation to the existing designation and the relevant statutory framework(s).

The Project assessment methodology involved the following process:

- A desktop study of aerial maps, the HCCODP plus other relevant documentation[5].
- Site visits (March to June 2025) were undertaken to assess the Projects location and to understand the context and character of the receiving environment. During these site visits, I also visited specific representative locations to understand views and help determine potential effects on landscape and visual amenity.

This assessment includes a consideration of the:

- Effects on landscape character using a broad set of parameters. Effects are typically derived from changes in the landscape's appearance, formative processes, and qualitative values, which may give rise to changes in its character and how it is experienced.
- Nature and extent of the visual effects relating to the changes that arise in the composition of the view(s) as a result of changes to the landscape, to people's response to the change, and to the overall effects with respect to visual amenity.

Typically, the landscape and visual amenity effects that arise from a project / activity result from change in the components, character or quality of a landscape. Usually these are the result of landform or vegetation modification or the introduction of new structures, activities or facilities into the landscape. Additional factors may include the:

- degree the Project assimilates or contrasts with the qualities of the surrounding landscape,
- extent of visibility of the Project based on the observer's position,
- viewpoint distance and foreground context in relation to the Project,
- backdrop and context within which the proposal is viewed; and
- quality of the resulting landscape, its aesthetic values and contribution to the wider landscape character.

The assessment also considers the landscape and visual amenity effects during construction, which are factors that will affect the visual amenity. Although effects of

[5] *WBOPDC Landscape Review, Assessment of Landscape Management Requirements for the Tauranga Harbour Margins and Wairoa River Valley, October 2008.*

construction machinery occur during the construction period, they will be visible but are temporary aspects and will have no long-term landscape and visual effects in the overall context and scale of the Project.

A change to the landscape does not necessarily constitute an adverse landscape or visual effect, as landscapes are dynamic and are constantly changing over time. These changes can be from natural processes or human induced activities and the change can be managed to avoid or be sufficiently mitigated to ameliorate the effects. In addition, changes in landscape must also be considered within the context of the projected and approved changes (such as the Existing Designation) to a landscape's use.

To manage landscape changes, the Project has sought to achieve an integrated architectural and landscape design (visual) approaches, and therefore, the design team have incorporated an 'assessment lens' within the design process.

3 Existing Landscape and Visual Character

3.1 Wider Landscape Context

The key landscape features that influence the overall character surrounding the application site include the following:

a) The broad alluvial terraces of the Waikato River,

b) The undulating landforms of Hamilton,

c) Urban and development associated with Hamilton CBD and the surrounding residential areas including utility services, roads and lighting,

d) The open spaces of the Domain and Hamilton Lake,

e) Areas of trees and vegetation, and

f) Views of Mt Pironga and Kakepuku Mountain to the south and across the Hamilton City to the north the Hakarimata and Taupiri Ranges are visible across the flat Waikato basin.

Figure 1.0 - Google Earth Map showing surrounding landscape

The relationship between the major geographical features contained within the surrounding landscape, and the human modifications and urbanisation of the area, are important factors to consider when assessing how the proposed Project will influence existing amenity values and urban character.

3.2 Application Site and Immediate Surroundings

Topography

The Project Site is located on the eastern side of the Domain, adjacent to the Ruakiwi Road and opposite the top end of Clarence Street and sits within the Destination Open Space Zone on the natural ridge running in a north to south direction (Refer to Appendix D, Photos 1.0 to 14.0). To the west the topography falls away quickly down to the Hamilton Lake shore edge. The area around Hamilton Lake is flat but rises to the undulating land that contains the lake. To the east of Ruakiwi Road that topography drops away quickly to the CBD, which is located on the flat terraces of the incised Waikato River.

Vegetation

The Project is located within the Domain adjacent to Hamilton Lake, and is characterised by the large mature macrocarpa trees which are scattered cross the grassed slopes and are distinct and prominent features in the landscape. The combination of trees, topography (with views across the landscape) and open grassed areas, make the Domain an important and high-value destination open space. The ridgeline to the east of the Domain contains a diverse range of vegetation, including native bush, mature exotic trees, ornamental plantings, and lakeside wetland plant species.

Vegetation types immediately surrounding the project site, are dominated by large mature macrocarpa (Cupressus macrocarpa) trees which dominate the skyline due to their maturity and size. They are extensively planted along the length of the ridge up to Lake Domain Drive. A group of oaks are located at the back of the footpath within the

current site designation and contribute to the amenity of the Ruakiwi Road streetscape. A number of trees have been more recently planted in the open space and within the proposed Project site, which include pin oak, hornbeam and kahikatea. In addition, there is a single protected mature Cupressus lusitanica (Mexican Cypress) that is located within the foot print of Reservoir one, which has a healthy dense conical form and contributes to the 'treed' environment/character.

The macrocarpa trees are mature and as outlined in the Arborist Report[6], they are showing signs of decline with wind damage and canker effecting most of the trees. To the southwest of the Site, the topography steepens, and the lower slopes of the ridge contain a mix of semi-native species, which provides a well vegetated character to the eastern aspect of the Domain.

In addition to the tree planting, there is a large grassed open space immediately west of the existing water tower that leads down the slope to the amphitheatre and Hamilton Lake and beyond. In and around Hamilton Lake are areas of grass with the lake edge containing wetland species.

Urban Features

The Domain is located to the west of Ruakiwi Road and contains Hamilton Lake and open grassed spaces and sports facilities on the western aspect of the lake (Innes Common). On the eastern side of Hamilton Lake is the Verandah Café and Function Centre with the well-equipped lake playground situated adjacent. A well utilised walking path circumnavigates the Lake with carparking and seating located around the Domain.

The Domain contains areas of open space, with open grassed areas occurring to the west and south-east of the Project site. The open space to the southeast follows the ridgeline and is dominated by the mature macrocarpa trees, which contributes to the tree'd character of the area (refer to Appendix D, Photo 4.0). To the west the grassed open space descends towards the stage at the toe of the slope, with the open space providing an amphitheatre type environment (refer to Appendix D, Photos 12.0 and 13.0). Although the stage is not well used, the open space is used by public mainly as an informal recreation space by walkers and dog walkers and people accessing the Hamilton Lake environment (from the CBD and adjacent residential properties).

The existing water tower is situated on the water utility designated land and is listed as Built Heritage[7] in the HCCOP. The tower is a prominent heritage feature within the landscape, which is visible from the surrounding streets, some areas in the city and from areas in and around the Domain.

Beyond the open space to the west of the Domain, the rolling topography contains residential housing, and further south beyond the city limits are distant views of Mt Pironga and Kakepuku Mountain.

Ruakiwi Road defines the eastern aspect of the Domain and abuts the Project site. Further east of Ruakiwi Road, the falling topography contains a mix of residential properties and terrace housing with the housing transitioning to commercial premises closer to the CBD.

[6] Arborist Report, May 2025

[7] Hamilton City Council District Plan, Schedule 8A : Built Heritage, H27, Lot 2 DP 16167

Overall, the former green belt status of the Domain provides a 'natural' parkland setting with extensive areas of open grass and a large number of mature trees (predominantly macrocarpa) scattered along the ridgeline, which contrasts with the surrounding urban environment that encapsulates the Domain.

Cultural Aspects
The broader area of Hamilton/Kirikiriroa has a long and rich heritage of Maaori settlement particularly along the river margins and across the land due to the rich soils and plentiful food sources. There was a well-formed walking track now covered by Ruakiwi Road, which extended right down the ridgeline along Pembroke Street and formed a route for people living at Te Rapa Pa (located at what is now Graham Park) to get to the lake and its resources. A Cultural Impact Assessment (CIA) has been undertaken for the Project and provides an understanding of the cultural significance and importance of the Project site and surrounding area.

3.3 Landscape Character Summary

The broader landscape character is defined by the urban development with suburban housing, which forms part of Hamilton City built environment and to this extent can be considered as a highly modified environment.

The landscape character associated with the Site is influenced by the 'Green Belt' of Hamilton Domain. The Hamilton Domain management plan identifies the character of this area as an important open space with large mature trees, although this is set within Hamilton City's urban environment. The site is located on the ridge within a flat to rolling landform, which gives some legibility to the underlying geomorphology, and introduces a somewhat natural element to what is an otherwise heavily modified environment.

The Hamilton Lake area is primarily an open body of water, which allows extensive views across and around the Lake of the rolling landscape, the built environment and vegetation associated with Hamilton Domain.

3.4 Visual Catchment / Zone of Theoretical Visibility (ZTV)

The extent of the visual catchment area is determined by which part or the degree to which the Project is visible. This is largely determined by landform features, topography and land cover, which in combination with distance may obscure or filter views and the extent of visual effects.

As an initial step in the visual analysis a Zone of Theoretical Visibility (ZTV) mapping exercise was undertaken, as illustrated in Appendix C, which is based on the maximum height at the top of the Reservoir (RL 70.850) to determine the potential visibility in the wider landscape. Although not absolute, it has helped inform the potential viewing audience with an ability to see the proposed reservoir.

The ZTV analysis takes into account the topographic data, based on one meter contours to identify the potential for views of the completed reservoirs. It has not taken into

account the intervening vegetation or structures, which in reality restricts and limits the views towards the Project and therefore, represents a worst case scenario.

With the assistance of the ZTV analysis, field work was carried out to determine the actual extent of the Project's influence and to check the localised screening afforded by topography, buildings, vegetation and other structures from publicly available viewpoints. With the Project being located on the ridge, it has the potential to affect a broad area, however, the extent of trees and planting within the Domain and the topography helps contain the extent of the visual catchment, which is less than shown on the ZTV map.

The Domain area immediately surrounding the Project will have visible direct views of the reservoirs particularly from the open grassed spaces, but as the topography drops away visibility of the structures will reduce rapidly. The Project will also be highly visible from Ruakiwi Road and associated footpaths, but is relatively well contained by the topography, vegetation and houses within the area (i.e. along Ruakiwi Road).

