

Prince of Wales/Omāroro Reservoir

Landscape and Visual Effects Assessment
Prepared for Wellington Water

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Executive Summary

Wellington Water have commissioned Boffa Miskell to prepare a landscape and visual effects assessment for a proposal to construct a new 35 million litre reservoir within Prince of Wales Park, part of the Brooklyn Hills Sector of the Wellington Town Belt.

Landscape Context

The Brooklyn Hills Sector of the Town Belt forms a complex series of gullies and spurs, some of which have been levelled to form sports grounds. Within this context, Prince of Wales Park includes an existing open spur that affords panoramic lookout opportunities across Wellington Harbour and Mount Victoria. This area also includes several recreation tracks and two adjoining playing fields supporting a variety of recreation uses. Vegetation within this area includes a combination of gorse and bracken, planted and regenerating native shrubs and areas of mature pohutukawa, eucalypts and pine.

The Brooklyn Hills or its surroundings do not form part of any identified outstanding natural feature or landscape. The wider town belt is highly valued by the community for its contribution to landscape amenity values and may form part of a special amenity landscape classification in the future given this recognition. In this context, the Town Belt Management Plan sets out provision for a buried reservoir within the Prince of Wales Park spur, supported with remedial planting to mitigate its impact on the Town Belt. The City to Sea Walkway also passes through the immediate vicinity of this spur alongside several community planting projects established in this area.

Landscape Effects

The proposed reservoir will form a substantial structure embedded within the existing spur landform of Prince of Wales Park. Adverse landscape effects are primarily limited to the construction period and generated by the substantial disruption necessary to accommodate a covered reservoir within an existing spur landform. As a result, temporary high adverse landscape effects are inevitable within the site during this period. Disruption to adjoining playing field and removal of existing native and exotic vegetation associated with a localised area of green backdrop will also generate localised high and moderate adverse landscape effects.

At completion, the rounded spur landform associated with this area of Prince of Wales Park will be reinstated, albeit of a more regular domed form. Once covered and planting establishes, it will become increasingly assimilated within the surrounding landscape and the potential for adverse landscape effects will be reduced. This will also support the re-establishment of recreation use including reinstated recreation tracks and levelled playing fields, albeit at a slightly higher elevation. Five years following completion, potential landscape effects will be low and become benign or beneficial in the context of the vegetated open space character and surrounding high landscape amenity values.

Visual Effects

As with landscape effects, adverse visual effects associated with the proposed reservoir will be greatest during construction as changes to the existing landform and associated operation of machinery is visible from adjoining areas. During construction, moderate-high visual effects will occur from adjoining residential dwellings along Rolleston Road and Hargreaves Street. Moderate adverse effects will also occur from the rear of dwellings with the ability to overlook Prince of Wales Spur along Dorking Road and parts of the Lower Park to the east of the site. Temporary low and very low adverse visual effects may also occur from wider surrounding residential areas, which become increasingly reduced as a result of intervening development and increasing viewing distances.

At completion, a mosaic of grass, amenity planting and native vegetation will replace areas of vegetation removed and successfully reintegrate the site within its surroundings. This will also reinstate an important outlook location along Prince of Wales Spur and maintain an open space outlook and green backdrop observed from surrounding areas. Similarly, playing fields will be re-established and predominantly retain their existing open space outlook from adjoining areas in association with planting introduced along their margins where necessary to address any potential for residual adverse visual and amenity effects.

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1.0 Introduction

- 1.1 Wellington Water have commissioned Boffa Miskell to prepare a landscape and visual effects assessment for a proposal to construct a new reservoir within Prince of Wales Park that forms part of the Wellington Town Belt.
- 1.2 The proposed reservoir holds a total volume of 35,000m³ of water, which is the equivalent of 14 Olympic size swimming pools. A proposed tunnel structure extends to the north of the reservoir and connects with the existing water network at Hargreaves Street through inlet and outlet pipes constructed beneath the adjoining playing field within Prince of Wales Park.
- 1.3 In landscape terms, the proposal will include measures to integrate the reservoir with the existing spur landform, including covering the structure with soil, planting and reinstating recreation access, as well as temporary and permanent alterations to the levels of adjoining playing fields (collectively hereinafter referred to as the **Site**).
- 1.4 For the purpose of this assessment, it is assumed that both the upper and lower playing fields at Prince of Wales Park will be permanently raised by up to 1.5m with suitable excavated materials from the reservoir site. It is also assumed that both fields will be used for the temporary storage of excavated materials that will be used to backfill and bury the reservoir once completed.
- 1.5 This assessment has been finalised following a separate application to occupy the Town Belt under the Town Belt Act. This has included an opportunity to respond to feedback from public consultation received during this process including concerns with privacy and shading in relation to raising the level of the lower playing field.
- 1.6 In summary, this report considers the overall significance and nature of landscape and visual amenity effects associated with accommodating the proposed reservoir within the Wellington Town Belt. Potential effects have been assessed during construction and at completion, given the scale and duration of the proposal.