The majority of the Domain and Hamilton Lake edges are likely to discern some degree of the Project, although in general, views will be partially obscured by the existing retained vegetation with the broader landscape context being the dominant feature in the view. However, in some cases there are view shafts where the Project site will be more visible. Housing located on the eastern side of Ruakiwi Road opposite the Project site will generally have direct views of the Reservoirs, which will result in a noticeable and permanent change in visual amenity. Views are obtainable from some areas within the southern areas of the CBD and in particular from the taller buildings where direct views across to the site are observable, with street views being obscured by buildings. Receptors in commercial office buildings have a lower sensitivity to change, as they are pre-occupied with work activities and are typically only day time viewers. Beyond the Waikato River, the receptors are likely to be too distant with buildings and vegetation screening views, and therefore, receptors will not discern any change in the broader landscape.

Overall, the visual envelope is well contained to the south and north of the Project due to the topography and extensive mature tree cover, with the visual envelope being contained to the east due to the topography and the built form of housing. The visual envelope will extend west across areas of Hamilton Lake and the Domain, but vegetation will obscure views and contain the reservoir site to a good degree.

4 Assessment of Effects

4.1 Key components which have the potential to affect landscape character and visual amenity

The key components of the Project that have potential to affect the landscape character and visual amenity include:

a. Short term construction areas, activities and associated machinery (earthworks machinery, trucks, cranes and workman vehicles etc);
b. Vegetation removal,
c. Reservoirs (staged approach) and architectural/cultural treatments,
d. Hard landscape, including paths and ramps,
e. Lighting,
f. Park furniture including bins, seats and signage
g. Landscape planting; and
h. The heritage water tower interventions/removal of incendiary vegetation and structures.

Overall, the Project aims at delivering on the strategic design approach to achieve an integrated design, that assimilates the architectural/urban design elements within the landscape. To this extent the Project landscape design will uphold the visual amenity and character of the area by:

- Ensuring a context sensitive design approach that manages landforms, land use/built form that responds to the historic water tower, the open space and treed character of the Domain and the urban built environment aspirations of Hamilton City[8],
- Providing a legible and well-designed resolution to the built form (encapsulation) that helps integrate the Project into the landscape,
- Ensuring design outcomes for structures achieves good form and proportions that utilise materials that achieve quality and durable finishes, and
- Incorporating opportunities to enhance the public open space realm
- Ensuring landscape mitigation planting is complementary to the character and amenity of the Domain.

[8] Hamilton City Design, Vista, November 2007

4.2 Assessment Considerations and Ratings

The extent of effects and the acceptability or otherwise of the proposed Project will be dependent on the degree of change to local landscape character and potential effects on the Domain's open space and adjacent urban environment/residential properties.

This Assessment considers the potential landscape and visual amenity effects of the Project using a rating system that aligns with the recommended 7-point scale contained within the Te Tangi a te Manu – Aotearoa New Zealand Landscape Assessment Guidelines[9]. Appendix A, Table 2.0 provides a detailed description of the rating system and a comparison in relation to the RMA ratings (minor to significant).

4.3 Effects on Landscape Character

Landscape character derives from the distinct and recognisable pattern of elements and key attributes of the surrounding area. The wider context of attributes has been described in Section 4.1 of this report with the character reflecting particular combinations of topography, vegetation, landuse and human settlement that forms a unique sense of place.

The Project site is located within the Domain open space, which over time has been highly modified with the removal of native vegetation, the inclusion of roads and built structures. The Domain area surrounding the Project site has its own distinct character of large mature exotic trees set with extensive grassed spaces (Refer to Appendix D, photos 1.0 to 13.0). Adding to the immediate area's character is the historic water tower, which is a distinct feature within the landscape, especially given its height and visibility from the surrounding areas. Overall, the presence of mature trees within the open space environment contributes to the character of the Domain and areas surrounding the Project site, with the 'green space' being of high amenity importance to Hamilton City.

The analysis has identified the key attributes of the various landscape features that contribute (as listed in the table below) to the landscape character and amenity of the site and its immediate surroundings. The effect of the completed reservoirs (Refer to Appendix F) on the following features have been assessed against the key landscape elements identified during site investigations and analysis along with other relevant background information.

In relation to the construction works, the effects will be noticeable during the two stages but will typically be localised (contained within close proximity to the Project area) to a high degree due to the containment provided by existing vegetation. In addition, construction activities (construction machinery and site compound etc) will have

9 *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.*

temporary visual effects, but no long-term effects on the surrounding landscape. Therefore, a summary of my assessment on landscape character is as follows:

Table 1: Landscape Character Elements and Summary Effect				
	Landscape type	Scale	Key Features & Attributes	Potential effect
1	The broad alluvial terraces of the Waikato River	City wide	• Dominant broader landscape feature to the east of the Project site. • Strong influence on the topography and geomorphic processes within the landscape. • Contains urban form of Hamilton City.	No effect. The Project will not directly affect the alluvial terraces.
2	The undulating landforms of Hamilton / Hamilton Domain	City wide / Local	• Rolling topography, some steep slopes interfacing with flat terraces. • Undulating form that contains Hamilton Lake. • Hamilton Domain contains vegetated ridgeline.	No effect on the broader landscape form. Some low-moderate adverse effect, but localised to the immediate earthworks associated with the Project.
3	Residential and urban development	City wide / Local	• Urban environment consisting of built forms, roads, lighting and utilities. • Residential one to two storey housing located adjacent to the Project site.	Neutral effect on broader urban character, with reservoirs adding to the general urban fabric. Localised moderate- high negative adverse effect in relation to built form immediately adjacent to the development site with change to the open space outlook, although base line development would have very high adverse effects.

4	Heritage water tower as prominent landscape feature	City wide / Local	• Prominent feature on the designated utilities site. • Distinct historical feature within the urban fabric.	Low benefit due to change of visibility from surrounding areas (Hamilton Lake and CBD) From localised areas, a low-moderate positive benefit with the removal of subsidiary structures and vegetation from the base area. Plus proposed reservoirs lower height and separated to maintain integrity of historic feature.
5	The open spaces of the Domain and Hamilton Lake	Local	• Prominent grassed open spaces of the Domain. • High public access.	Localised moderate-high adverse effect with loss of open space to accommodate reservoirs. The broader Domain character remains unaffected.
6	Areas of trees and vegetation	City wide / Local	• Canopy of mature tree provides prominent ridgeline feature and vegetated character. • Mature trees within the Domain have distinct character.	A low effect on the broader /city wide vegetated character will occur. A noticeable moderate adverse effect on the ridgeline landscape from Hamilton Lake. Moderate-high localised effect from loss of trees, but staging will assist in managing the change.
7	Views of Mt Pirongia and and Kakepuku Mountain to the south and across the city to the north the	District	• Dominant backdrop feature to the south of the Project site/Hamilton of Mt	No effect. The Project will not directly affect the hill country or the

	Hakarimata and Taupiri Ranges are visible across the flat Waikato basin.		Pirongia and and Kakepuku Mountain. • Dominant backdrop feature to the north of the Project site/Hamilton of Hakarimata and Taupiri Ranges.	characteristics of this landscape feature.

In summary, the Project is located within a modified area, which is characterised by adjacent built form/residential housing and the highly modified open space of the Domain. However, the Domain area surrounding the Project site has its own distinct character of mature exotic macrocarpas and trees set within extensive grassed spaces with the historic water tower being an additional distinct feature within the landscape. The landscape effects of the proposed Project are rated against the existing physical environment including the rolling landforms, vegetation, built form and the historical structure, which are discussed in more detail as follows:

4.4 Landform and Landscape Effects

The proposed Project is located on sloping topography, which will require a degree of cut and fill earthworks (17,602m³ of cut and 11,603m³ of fill) to level and re-contour the site to accommodate the reservoir storage units and the pump house facility. In addition, earthworks will include ground improvement works for the placement of the maintenance access road, pedestrian paths and the overflow structure.

A varying degree of cut and fill will be required for each of the reservoirs to provide a suitable level platform for the tanks, although cut requirements fir Reservoir 2 will be about 40% less than Stage 1 works. The use of retaining walls around the base of the tanks will contain the extent of earthworks confining the works to the reservoir tank footprint.

During the construction of each of the reservoirs, the earthworks will result in a short-term noticeable change to the landform due to the formation of the reservoir platforms due to the exposed works. The intent is to utilise the retaining walls to minimise the extent of earthworks and ground modification, which will also help assimilate the reservoirs into the landscape.

Overall, the extent of earthworks will be localised and will be contained within the reservoirs 'retained' footprint, which will result in a *low adverse* change to the immediate site's landform character, but there will be *no change* to the broader area's landform, and therefore, avoiding further encroachment into the open space.

4.5 Land use

The landuse currently contains the existing historic water tower and secondary defunct water reservoir (immediately to the north of the main tower). These features sit within the

open space of the Domain and contribute to the character of the area, but the Domain is predominantly used for recreation, (dog) walking and accessing the Domain from the adjacent streets and the CBD.

The proposed water reservoir tanks will result in the land use changing from a treed open grass recreational and amenity space to a reduced open space area containing the reservoir structures and pump house building including the removal of trees. By accommodating the reservoirs the open space will diminish and the loss of trees will alter the character of the area around the reservoir. However, key areas such as the stage and grassed amphitheatre will remain useable and intact. The proposed paths will maintain public access through the open space with trees incorporated in and around the reservoirs to help uphold the treed character of this area of the Domain. The change to character will be progressive with each stage (staged tree removal and reservoir construction), with the change of character being most defined and noticeable within close proximity of the Project. However, in the context of the totality of the Domain, the Project will not change the broader character.

The change in land use with the loss of existing open space to accommodate the built forms will result in a noticeable and permanent change to the useability of the Domain's open space within the adjacent Project area. However, the Project design response aims at providing opportunities to increase the public amenity and accessibility into the open space, which includes the incorporation of paths, seating and signage and the integration of an elevated walkway around the reservoirs to provide a lookout to the south. In addition, the separation of the proposed reservoirs from the heritage tower provides a connecting open space to visually link Ruakura Road to the Domain's open space.

4.6 Vegetation Loss

The Domain benefits from extensive tree planting, which comprises of macrocarpa and exotic deciduous tree species. There is a mix of predominantly native planting along the lower ridge slopes toward Hamilton Lake (Refer Photos in Appendix D, photos 1.0 to 14.0). Within the Project site a single conifer tree[10] (Sequoia sempervirens / Redwood tree) has a protection order on it, and although this is a reasonable specimen it will be removed to accommodate the Stage 1 reservoir.

The Project will require a moderate amount of tree removal to enable the construction of the reservoirs and ancillary valve chamber building. Based on the arborist report the macrocarpas have reach maturity with most having canker disease, which although is not fatal, affects their long-term vitality and potential of retention. The position of the reservoirs and construction access areas has been adjusted to minimise the potential effects on tree root zones and to avoid tree removal where possible.

The tree removal will include 72 trees in total, that will be removed in stages to align with the construction of each of the reservoirs, which will also assist in reducing the visual

[10] HCCODP, Notable Tree (Schedule 9D), Notable Tree Reference T280.13 (Sequoia sempervirens)

effects of the tree loss across two separate periods, which forms part of the landscape strategy. Appendix E provides the staging plans for tree removal plus identifies trees for relocation and provides a list of tree species that will be either removed or relocated. Tree removal for each stage will be as follows:

Stage 1:

There will be seven mature macrocarpas and 15 smaller trees removed, with twenty nine trees that have been more recently planted (exotic and native species) being uplifted and relocated to other Hamilton City park locations. The clump of oak trees along the east reservoir designation boundary adjacent to Ruakiwi Road will be retained with protective measures and adjustments to construction methods to minimise the effects and ensure long term retention of these trees.

Stage 2:

At the commencement of Stage 2 construction (approx. in 10 years) further tree felling will occur, requiring the removal of a further thirteen mature trees.

Although there are a moderate number of trees that will be removed, the strategy to retain as many as possible (by adjusting the reservoir and construction access) and implementing a staged removal will assist in minimising the overall change in landscape and visual amenity. The retention of trees will maintain the skyline canopy to a degree and will also help obscure the reservoir tank(s) particularly from viewpoints to the west of the project site (i.e. Hamilton Domain).

The Stage 1 removal of the trees will have a localised moderate-high adverse landscape effect particularly in and around the reservoir site as the treed open space will change due to the quantum of large mature tree removal and relocation of the smaller trees. On a broader landscape sense, there will be a low-moderate change particularly from viewpoints from around Hamilton Lake, where an observable change to the tree skyline canopy character will occur but overall will be only a slightly discernible change appearance.

The Stage 2 tree removal will result in a localised moderate adverse effect on the landscape character as there will be less of a change due to the lower number of trees being removed. New tree planting associated with Stage 1 works will have also grown to help reduce the change in landscape character. Overall, due to the extent of tree removal there will be a noticeable change to the existing tree cover, but the Project will retain a significant number of trees that will help maintain the character of the site and boarder landscape. Tree replacement of removed trees will result in two trees for every tree removed, with a total of 144 to be planted. However, the landscape proposals have accommodated 35 mixed grade size trees into the immediate open space areas around the site, which in time will help maintain the treed character and assist in softening the reservoir structure (rather than screening).

4.7 Landscape Character Effects Summary

As the extent of the Project is well contained within the proposed alteration to designation footprint, it is considered that there will be *low adverse* effects on the key attributes in relation to broader landscape features. In comparison to the baseline design proposals, the current design and layout is a vast improvement and avoids the poor outcomes that would occur in relation to the permitted baseline, where the structures would dominate the streetscape, open space and impinge on the heritage tower. However, the removal of the large mature trees will alter the canopied skyline, particularly when considered from areas in the Domain (west of the Project) and to a lesser degree from the CBD, due to the distance and intervening structures which obscures views.

When considered within the context of the site and its immediate surrounds, Stage 1 reservoir will have a localised *moderate-high* adverse effect on the existing landscape character. The adverse effect will be associated with the earthworks modifying the topography, the loss of open space and the removal of trees to accommodate the Project and the associated hardscaping in and around the facility. The management of tree removal will assist in reducing the initial quantum of trees (59 of the total 72 trees) to be removed, which will help reduce the potential effects, however the greatest change to the treed character will occur in Stage 1.

During Stage 2, further changes in the landscape character will occur, which will mainly be localised, but result in a *moderate* adverse landscape effect. The effects are associated with the earthworks, tree removal and further loss of open space to accommodate the second reservoir. The degree of effect is lessened as a result of less tree removal (13) and a lower volume of earthworks, plus the Stage 1 reservoir will be complete, resulting in the works for Stage 2 being associated to that context.

The setting and character in and around the heritage reservoir, will benefit from the removal of the incidental built facilities and vegetation located around the base, effectively removing the visual 'clutter'. The positioning of the two reservoirs has also been considered to achieve a separation distance, which sets the heritage structure in its own space (minimising the new structures 'visually competing') but also provides open space and a visual link to the grassed Domain open spaces, particularly from Clarence Street.

4.8 Visual Effects Assessment

The process of the LVIA has included the use of the ZTV maps (Refer to Appendix C) combined with site investigation to determine the potential visibility of the Project. Site photos at representative locations (Refer to Appendix D location map) have been utilised within the design model to develop accurate montages to illustrate the potential visibility and visual effects of the Project (refer to Appendix D, montages 1.1 to 10.1).

In general, the extent of the visual catchment and viewing audience is a relatively well contained area around the Project site, although the ZTV maps indicate a broader area as the maps does not allow for the screening effects of vegetation or buildings. The 'containment' is a result of the vegetation surrounding the Project site (located within the

Domain), the topography where the land drops away to the west and east, the distance of receptors, particularly in relation to uses to the west of Hamilton Lake and those in the CBD, and the built structures which are situated along Ruakiwi Road.

During the approximate two year construction period there will be a moderate adverse degree of visual effects associated with truck transportation of precast elements and concrete deliveries creating regular movement in and out of the site. A crane will be present for the duration of the reservoir construction to allow panels to be lifted into position, which will be visible in and around the Project site. Stage 1 Reservoir construction will be the most notable for residents facing the Project site along Ruakiwi Road, as the construction work will be directly visible for the receptors. For stage 2 reservoir construction, there will be a similar level of machinery and truck deliveries, however the first reservoir will aid in screening some of the construction work and therefore the effects on views will be low-minor adverse. Overall, the construction effects will be temporary and will not affect the long-term visual amenity of adjacent residents or the Domain users.

The architectural and landscape mitigation/design measures (Refer to Appendix F and G) are part of the overall design strategy to ensure the reservoirs integrate into the landscape and surrounding urban environment. The following sections provide an assessment of the visual and urban design effects in relation to the completed Project and provides a summary of effects.

4.9 Visual Absorption Capability

An important factor that influences the Project's visual effect is the visual absorption capability (VAC) of the receiving landscape (definitions relevant to the VAC shown in Appendix A, Table 1.0). Effectively, the VAC is the landscape's ability to integrate the Project into the existing visual character of the Project area without resulting in significant change. The VAC must also be considered in light of the existing environment, being that of the Domain's open space and the surrounding urban environment.

I have rated the identified view locations in terms of its VAC, which considers a number of factors when determining a site/locations VAC rating, and includes:

- The extent of visibility of the Project (Reservoir enclosure including the concrete block retaining wall),
- The visual links with other similar elements in the landscape (such as the heritage water tower and urban built form),
- The extent of modification to the surrounding landscape, including short and long term change,
- Distance from the Project, and
- The foreground or background in relation to the view.

The combination of rolling topography/ridge, the existing (retained) vegetation and built forms within the landscape, provides an environment well suited to visually absorb the Project. Based on the Appendix A Table 1 ratings, it is considered that the area within the

Domain will have a good capacity to absorb the visual effects associated with the Project site.

4.10 Representative Viewpoints

As part of the assessment, representative photographic points have been established from publicly accessible viewpoints to demonstrate visibility of the Project within its landscape context and are shown in Appendix E. Representative viewpoints were selected based on the following criteria:

- The requirement to provide a reasonable spread of representative viewpoints within the visual envelope from locations around the Project site,
- From locations that represent a range of viewpoints from around Hamilton Lake due to the openness of the Lake and prominence of the ridge line location of the Project site, and
- The use of public viewpoints that are reasonably representative of views that may be obtained from private dwellings (or groups thereof). However, it is noted that views from private dwellings may be curtailed depending on building and living room orientation, fences and vegetation, which could only be assessed by accessing individual properties, which has not been undertaken.

Utilising the identified view locations (Receptors), photographs have been taken using the NZILA guidance for photos (1.8m off ground with standard lens). The viewpoints are located on the Photo Location Plans (Appendix D, Fig 3.0 and 3.1) with supporting before and after (completion of both stages) Montages, which are located in Appendix D.

The representative viewpoint locations have been assessed and the effects of the Project taken into consideration to determine the degree of change and whether the Project design proposals are effective in avoiding, minimising or mitigating the visual effects.

4.11 Visual and Amenity Effects from Representative Viewpoints

The assessment below provides a brief description of the current view and outlines the potential change, which provides the basis of determining the likely visual effect rating for each of the representative viewpoints. The rating is based on the visibility of the Project for the two stages, based on the architectural and landscape mitigation proposals in place.

The following provides the assessment of representative viewpoints:

Location Point A - Lakeside walking path / open space area

Located on the public lake walk footpath at the southern end of Hamilton Lake, which is also representative of residential housing situated around the lake on the rising topography up to Lake Crescent, which also benefit from views across the lake toward the Project location. As can be seen in Appendix D, Montage 1.0, Location A, the view is

dominated by Hamilton Lake with the rising landform clad with vegetation providing the dominant background across the lake.

The effects, are primarily associated with the loss of trees resulting in a change of appearance to the ridge's treed canopy line, as seen in Appendix D, Montage 1.1. The removal of trees will be staged, with trees removed to enable the construction of each reservoir. It is anticipated that the Stage 1 tree removal will be more noticeable due to the number of trees that will be removed with Stage 2 requiring fewer trees to be felled.

In relation to the reservoir structures, the upper tank areas of both reservoirs will be partially visible through the retained vegetation. The relatively low height and benching into the slope, plus the base treatment of concrete blocks with the corten steel façade, helps the units assimilate well within the landscape and reduce the potential effects, even though they are discernible, but are not prominent in the view.

Overall, the loss of trees/canopy line and the obscured visibility of the reservoirs will likely result in a *low-moderate adverse* visual effect. The change to the skyline alters the appearance, but the treed canopy appearance remains by in large intact and characteristic of the current environment with the reservoirs being visible but not prominent in the receiving environment. In relation to the heritage water tower, this will be slightly more visible due to the removal of vegetation and will result in a very low positive visual effect due to the increased visibility of the structure.