2.0 Existing Environment

2.1 Site Location

- 2.1.1 The Site occupies part of the Wellington Town Belt ('Town Belt') within Prince of Wales Park and part of the Brooklyn Hills Town Belt Management Sector (see **Figure 1**). This sector of the Town Belt forms part of the wider Open Space C zone, which separates the inner and outer residential suburbs of Mount Cook and Brooklyn (see **Figure 2**). Further south, the Town Belt encompasses Macalister Park forming part of the western backdrop to Newtown.
- 2.1.2 Prince of Wales Park includes an elevated spur which rises to the south of an existing playing field accessed off Rolleston Street (Upper Park) and north-west of a lower playing field accessed off Salisbury Terrace (Lower Park). Parts of the spur afford panoramic views north towards Wellington Harbour across Te Aro and east towards Mount Victoria. It also forms part of a larger network of open space accessed from adjoining residential areas in Mount Cook and Brooklyn.
- 2.1.3 To the west of the Site, dwellings along Dorking Road adjoin the western area of Prince of Wales Park and have views overlooking the Site and environs (see **Photo 1**). Dwellings within Mount Cook are located below the Site and include several dwellings along Rolleston Street and Hargreaves Street that obtain views towards the playing field within Upper Park (see **Photo 2**). The Lower Park contains a further playing field and an existing pavilion building accessed from Salisbury Terrace. Access to the Scottish Harriers car park extends to the east of the Lower Park adjoining the rear boundary of residential dwellings along Salisbury Avenue (see **Photo 3**).



Photo 1: Elevated residential dwellings along Dorking Road visible from the proposed reservoir location along Prince of Wales Spur.



Photo 2: Residential dwellings along Rolleston Street which overlook the Upper Park.



Photo 3: Access to the Lower Park which backs onto residential dwellings to the south of Salisbury Avenue.

2.2 Site Context

Landform

- 2.2.1 The existing topography encompassing the Site is shown on **Figure 3**. The proposed reservoir is located within the northern end of a gently sloping spur (hereinafter referred to as Prince of Wales Spur). This reflects the rolling to steep topography characterising many of Wellington's suburban areas and much of the adjoining Town Belt. Prince of Wales Spur extends from adjoining elevated areas of Brooklyn and slopes north-east towards the suburb of Mount Cook.
- 2.2.2 Along Prince of Wales Spur, the existing landform proposed to accommodate the reservoir reaches a maximum elevation of approximately 95 metres above sea level (masl). A localised gully extends to the west of this and falls north towards Rolleston Street. This also accommodates a tributary to Waitangi Stream. The topography continues to rise to the west of the site towards the more elevated residential area of Brooklyn. The eastern face of Prince of Wales Spur slopes down more steeply towards Papawai Stream, which flows along the western and northern edges of the Lower Park before continuing east of the Upper Park and into underground pipes beneath the residential area of Mount Cook.
- 2.2.3 Playing fields formed within the Upper and Lower Parks have resulted in levelling and benching the pre-existing topography in these areas. The Upper Park adjoining Rolleston Street is located at approximately 68 masl and includes an existing cut slope along the northern end of Prince of Wales Spur. The Lower Park is located at approximately 60 masl and is benched above adjoining dwellings on Salisbury Terrace, Salisbury Avenue and Westland Road. Similar cuts are also evident along parts of the southern and western faces of the Lower Park alongside earth bunds formed along the western and northern edge of this field to contain Papawai Stream.

Land cover

- 2.2.4 The existing vegetation along Prince of Wales Spur includes grass with areas of gorse, native vegetation and eucalypts surrounded by areas of pine and pohutukawa. Pine and pohutukawa has also been established throughout parts of Prince of Wales Park.
- 2.2.5 Grass presently covers the central area where the reservoir is proposed, enabling open views to the north and east across Te Aro and towards Mount Victoria respectively. Recently planted native vegetation also occupies part of the western face of the spur along the gully that extends towards Rolleston Street. Gorse and bracken interspersed with mature eucalyptus trees are established along the spur's northern and north-eastern faces and adjoins taller native vegetation and an area of mature pine trees to the east and south. Mature pohutukawa trees are also located along a cut slope to the south of the Upper Park and north of the area where the reservoir is proposed.
- 2.2.6 Of the native scrub and forest present, mahoe, an early successional species, is usually dominant in association with a reasonable diversity of planted broadleaf species, tree ferns and manuka. A full description and a botanical survey of the Site is included in the Ecological Values and Effects Assessment as illustrated on **Figure 4**¹.