Location Point B - Lakeside walking path / open space area

The photo location is from the public footpath, which traverses around Hamilton Lake, and is also representative of residential housing situated around the lake on the rising topography up to Lake Crescent, which benefit from views across the lake toward the ridge and Project location. As can be seen in Appendix D, Montage 2.0, the view is dominated by the Lake with the rising landform and vegetation providing the dominant background across the lake.

Similar to Viewpoint A, the effects, are primarily associated with the loss of trees resulting in a change of appearance to the ridge's treed canopy line, as seen in Appendix D, Montage 2.1. Although the removal of trees will be staged, the progressive removal of the trees will result in a noticeable change to the vegetated ridgeline. It is anticipated that the Stage 1 tree removal will be more noticeable due to the number of trees that will be removed in comparison to Stage 2 where fewer trees to be removed.

In relation to the reservoir structures, their low stature, means they follow close to the ridge line and will only be partially visible through the retained vegetation. The relatively low height and benching into the slope, plus the base treatment of concrete blocks with the corten steel façade helps the units 'sit' in the landscape, making them less noticeable.

Overall, the loss of trees/canopy line and the obscured visibility of the reservoirs will likely result in a *low-moderate adverse* visual effect. The change to vegetation cover and change to the skyline alters the appearance of the treed ridge, but the overall

appearance remains intact and characteristic of the current environment. The reservoirs sit low on the ridge and will be slightly visible through the vegetation but not prominent in the receiving environment. In relation to the heritage water tower, this will be slightly more visible due to the removal of vegetation and will result in a low positive visual effect due to the increased visibility of the structure.

Location Point C - Hamilton sailing club ramp location

The photo location is from the public launch ramp, which is near public play facilities, seating and the sailing club building and is representative of the views within this area. This location also benefits from views across Hamilton Lake toward the Project, and is illustrated in Appendix D, Montage 3.1, the view is dominated by the Lake with the rising landform and vegetation providing the backdrop across the lake.

Similar to Viewpoint A and B, the effects are primarily associated with the loss of trees resulting in a change of appearance to the ridge's treed canopy line. Although the removal of trees will be staged, the progressive removal of the trees will result in a noticeable change to the vegetation cover, but the broader landscape located across the ridge maintains the overall visual amenity of the view. It is anticipated that the Stage 1 tree removal will be more noticeable due to the number of trees that will be removed with Stage 2 requiring fewer trees to be felled, with the remaining trees providing some degree of continuity of the skyline character. The removal of trees, will however, provide a low benefit of the heritage tower being more visible.

In relation to the reservoir structures, their low stature and the use of the corten steel façade results in the units assimilating into the landscape well with the upper areas of Stage 2 reservoir being partially visible through the retained vegetation. Overall, the relatively low height and benching into the slope, plus the corten steel façade, helps the units sit within the landscape, making them less noticeable.

The loss of trees/canopy line and the obscured visibility of the reservoirs will likely result in a *moderate adverse* visual effect. The change to vegetation cover and skyline will change, but the treed canopy appearance remains by in large intact with the border back drop view retaining the treed character. However, from this location the upper sections of the reservoirs are more discernible against the sky line, although their low statue means they sit within the landscape and are partially screened by the retained vegetation, and therefore, are not dominant in the receiving environment. In relation to the heritage water tower, this will be slightly more visible due to the removal of vegetation and will result in a low positive visual effect due to the increased visibility of the structure.

Location Point D - Public carpark, pedestrian Lakeside Walkway

The viewpoint is located on the public footpath adjacent to the edge of Hamilton Lake, near a public carpark (access of Lake Crescent) and is representative of residential housing fronting Lake Crescent, which are built on rising topography. The representative location is typical of the views across lake toward the Project location from around this location. As can be seen in Appendix D, Montage 4.0, the view is dominated by the Lake

with the rising landform and vegetation providing the dominant background across the lake.

The effects generally relate to the loss of trees, which will result in a change of appearance to the treed canopy line. Although the removal of trees will be staged, the progressive removal of the trees will result in a noticeable change to the vegetation cover and vegetated ridgeline view. It is anticipated that the Stage 1 tree removal will be more noticeable due to the number of trees that will be removed, and after approximately 10 years the Stage 2 construction will require fewer trees to be felled.

In relation to the reservoir structures, although their stature is relatively low, they will be partially visible through the natural view shaft of the retained vegetation. The grassed open space to the west of the structures will afford views of the reservoirs, particularly of the Stage 2 reservoir which will occupy some of the existing open space. However, the relatively low height, the benching into the slope, plus the base treatment of concrete blocks with the corten steel façade breaks up the scale and helps the units sit within the landscape, making them less noticeable, as illustrated in Appendix D, Montage 4.1.

Overall, the loss of trees/canopy line and the obscured visibility of the reservoirs will likely result in a *low-moderate adverse* visual effect. The removal of vegetation will be noticeable, but the overall 'treed' amenity of the view will retain the prominent character/appearance, and the reservoirs will be visible but not prominent in the receiving environment. In relation to the heritage water tower, this will be considerably more visible due to the removal of vegetation and will result in a moderate positive visual effect due to the increased visibility of the structure from this location.

Location Point E - Junction of Killarney and Lake Domain Drive

The viewpoint is located on the public footpath adjacent to the Lake Crescent and Killarney Road junction, which is also representative of residential housing that fronts onto Lake Crescent, with the housing situated on the rising topography. This location offers views across the lake toward the Project location. As can be seen in Appendix D, Montage 5.0, the view is dominated by the Lake with the rising landform and vegetation providing the dominant background across the lake, noting the heritage water tower is not visible due to it being screened by vegetation.

The vegetation removal when viewed from this location (for both stages) will be less visible due to the foreground vegetation providing a good degree of screening of the Project site. It is likely the tree removal will result in a slight change of appearance to the treed canopy line. However, the overall character of the heavily vegetated ridgeline will retain its character. The reservoir structures will predominantly be screened by the vegetation located on the lower slopes to the southwest aspect of the Project site, and therefore, the structures will be difficult to discern from this location.

Overall, the loss of trees/canopy line and the obscured visibility of the Project will likely result in a *low adverse* visual effect. The removal of vegetation will have a slight alteration to the vegetated character, but overall, the 'treed' character will remain with the

reservoirs only slightly visible in the receiving environment. In relation to the heritage water tower, this will be slightly more visible due to the removal of vegetation and will result in a low positive visual effect due to the increased visibility of the structure.

Location Point F - Fowlers Ave

The viewpoint from the top of the cul-de-sac of Fowlers Ave is representative of residential housing in the area, which are orientated east to south-east on the rising topography. Vegetation and house roofs feature in the view with the vegetated ridgeline being visible but not dominating the longer view, as seen in Appendix D, Montage 6.0. The heritage water tower is not visible from this location due to it being screened by vegetation that extends along the ridge.

The Project requirement to remove vegetation will result in a slight change to the vegetation along the ridgeline, although overall vegetated character will remain with the surrounding vegetation screening and maintaining the visual amenity when viewed from this location.

The reservoir structures will effectively be screened by the vegetation that is located along the lower slopes of the ridge to the northwest of the Project site, and therefore, the structures will be difficult to discern from this location.

Overall, the loss of trees/canopy line and the obscured visibility of the reservoirs will likely result in a *very low adverse* visual effect, as the removal of vegetation will cause only a slight alteration to the vegetated character, with the overall 'treed' character retained plus the reservoirs will not be visible in the receiving environment. In relation to the heritage water tower, this will not be visible from this location and will result in no change to the visual amenity in relation to the heritage feature.

Location Point G - 12 Ruakiwi Road

The viewpoint from the location in front of the property at 15 Ruakiwi Road is representative of residential housing and views from the public footpath and vehicles driving south from this point. The existing vegetation is prominent in the view, which also obscures the view of the heritage water tower, as seen in Appendix D, Montage 7.0.

The Project's requirement to remove vegetation for Stage 1 will result in noticeable change to the vegetation, with little change during Stage 2 tree removal when viewed from this location. The retained background vegetation will maintain the treed character associated with the view, which in turn minimises the changes to the visual amenity. The removal of the incidental building at the base of the heritage tower will provide a low benefit when viewed from this location.

The Stage 1 reservoir structure/corten steel enclosure will be a noticeable new feature within the view, but Stage 2 reservoir will not be visible from this location. The use of the corten steel facing treatment and planting of trees and vegetation integrates the built form into the landscape well and is well illustrated In Appendix D, Montage 7.1.

Although there will be loss of trees this is balanced with the retention of the oaks along the street frontage, with additional tree planting (including large grade trees) will in time further soften the façade treatment of the reservoir. Therefore, although the change in environment will be noticeable, the façade treatment of the reservoirs will help integrate the structures into the landscape. This will result in only a *moderate adverse* effect when viewed by residents, road users and pedestrians from this location. In relation to the heritage water tower, this will not be visible from this location and will result in no change to the visual amenity in relation to the feature.

Location Point H - 22 Ruakiwi Road

The viewpoint from the location in front of the property at 22 Ruakiwi Road and looks up towards the Project site with the view being dominated by the tree planting, although views into the open space are available from the residential properties along Ruakiwi Road. The view is representative of the residential housing from this location back toward Clarence Street that face toward the Domain, plus the public footpaths and vehicles driving north from this point. The existing vegetation and grassed open space are prominent features in the view, as seen in Appendix D, Montage 8.0.

The Stage 1 vegetation removal will result in a noticeable change to the vegetated character of the open space, and it is likely the degree of change for stage 2 tree removal will be less noticeable (partially due to reservoir 1 being completed prior to delayed construction of reservoir 2) when it occurs in approximately 10 years' time. The retention of the trees south of the Project and the group of oak trees will help to maintain a degree of the Domain's treed character, plus the treed streetscape and will also help soften and break up the building mass and dominance when viewed from this location. However, the Stage 1 reservoir structure will be a noticeable new and dominant feature within the view for properties looking towards the site. The use of the concrete block at the base with the corten steel facing treatment will help break down the perceived vertical height of the concrete reservoir structure and combined with the steel façade is an important design element that will help enhance the public amenity and soften the appearance of the reservoirs. The Stage 2 reservoir will have only a *low visual* effect on the viewpoint due to it being built behind the stage 1 reservoir, as illustrated in Appendix D, Montage 8.1.

The loss of trees and considerable bulk of the reservoir will fundamentally change the treed open space area, but this is balanced by the retention of trees with additional mitigation tree planting combined with the corten steel and block retaining wall façade treatment will help minimise the visual effects of the reservoirs. Therefore, the change in environment will be noticeable, resulting in *moderate-high adverse* effect when viewed by residents, road users and pedestrians from this location. In relation to the heritage water tower, the visibility remains consistent, but the placement of the proposed reservoir will be a noticeable new feature in the foreground and therefore will result in a moderate adverse visual effect.

Location Point I – Adjacent to 146 Clarence Street

The viewpoint from the road location opposite the residential property at 146 Clarence Street is representative of mainly vehicles and pedestrians travelling south-west, as the residential properties sit perpendicular to the street (i.e. properties have oblique views). The prominent element in the view is the vegetation which fills the skyline (when moving towards the Project site), however due to the steep topography, views of the area are only obtainable from this point forward as seen in Appendix D, Montage 9.0.

The Stage 1 vegetation removal will result in a noticeable change to the vegetated character within the view, but Stage 2 tree removal will be less noticeable due to the lower tree numbers being felled, the topography and the construction of reservoir 1. Only the Stage 1 reservoir structure will be noticeable and will change the vegetated open space view to that of a built form. Although this is a change from the existing environment, the corten steel façade will be seen in context/character of the adjacent urban built forms to some degree (refer to Appendix D, Montage 9.1). Only a small upper section of the stage 2 reservoir will be visible, but the view shaft between the heritage tower and the proposed reservoirs provides a visual connection with the open space as the viewer comes up to the intersection of Clarence and Ruakiwi Roads.

The change in environment due to the loss of trees and placement of the structure will be a noticeable change to the open space of the Domain, resulting in *moderate-high adverse* effect when viewed by road users and pedestrians (but a lesser degree for residential properties) from this location. In relation to the heritage water tower, the visibility remains consistent, but the placement of the proposed reservoir will be a noticeable new feature in the view and therefore will result in a low-moderate adverse visual effect.

Location Point J - 108 Pembroke Ave (access drive),

The viewpoint from the access drive located to the north of 108 Pembroke Ave, is representative of the surrounding residential properties. The prominent element in the northern view is the vegetation which fills the mid to distant view, which in turn screens the heritage water tower, as seen in Appendix D, Montage 10.0.

The removal of vegetation for Stage 1 and 2 will not be discernible from this location as the bulk vegetation and rising topography will screen any potential effects. In addition, the vegetation will effectively screen views of the completed reservoirs. Therefore, there will *no visual* effect from the Project from the viewpoint or adjacent properties. In relation to the heritage water tower, this will not be visible from this location and will result in no change to the visual amenity in relation to the heritage feature.

View from the CBD (Appendix D, Photo 15.0)

The views from the CBD street areas are obscured by the built form, the topography and to a lesser degree vegetation that block or restricts views. However, views from some of the taller buildings will obtain distant views towards the Project site (Refer to Appendix D, Photo 15.0). The visual receptors associated with these buildings are typically working and

have a low receptor value, plus with the distance from the Project site the changes will be difficult to discern. Therefore, the visual effects are likely to be low adverse, as some change to the skyline may be detected.

The Summary of Effects are provided in Table 2 below:

Table 2: Summary of Effects in relation to Representative Viewpoints (Visual Receptors)

Viewpoint Number	Location	Description	Completed Project Effects
A	Lakeside walking path / open space area	Public location and representative of residential housing on rising contour with views across lake toward the ridge and Project location. Effects relate to a change in skyline with loss of trees. Project largely screened/obscured by existing vegetation. Change of visibility of the heritage water tower	Low-moderate adverse effect. Very low positive effect
B	Lakeside walking path / open space area	Public location and representative of residential housing on rising contour. Views across lake to broader landscape with views of ridge with the Project site potentially obscured by vegetation. Effects relate to a change in skyline with loss of trees. Project largely screened/obscured by existing vegetation. Change of visibility of the heritage water tower	Low-moderate adverse effect. Low positive effect
C	Hamilton sailing club ramp location	Public location and representative of open space and car parking area. Views across lake to broader landscape with views of ridge, with vegetation obscuring views of the Project site. Effects relate to a change in skyline with loss of trees. Project largely screened/obscured by existing vegetation. Change of visibility of the heritage water tower	Low-moderate adverse effect. Low positive effect
D	Public carpark, pedestrian Lakeside Walkway	Public location and representative of residential properties facing Lake Domain Drive. Views across lake to broader landscape with views of ridge, but Project site obscured by vegetation.	Low-moderate adverse effect.

		Effects relate to a change in skyline with loss of trees. Project largely screened/obscured by existing vegetation. Change of visibility of the heritage water tower	Moderate positive effect
E	Junction of Killarney and Lake Domain Drive	Public walkway, public road and representative of housing facing Lake Domain Drive, with vegetation obscuring views of Project site. Effects relate to a change in skyline with loss of trees. Project largely screened/obscured by existing vegetation. Change of visibility of the heritage water tower	Low adverse effect. Low positive effect
F	Fowlers Ave public road	Public road and representative of residential properties overlook Hamilton Lake, views across Lake. Existing rooflines and vegetation screens Project site. Change of visibility of the heritage water tower	Very low adverse effect. No change
G	12 Ruakiwi Road	Public road and residential housing facing Ruakiwi Road. The photo location is the limit of visibility from north of the Project, with no views of heritage tower. Existing vegetation partially screens views; effects relate to loss of vegetation and placement of reservoir structure. Change of visibility of the heritage water tower	Moderate adverse effect. No change
H	22 Ruakiwi Road	Representative of residential properties facing Ruakiwi Road (including properties at 21 Ruakiwi Road) with oblique views of both reservoir tanks. Effects relate to vegetation removal, loss of open space and views of reservoir structure. Change of visibility of the heritage water tower (proposed reservoir effects view)	Moderate-high adverse effect. Moderate negative effect
I	Adjacent to 146 Clarence Street	Public road and residential properties at the top of incline of Clarence Street will view the Project (Stage 1 Reservoir only). Effects relate to vegetation removal, loss of open space and views of reservoir structure. Change of visibility of the heritage water tower	Moderate-high adverse effect.

			Low moderate negative effect
J	Semi-private / private location	108 Pembroke Ave (access drive), representative of housing within immediate vicinity. The Project site is screened by the existing vegetation located to the south of the reservoirs. Change of visibility of the heritage water tower	No effect. No change

4.11.1 Visual Effects Summary

The visual effects will occur during the construction of each stage, particularly with the proximity of Stage 1 to Ruakiwi Road and adjacent residential properties, which will observe the greatest visual effects during construction. The construction effects are related to the truck delivery movements, the use of the crane and the change in environment as the reservoirs are constructed.

Stage 2 construction effects will be low in relation to the residential properties along Ruakiwi Road, as the works will be screened to a good extent by the completed Stage 1 reservoir. A noticeable but localised *moderate-high adverse visual effect* will occur in relation to the open space users within the immediate area of the Project.

In relation to the completed stage 1 reservoir, the residential properties located along Ruakiwi Road that face the Project site will observe the most significant and permanent visual change. The quantity and quality of the open space will have diminished with the large and dominant form of the reservoir changing the outlook for these properties. However, the retention of the oak trees along the Project site frontage, plus the remaining retained trees will provide a 'green' vegetative back drop to help anchor the reservoir compound into the landscape with the existing street trees also helping to break up the bulk of and mass of the building.

In addition, the benching in of the relatively low height reservoirs into the undulating landform, plus the use of the corten steel screen encompassing the reservoirs and the use of concrete block walls will help break down the perceived height/overall mass that will help to enhance the public amenity and will help to soften the visual effect to a reasonably acceptable level, particularly in comparison to the permitted baseline, which would have resulted in a significant adverse visual effect, due to the form and mass of the structures.

The visual effects from the west of the Project site, within the Domain and Hamilton Lake edge will in general have a low visual effect, even though there will be a change in the vegetation cover will be discernible, the scale and nature of the change plus the broader

landscape retains the overall character and amenity. The ridge line to the east of Hamilton Lake is a dominant feature within the view from the west of the lake (including residential properties, locations along the lakeside path and open recreation spaces), which will overall retain the visual amenity and character of a well vegetated backdrop. The visual effects relating to tree removal will be more noticeable during Stage 1 works due to the larger number of trees being removed. The tree removal in Stage 2 will see a further incremental change in the vegetation appearance, but the visual effects will be lower due to the precedent set by Stage 1.

The tree removal in and around the Project site will mainly affect the canopy line along the ridge, but the broader well vegetated ridgeline will retain it visual amenity and character. The relatively low height of the reservoirs combined with the external steel screen ensures they 'sit' within the landscape and will be well obscured by the retained vegetation when viewed from areas around Hamilton Lake and the structures will not be prominent in the view.

Overall, the architectural and landscape interventions will help to contribute and uphold the visual amenity of the Domain's open space area and will in general be well absorbed into the receiving landscape.

4.12 Document Review & Relevant Policy

4.12.1 Vista, Hamilton City Design Guidelines, November 2007

Hamilton City's Vista Design Guide outlines key urban and landscape policies to promote sustainable and high-quality urban environments. The main policies relating to the Project site are:

Urban Design Policies

- *Integrated Development: Encourages mixed-use spaces that blend residential, commercial, and recreational areas.*
- *Pedestrian-Friendly Spaces / Access: Prioritizes walkability with well-connected pathways and public spaces.*
- *Heritage & Character Protection: Ensures new developments respect historical and cultural sites.*

Landscape Policies

- *Green Infrastructure: Supports urban greening, including tree planting and ecological corridors.*
- *Public Realm Enhancements: Focuses on improving parks, streetscapes, and waterfront areas.*
- *Sustainable Stormwater Management: Implements eco-friendly drainage solutions to reduce environmental impact.*

Overall, the design process and response has been developed to ensure the Project achieves the objectives and policies of the Vista document. The proposal seeks to integrate the utilities aspect of the reservoirs into the Domain's open space to bring opportunities to access viewpoints, paths and informal play activities. The incorporation of accessible paths in and around the reservoirs will provide the public with improved access from Ruakiwi Road, providing pedestrian friendly spaces within the Domain and recreation opportunities associated with the lookout walkway.