Land use

- 2.2.7 Recreation, both formal and informal is a primary purpose of the Wellington Town Belt. Within the Site, this includes formal recreation opportunities on playing fields and informal recreation opportunities on tracks and open areas including access across Prince of Wales Spur. As illustrated on **Figure 4**, such tracks include the City to Sea Walkway that connects

¹ Boffa Miskell (2017) Ecological Values and Effects Assessment.

with several smaller informal recreation tracks that disperse throughout this area. Several community-planting projects also contribute to the cover of native vegetation. A more detailed assessment of the existing recreation use within the Site is set out in the Recreation Assessment².

2.3 Landscape Character

- 2.3.1 The Town Belt context and proximity of adjoining urban development within the suburbs of Mount Cook and Brooklyn influences the Site's landscape character. The Wellington Town Belt Management Plan identifies the character of this area of Town Belt as the Brooklyn Hills and includes the following description³:

The Brooklyn Hills area is made up of a complex series of gullies and spurs, which have been levelled in several places to form sports grounds. The hills are a secondary but important backdrop to the city. Continuity of vegetation is needed to link the area visually.

- 2.3.2 Prince of Wales Park forms the southern extent of the Brooklyn Hills and is consistent with this description identifying a wider sequence of gullies and spurs supporting vegetated slopes interspersed with areas of open ground. The open spur and lookout opportunities on Prince of Wales Spur and the flat accessible playing fields in the Upper and Lower Parks form key characteristics within Prince of Wales Park providing important recreation and associated amenity opportunities. Community planting projects, including care for Papawai Stream also contribute to the character of this area.
- 2.3.3 To the west of Prince of Wales Park, the residential area of Brooklyn is characterised by single and doubled storied wooden bungalows stepped into the topography and accessed along narrow winding roads. Houses are generally elevated and orientated to obtain views across the western edge of Wellington Harbour. Many of the dwellings in this area also back onto the Town Belt that helps establish a strong framework of vegetation throughout this area. Within Mount Cook, to the east and north of the Site, residential development is typically of a higher density and configured along narrower sections within gently undulating terrain. Retaining walls enabling a more ordered and linear road network is also common throughout this area.

2.4 Summary of Context and Character

- 2.4.1 The Site occupies part of the Wellington Town Belt within Prince of Wales Park and is part of the broader Brooklyn Hills Town Belt Sector.
- 2.4.2 The landform of this area of the Town Belt is characterised by rolling and steep slopes that rise between Mount Cook and Brooklyn. Levelled playing fields truncate the northern and eastern edges of Prince of Wales Spur along which the reservoir is proposed.
- 2.4.3 Vegetation throughout Prince of Wales Park includes a combination of grass used for formal and informal recreation, planted and regenerating native shrubs and areas of mature eucalypts and pine. Cut slopes to the south of the Upper Park also accommodate mature pohutukawa.
- 2.4.4 Prince of Wales Park forms an integral part of the Brooklyn Hills Town Belt management sector and includes several walking tracks that extend throughout vegetated slopes and areas of open ground. Lookout opportunities over Te Aro and Mount Victoria along Prince of Wales Spur and recreation use of the Upper and Lower Parks form important key characteristics in this area.

² Paos (2017) Recreation Effects Assessment.

³ Wellington City Council (June 2013) Wellington Town Belt Management Plan, page 113.

- 2.4.5 Residential development within the surrounding suburbs of Brooklyn and Mount Cook includes dwellings that overlook different parts of the Site. Elevated dwellings within Brooklyn typically obtain wider views looking north across the city with views from adjoining areas in Mount Cook most commonly limited to those which adjoin and access existing playing fields.

3.0 Statutory Planning Context

3.1 Resource Management Act

- 3.1.1 No Section 6 matters are relevant to the assessment of this project in relation to landscape and visual effects. The Site or its vicinity does not include any outstanding natural landscapes or features. The ecological assessment identifies the presence of significant indigenous vegetation and habitats of significant indigenous fauna, whilst noting such areas have varying values within the Site⁴.
- 3.1.2 The RMA provisions relevant to landscape and visual effects addressed in this report will be in respect of:
- Section 7(c)** – the maintenance and enhancement of amenity values
- Section 7(f)** – the maintenance and enhancement of the quality of the environment
- 3.1.3 Schedule 4 Section 7 (1b) of the RMA requires any physical effect of the locality to be addressed as part of the assessment of environmental effects including and landscape and visual effects.