The overall design treatment (refer to Appendix F, Architectural Concept) of the steel cladding, block retaining wall and tree planting assists in providing considerable public realm enhancement, which is an appropriate response for the development occurring within the open space of the Domain. The grouping of facilities and positioning of the proposed reservoirs provides an open space between the structures and the heritage tower, which also creates a physical and visual link to the green space of the Domain. Rain gardens will be incorporated to manage the stormwater, which will be planted with appropriate species to manage stormwater and provide aesthetic benefit. Replacement tree planting will mitigate the loss of some of the mature macrocarpa trees, and in time will help maintain the 'treed' character of the Domain while helping to soften and integrate the structures into the landscape.

4.12.2 Hamilton Lake Domain Management Plan 2017

The Hamilton Lake Domain Management Plan (HLMP) has been developed with park users and stakeholder groups, and current Council's proposed development and management of the Domain. Reserves Act management plans are an important park management tool, and provide continuity between legislative requirements, council plans and policies, and the day-to-day operation of council administered reserve land.

The Domain is an important destination for residents and visitors, plus it contributes significantly to the character of Hamilton City. It is a site recognised and valued for its natural beauty and cultural and ecological importance. The lake and vegetation being part of the original western green-belt of the city, provides an important break from the surrounding developed urban environment while providing a central ecological link with the city's green network. In total, the Domain is about 101 hectares.

Key principles from the plan that are relevant to guide and inform the management of the Domain are as follows:

- *conserve and enhance the open space natural character*
- *historic and cultural values of the Domain are recognised, conserved and protected*
- *provide informal no-cost leisure and recreation opportunities*
- *safe and accessible*
- *limit built environment and development to key areas*
- *ecological and environmental values of the lake margin and natural environment are enhanced and protected*

The incorporation of the two reservoirs into the public realm will result in the loss of some open space and associated 'natural' character, with effects being related to the removal of vegetation and the construction of the Project. The strategic location (within the utilities designation) and the considered design approach to consolidate the combined footprint and encapsulate the facility with a steel façade treatment achieves an appropriate aesthetic value for the location and interfaces well within the public open space.

The incorporation of paths and an access to the viewing platform provides a safe and accessible benefit to the public with views across the lake. Replacement tree planting and the use of native planting will help offset some of the loss of the mature trees that will require removal. In addition, the removal of planting and incidental structures to the base of the heritage tower, plus providing a view shaft between the old and new reservoirs helps in recognising and celebrating the historic values of the site. In addition, cultural design and information boards will be integrated into the Project to acknowledge the cultural values of the site/area.

4.12.3 Hamilton City Council Operative District Plan (HCCODP)

The HCDP provides policy and objectives to control development and land use matters. The following highlights the relevant landscape and visual policy and objectives. Sections that apply to the Project site include:

Section 2 Strategic Framework

This section of the HCCODP sets out the strategic objectives and policies for Hamilton City, with the Relevant Objectives and Policies relating to the Project's landscape matter include:

Urban Design Approach
Objective 2.2.5:
Promote safe, compact, sustainable, good quality urban environments that respond positively to their local context, recognising that further change may occur through intensification.
Policies:
2.2.5a Development responds to best practice urban design and sustainable development principles appropriate to its context.
2.2.5b Development responds to Low Impact Urban Design and Development and Crime Prevention Through Environmental Design (CPTED) principles
2.2.5c Development enhances civic, natural heritage, cultural, ecology and surrounding public space networks

Hamilton's Identity, Character and Heritage
Objective
2.2.10 Hamilton's unique history, heritage and identity are reflected in its built environment.
Policies
2.2.10a Development is sensitive to and enhances Hamilton's identity and heritage values.
2.2.10b Development is sensitive to and protects Hamilton's identified built heritage and historic heritage areas.
2.2.10c Development is sensitive to and protects Hamilton's archaeological and cultural heritage sites, structures, areas, landscapes and places.

Natural Environment
Objective
2.2.11 Protect and enhance natural character, natural features and landscapes, ecosystems and indigenous biodiversity.
Policies
2.2.11a Land use and development protects natural character, natural features and landscapes and ecosystems and promotes positive outcomes for indigenous biodiversity in the Waikato region.

2.2.11b Land use and development maintains the extent and, where possible, enhances ecological corridors.

Integrate Land Use, Transport and Infrastructure
Objective
2.2.13 Land use and development is integrated with the provision of infrastructure (including transport, Three Waters services and open space).

Policies
2.2.13b Development allows for future infrastructure needs, including maintenance, upgrading and co-location where appropriate.
2.2.13f Development prioritises strong connections to, and use of, public transport and walking, cycling, and micro-mobility.

The Project is located within a highly modified open space and urban environment, but it is considered that the design and development of the critical infrastructure responds well to the objectives and policies with the Section 2 Strategic Framework. To this extent the design approach provides a well resolved built form that utilises a steel 'curtain' wall screen to encapsulate the reservoirs and valve chamber. The design incorporates a textured concrete block retaining wall at the base, which helps break down the perceived height of wall and provides relief to the vertical face of the reservoir. A series of paths including an integrated lookout path, plus signage, lighting and informal play enhances the public experience of the Project and helps contribute to the experience of the Domains open space.

The steel screen prevents public access into the facility and minimises the potential for graffiti with lighting and planting positioned to maintain views and safe spaces (avoids concealment) in and around the structure to respond to CPTED principles.

The Project acknowledges the heritage water tower with the design strategy of consolidating the reservoirs and setting them away from the existing tower to provide the tower with it's own 'space'. In addition, the incidental buildings and vegetation at the tower's base will be removed to remove clutter and ensure a suitable setting around the heritage tower.

To achieve the construction of the reservoirs, a number of mature trees will be removed and a loss of open space will occur. The architectural and landscape response aims at maintaining the aesthetic value of the area, which combined with tree planting aims at maintaining the 'treed' character of the Domain.

Section 15 Open Space Zones

The purpose of the Open Space Zone focuses on the importance and benefit of open spaces to provide social, economic and cultural wellbeing of a community. Reserves are a type of public open space managed by Council to provide for the day-to-day

management of activities on reserves. It also covers the Destination Open Space Zone that includes open spaces that cater for a City-wide or regional catchment and are often large areas with a combination of functions and values. A higher level of use and development of these areas is anticipated and include Hamilton Lake Domain. Key Objectives and policies relevant to the Project include:

15.2 Objectives and Policies

Objectives
15.2.1 Development and activities must complement the functions and values of the particular open space and the surrounding environment.

Policies
15.2.1a Open space shall be developed and used in accordance with any relevant operative Reserves Act Management Plan.
15.2.1b Buildings and structures shall be designed and sited to be compatible with the function and predominant purpose of the open space.

Objectives
15.2.2 Open space accommodates a range of functions where appropriate.
Policies
15.2.2b Open space may accommodate stormwater management functions, natural, heritage, recreational and amenity values which should be considered as part of the design.
15.2.2c Public access, walkways and cycleways shall be maintained and enhanced within areas of open space, provided that adverse effects on the amenity, natural and heritage values of those areas are minimised.

Objectives
15.2.3 Well designed and safe open space.

Policies
15.2.3a Open space shall be designed and developed to ensure a safe physical environment by:

i. Providing clear sightlines that maximise visibility of public areas, provided that natural values are not compromised.

ii. Achieving passive surveillance by having open space that is overlooked by surrounding development.

15.2.3b Buildings shall be of a design, bulk and scale that is compatible with the open space and the surrounding environment.
15.2.3c Landscaping shall enhance the amenity of the open space and surrounding environment.

15.2.3e Where possible, open space shall be accessible to all, including the disabled.

Objectives
15.2.4 Open spaces are used and developed in a way that minimises adverse effects on the surrounding environment.
Policies
15.2.4a Buildings, structures and activities shall be designed, sited, operated and maintained to address the potential adverse effects of visual intrusion, loss of sunlight and daylight, noise, glare, lighting and traffic.
15.2.4b The amenity of the surrounding environment shall not be adversely affected by the scale of buildings or activities on open space.

The Project seeks to find a balance of providing the critical infrastructure reservoirs while minimising the effects on the receiving open space and character of the Domain. To this extent the Project has consolidated the footprint of the reservoirs and chamber building with the facilities being encapsulated within a steel screen. The screen is designed in combination with the textured concrete retaining wall that helps to visually manage and reduce the bulk and scale of the structure to respond to the context of the open space and surrounding urban environment. Lighting will aim at minimising light spill but provide sufficient lux levels to maintain security and amenity lighting to paths around the reservoirs. A 'lookout' path has been incorporated into the design and wraps around the perimeter of the reservoirs providing public with a safe, accessible way of gaining views of the lake and surrounding environment.

The landscape concept proposals illustrate the tree and shrub planting that will be incorporated into the Project to help ameliorate the tree removal requirements, with the aim of upholding the 'treed' character of the ridgeline within the Domain. The planting will also aid in softening the structure and help to integrate the built form into the open space area.

Appendix 8: Heritage

This section provides the basis for historic and cultural features in and around Hamilton City, and as such Schedule 8A identifies the Water Tower on Ruakiwi Road (H27, Lot 2 DP 16167) as Built Heritage with an overall ranking of B. The ranking basis relates to (a) Historic qualities, (b) Physical/aesthetic/architectural qualities, (c) context or group qualities and (f) cultural qualities.

The Project aims to respect the heritage status of the tower, and as part of the works, will remove the ancillary building and vegetation located on the southern side of the tower that detract from the built form and importance of the structure. In addition, the proposed reservoirs have been physically offset to provide a visual space between the new and old structures, and therefore maintain the heritage importance of the tower.

Chapter 20 Natural Environments

This chapter of the District Plan relates to Significant Natural Areas (SNA), significant trees or groups of trees. Schedule 9C: Significant Natural Areas lists the Project site being in the Domain with the SNA 36 overlay, Lake Rotoroa (maps 44B and 45B). The purpose of the section is to identify and protect the SNA and to manage any further loss to areas of biodiversity value and restoring and enhancing site

Objective 20.2.1
Significant Natural Areas are protected, maintained, restored and enhanced.

Policies
20.2.1a
The values and characteristics that define the City's Significant Natural Areas shall be identified.
20.2.1c
The particular values and characteristics that make an area a Significant Natural Area shall be protected from adverse effects by having regard to:

i. The character and degree of modification, damage, loss or destruction that will result from the activity.
ii. The duration and frequency of effect (e.g. long-term or recurring effects).
iii. The magnitude or scale of effect, including effects on ecological processes supporting or provided by the Significant Natural Area.
iv. The irreversibility of effect.
v. The resilience of the area to assimilate change.
vi. The opportunities to minimise pre-existing or potential adverse effects (e.g. restoration or enhancement), where avoidance is not practicable.
vii. The probability of effect.
viii. Cumulative effects.
ix. Need for, or purpose of, the works.

20.2.1d
Adverse effects of development on the City's Significant Natural Areas shall be avoided.

The Project is located within a highly modified environment of the Hamilton Domain Reserve, and is located within SNA 36, as the open space is an important environment for Hamilton City.

This report has identified the landscape and visual features associated with the receiving landscape around the Project. The important features include the heritage water tower, the topography, open space areas and the mature trees that contribute to the Domain's character.

The amenity and character of the receiving environment will be affected primarily by the loss of trees to accommodate the Project. The staged tree removal approach will aim at

minimising the trees removed as much as practicable and therefore the effects will be localised with the broader 'treed' ridgeline character being maintained, which also affords a degree of screening of the Project. Where trees have been lost, trees will be planted to help uphold the treed open space character and to help soften the structure (Refer to Appendix G, Landscape.

4.13 Architectural and Landscape Mitigation

The concept architectural and landscape design approaches are provided in Appendix F and G. The two design packages illustrate the design approach that has been developed to achieve a well-integrated design to ensure the Project 'sits' within the Domain's open space and ties into the urban fabric of Hamilton City.

Architectural Design Outcomes Sought

The 'mitigation' design proposals provide a comprehensive approach to achieving a quality public utility asset. To this extent the grouping of the reservoirs and valve chamber and offsetting them from the heritage tower helps contain the built structures, while respecting the heritage status of the tower and providing a positive link to the Domain's open spaces beyond.

The use of the vertical corten folded channel louvre screen encompasses the reservoir tanks with a concealed vertical corten channel hinged gate in front of a roller door to provide access to the valve chamber building with a corner window to provide interest and to allow the public to interact/observe the function of the water facilities. The use of the corten steel curtain around the facility will contain views of the ancillary equipment and help to reduce the visual mass of the concrete reservoirs.

Integrated with the corten steel is the use of a mass block retaining wall, which will incorporate a subtle colour variation pattern (note the final pattern is to be developed in partnership with local iwi) with a corten steel railing to provide safe access around the reservoirs creating look out points, which also invites the public into the space and helps activate the public areas. The combination of the mass block and corten steel railings provides texture and interest to the façade and helps to break up the overall mass of the otherwise plain concrete reservoirs.

Landscape Design Outcomes Sought

The landscape approach aims at maintaining the open treed character of the Domain open space. To this extent, a simple approach of allowing the gentle undulating slopes of the open space to abut the mass concrete retaining wall will minimise the change to the landform while creating an appearance of the reservoirs seemingly 'emerging' from the landscape.

Planting will be selected to uphold the Domain's treed character and visual amenity of the open space and therefore will utilise strategically located 'heroic' tree species which

in turn will help to soften the reservoir structures (rather than a solid screen). Trees will be located to maintain views from the adjacent Ruakiwi Road residential properties where possible, plus aim at supporting wildlife habitat creation.

The staged removal of trees (to coincide with the two construction stages) will assist to spread the effects of tree loss and maintain the benefits of obscuring views and contributing to the character of the Domain. The retention of trees where practicable and the introduction of new tree planting, plus areas of shrub planting will help retain the area's open space character and visual amenity.

The incidental buildings and vegetation at the (southern) base area of the heritage water tower will be removed with the ground form reshaped to a consistent grade, which will help to remove the clutter and provide a strong visual green link between Ruakiwi Road and the open space beyond.

The proposed landscape design embraces the following:

- Retention of trees where possible with a staged removal process,
- Removal of incidental structures at the base of the historic tower to improve openness,
- Use of native plant mixes to support ecological enhancement and visual amenity at select location around the reservoirs,
- The use of both native and exotic trees to complement the existing trees found in and around the Project/Domain area,
- Stormwater swales/rain gardens to utilise a mix of vegetation types to suit soil moisture conditions, and
- Ensure planting types and locations uphold CEPTED guidelines to provide safe walking zones and ensure passive surveillance.

5 Conclusion and Recommendations

The Project will provide future water storage capacity for Hamilton City and enable future CBD residential development and is situated within the Domain's open space area adjacent. The reservoirs will result in a substantial built form within the Domain's open space, however the consolidation of the footprint by minimising the space between the new valve chamber and reservoirs creates more space between the new and heritage reservoir and offers a view shaft from the top of Clarence Street. In addition, the consolidation of the 60m diameter reservoirs allows the steel screen to wrap around the facility to provide a functional and aesthetic role tying the elements together while screening the unattractive functional facilities of the reservoir. The façade treatment also addresses CPTED issues by preventing public access and diminishes the potential for vandalism.

The design incorporates a public access path in the form of a ramp, which wraps around the perimeter of the reservoirs to provide the public with a safe accessible way of gaining views across Hamilton Lake and surrounding areas. The separation of the new reservoirs from the heritage water tower provides a 'view shaft' to visually connect the open space

to the west with the views from Clarence Street. This also will allow for footpaths to be incorporated to provide public access to the Domain and opportunities of landscape planting to soften the structure.

In terms of the urban design aspects of the Project, the scale and size of the reservoirs is managed well with the corten steel screen and the concrete block retaining wall combination that will assist in breaking down the perceived height of the reservoirs. The placement of trees will be managed to further help soften and mitigate the structure while helping to maintain the 'treed' character of the Domain's open space.

The change in land use with the loss of existing open space to accommodate the built forms will result in a noticeable and permanent change to the useability of the Domain's open space within the adjacent Project area. However, the Project design response aims at providing opportunities to increase the public amenity and accessibility into the open space, which includes the incorporation of paths, seating and signage and the integration of an elevated walkway around the reservoirs to provide a lookout to the south.

Overall, it is considered that the proposed Project can be implemented within the Domain area as it will be readily absorbed into the receiving landscape. It is acknowledged that the landscape and visual effects will vary from in and around the Project, with a low effect on views from the west of Hamilton Lake/Domain and with substantial changes occurring for the open space and residential properties opposite the Project site on Ruakiwi Road. The change in character resulting from the progressive removal of trees to accommodate the construction of the two reservoirs over time, which will also result in a loss of some of the Domain's open space. However, it is considered that the effects on the character of the Domain will be contained predominantly within the vicinity of the Project. To minimise and manage the effects Project will integrate paths and viewing platform, landscape and tree planting and open space enhancements with the architectural interventions aiming to uphold and contribute to the public realm. However, the overall architectural and landscape design assist in enhancing the public amenity while softening the structure, and therefore, manages the visual effects of the reservoirs to achieve an acceptable amenity outcome.

RECOMMENDATIONS

At this concept design stage, the key recommendations are following, which should be incorporated into subsequent detailed design stages:

- Adoption and implementation of the Concept Architectural and Landscape Mitigation Plans,
- The incorporation of secondary path facilities to promote connectivity and recreational opportunities,

- Removal of vegetation and incidental buildings from the base of the heritage water tower to enhance sight lines and uphold the visual amenity and value of the heritage water tower,
- The use of appropriate light fittings that minimise light spill onto the surrounding open space and streetscape,
- Development of appropriate ecological planting of swale stormwater facilities to provide enhanced ecological outcomes,
- Selection of plant species to ensure that once established, the type of planting is such that it does not require high input maintenance,
- Identification of existing mature vegetation (tagging trees on site) to be removed and retained, including the protection measures and any arboriculture assessments to be undertaken prior to construction,
- Provide a staging plan to felling only the trees essential for each reservoir construction stage,
- A schedule of the species to be planted including botanical name, average plant size at time of planting, planting density and average mature height of each,
- Maintenance and establishment requirements over a two-year period following planting to ensure establishment, and
- Measures required to enable consultation and appropriate cultural inputs with tangata whenua.

Report end

APPENDIX A

Landscape and Visual Effects Methodology

Introduction

This section outlines the landscape and visual effects assessment methodology used for the Project, referencing the Te Tangi a Te Manu: Aotearoa New Zealand Landscape Assessment Guidelines (Guidelines).

The Guidelines aim to provide a consistent and structured approach to landscape assessment, to ensure findings and recommendations are clear and objective. These Guidelines have been used to inform my assessment of the existing landscape character and visual amenity within the designation footprint and broader Project corridor to assess the effects of the Project on landscape and visual amenity/values.

Diagram 1.0 (below) captures the components and processes of the assessment, outlined in detail in the text below. This process involves identifying the landscape character and amenity values, and associated key attributes of the Project corridor, which are considered in relation to the statutory frameworks and requirements to determine how the Project influences or effects the landscape character and visual amenity values. Through the analysis and identification of the magnitude (which may be negative or positive) of the potential effects on the landscape and potentially affected parties/receptors, then suitable mitigation can be recommended.

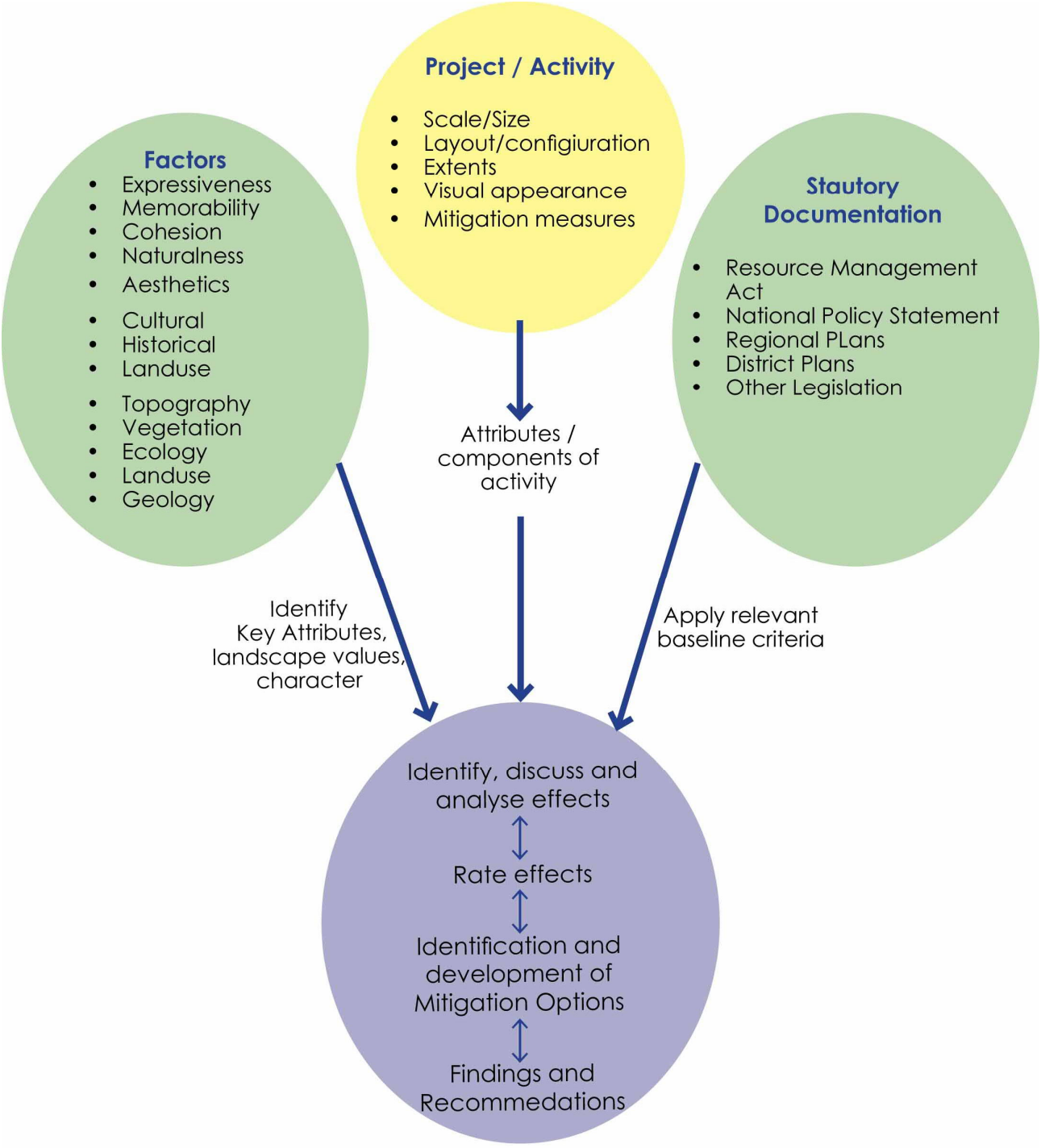


Diagram 1.0 – Landscape and Visual Assessment Framework Diagram

Approach

My assessment examined the potential effects of the Project on the existing landscape character and visual amenity values within the designation footprint and Project corridor (semi-rural/peri-urban) on the environment (including SH2 and the Existing Designation D181)

The Project involves an alteration to the footprint of the Existing Designation and the conditions that apply to part of that designation. As such, the assessment of the landscape and visual effects is limited to the effects on the environment of the extension of the footprint and change in conditions[11] to accommodate the current design and safety requirements.

The use of the Existing Designation as the baseline or 'delta' accords with the process undertaken for the Cambridge Expressway, which also required a change to the designation due to the improved safety requirements and additional construction width to meet the standards at that time. This assessment was undertaken within the context of relevant planning provisions[12].

Defining Landscape Character and Visual Amenity Values

Landscape character and visual amenity values can be derived from the following attributes:

- Perceptual aspects (i.e. sensory attributes of naturalness, cohesion, legibility, memorability and aesthetics etc;
- Associated aspects (i.e. cultural, tangata whenua, historical land use etc); and
- Physical attributes (topography, soils/geology, ecology, landcover, urbanisation and heritage/cultural etc).

In addition to the attributes above, landscape character and visual amenity values can be derived from the importance that people, communities and tangata whenua attach to a particular landscape and its attributes. As such, the classification of Outstanding Natural Feature or Landscape (ONF/L) (refer to the RMA s.6(b)) are similarly based on the sensory, physical and associative attributes. Therefore, all landscapes have the potential to derive a value, which in turn may be affected (positively or negatively) by a proposed development.

Landscape and Visual Effects

Landscape effects

Determining effects on landscape character requires consideration of the magnitude or degree of change to the landscape, landscape features or key landscape attributes.

Visual Amenity effects

Visual amenity effects are a subset of landscape character effects, resulting from the change in landscape values a viewer may experience. Therefore, the assessment of

[11] Refer to the Assessment of Environmental Effects, Bloxam Burnett and Olliver Ltd, 2025
[12] A table of relevant planning matters is located in Appendix A -3 and an overview discussion is provided in Section 6.0 of this report

visual effects requires identification of the area(s) where a proposed activity may be visible, including the potential viewing audience and public viewing locations.

The nature and extent of visual effects of the Project have been determined by analysing how observable the Project's changes to existing landscape character and visual amenity are, and how this impacts overall aesthetic appreciation of the landscape. This analysis requires consideration of visual parameters including distance, orientation of a viewer to the Project, extent of view, screening, and the backdrop and perspective depth.

Landscape Sensitivity and Capacity

Landscape sensitivity relates to the cohesiveness of the landscape environment, considering the biophysical, sensory appearance and recognisable attributes (such as formative processes) of the landscape. Landscapes with high sensitivity are those identified as ONF/L where high quality and recognisable attributes exist. Landscapes with lower sensitivity may have many different components and detractors that lack the important biophysical and recognisable attributes of higher sensitive landscapes (for example, those in a highly modified environment). To this extent, sensitivity is also impacted by the geographical extent of the Project, and whether the change is contained to the immediate setting and/or affects the wider landscape.

A landscape's sensitivity rating will influence the landscape's visual absorption capacity (VAC). VAC relates to a landscape's capacity to absorb change and whether key characteristics of the landscape (including significant aesthetic or perceptual elements) will remain intact or not.

The following VAC system has been adopted for this assessment and is consistent with recommendations in the Guidelines.

Table 1.0: Visual Absorption Capability

Ratings and Definitions

VAC Rating	Definition
Very Good	Existing landscape features would completely contain or screen the proposed development/activity and views of the development would be unidentifiable or difficult to discern. To this extent, the existing character of the surrounding landscape or view remains largely un-affected.
Good	Existing landscape features would predominantly contain or screen the proposed development but would be identifiable. The development may introduce a new and/or discernible feature in the landscape or view, but it would not affect the existing character of the surrounding landscape or view in which it is seen.

Neutral	The proposed development or activity may not be screened but would not become a visual intrusion. The proposed development or activity may introduce a new visual element into the landscape or view and be discernible from some locations and would alter the existing character of the surrounding landscape or view in which it is seen.
Poor	The proposed development or activity would be a clearly visible/discernible new visual element within the landscape or view. The proposed development or activity would alter the existing character of the surrounding landscape or view in which it is seen.
Very Poor	The proposed development or activity would be highly visible/discernible new visual element (and/or not commonly found) within the landscape or view. The new visual element will be significantly different in appearance, or scale or form from the existing landscape elements surrounding it.

Magnitude of Change / Rating System

Magnitude of landscape change is determined by the amount of change that is likely to occur to areas of landscape, landscape features of key landscape attributes. This assessment considers the magnitude of change in relation to the size or scale of change within the geographical extent of the area influenced, the duration of change (short term or permanent) and whether the change is permanent.

The magnitude of visual effects also considers the potential magnitude of change to views of the Project. Therefore, this assessment takes into consideration the degree of change the proposed project/development has on the elements, features and characteristics of the landscape and how that affects the view and visual values.

This assessment considers the magnitude of visual change in relation to a number of factors, such as:

- viewing audience sensitivity (i.e. dwellings having high sensitivity compared to places of employment);
- direction of view (viewing distance, front on view or oblique, extent of visibility);
- value attached to views (i.e. identified view shafts, important landmarks);
- size and scale (i.e. potential loss or retention of key features, prominence in terms of scale, mass height colour and texture); and
- duration (whether the change is temporary or permanent).

Table 2.0: Effects Rating System		
Rating in relation to RMA scales	Effects Rating	Definition: The development / activity having effect as follows:
Significant	Very High	Complete change resulting in the loss of key elements, features and characteristics of the receiving environment and/or the vista within which it is seen.
	High	A high level of effect on the majority of key elements, features, characteristics of the receiving environment and/or the vista which it is seen.
More than Minor	Moderate-High	A moderate-high level of effect on key elements, features and characteristics and/or the vista which it is seen i.e. the landscape character remains evident but is materially/noticeably changed.
	Moderate	A moderate level of effect on key elements, features and characteristics and/or the vista which it is seen i.e. new elements may be prominent in views, although they may not be uncharacteristic within the receiving environment.
Minor	Low-Moderate	A low-moderate level of effect on key elements, features and characteristics and/or the vista which it is seen i.e. new elements are not prominent in views or uncharacteristic within the receiving environment.
Less than minor	Low	A low level of effect/loss or modification to key elements, features and characteristics and/or the vista which it is seen i.e. modification or change is not uncharacteristic or prominent in views (or maintains) and are readily absorbed into the receiving landscape.
	Very Low	A very low level of effect/loss or modification to key elements, features and characteristics and/or the vista which it is seen i.e. effectively no or imperceivable change to the landscape or views.
No Effect		The development has no detectable effect on the landscape/receiving environment.

Nature of Effects

When assessing a Project's level of effects, the assessment also requires consideration of the nature of these effects and whether they are in relation/harmony to the receiving environment. The nature of effects will either be:

- positive/beneficial (contributing to the visual character and quality of the environment; or
- negative/adverse (detracting from the existing character and quality of an environment).

It is possible to have neutral effects where landscape or visual effects are benign. Neutrality will occur when an activity is consistent with the scale, landform and pattern of the existing landscape, therefore maintaining the existing landscape character or visual amenity values.