3.2 Wellington Regional Policy Statement

- 3.2.1 The Wellington Regional Policy Statement (RPS) became operative on 24 April 2013 and provides the current framework for the sustainable management of the regions natural resources.
- 3.2.2 Within the RPS, Objective 17 is relevant to the Region's outstanding natural features and landscapes. Under this objective, Policies 25, 26 and 50 require the identification, protection and management of outstanding natural features and landscapes. Objective 18 refers to the Region's special amenity landscapes with policies 27 and 28 referring to their identification and management.
- 3.2.3 No outstanding natural features and landscapes or special amenity landscapes have been identified in accordance with the RPS. This area of the Wellington Town Belt is contained within an established urban context. Accordingly, natural science and sensory landscape attributes are strongly influenced by notable levels of modification. Within Prince of Wales Park, this includes landform changes required to create recreation tracks and playing fields and a high proportion of introduced planting. Given this context, the Site would not likely qualify as an outstanding natural landscape or feature.
- 3.2.4 Notwithstanding the above, the Town Belt is widely recognised by the community including its contribution to landscape amenity and associative values. Accordingly, it may be recognised as part of a Special Amenity Landscape in the future. The assessment required to confirm any landscape classification is presently underway.

⁴ Boffa Miskell (2017) Ecological Values and Effects Assessment.

3.3 Wellington City District Plan

- 3.3.1 The Site is identified as Open Space C (Inner Town Belt) within the Operative Wellington City District Plan. Chapter 16 of the District Plan sets out the relevant objectives and policies in relation to the Town Belt. This includes recognition that the Town Belt is valued for its historic, social and cultural importance.
- 3.3.2 The objective of Wellington's Open Space zones is set out in Section 16.5.1 which states:
- To maintain, protect and enhance the open spaces of Wellington City.
- 3.3.3 Policy 16.5.1.3 has direct relevance to managing the impacts of activities within the Town Belt and states:
- Manage the impacts of activities in the Inner Town Belt in order to protect and preserve its special qualities for the benefit of future generations.*
- 3.3.4 Similarly, Policy 16.5.1.4 recognises the special status of Wellington's Town Belt and states:
- Recognise the special status of Wellington's Inner Town Belt and manage the impacts of activities in order to protect and manage its special qualities for the benefit of future generations.*
- 3.3.5 Objective 16.5.2 seeks to maintain and enhance natural features (including landscapes and ecosystems) that contribute to Wellington's natural environment. In accordance with this objective, Policy 16.5.2.1 seeks to achieve the following:
- Identify and protect from development and visual obstruction landforms and landscape elements that are significant in the context of the Wellington landscape, and in particular significant escarpments and coastal cliffs.*
- 3.3.6 The Site is not identified within any area of Wellington's Ridgeline and Hilltops overlay subject to Policy 16.5.2.2.
- 3.3.7 Policy 16.5.2.3 relates to indigenous vegetation cover and states:
- Encourage retention of existing native vegetation and where appropriate re-introduce native cover.*
- 3.3.8 Section 22 of the District Plan relates to Utilities, the objectives for which is set out in 22.2.1 which states:
- To provide for the efficient development and maintenance of utility networks and the activities of other utility operators throughout the city while avoiding, remedying or mitigating any adverse effects of activities on the environment.*
- 3.3.9 Policy 22.2.1.1B relates to the inclusion of utilities in land zoned Open Space C and states:
- To recognise reserve land values (typically zoned as either Open Space or as Conservation Sites) in the siting of utilities. Some utilities may be appropriate on Open Space A land as this land typically contains buildings and/or structures which can be used to mitigate the effects of utilities. On Open Space B and C land and Conservation Sites, utilities are generally discouraged but may be appropriate, where there are no reasonable siting alternatives and where adverse visual effects can be appropriately mitigated, in particular for those utilities associated with the operation of legal roads.*

3.4 Wellington Town Belt Act

- 3.4.1 The Wellington Town Belt Act received Royal assent on 9 May 2016. The purpose of this Act is to:

- (a) *Provide a transparent statutory basis for the Council's trusteeship and management of the Wellington Town Belt on behalf of the inhabitants of the city of Wellington; and*
 - (b) *Impose on the Council responsibilities, and provide the Council with powers, to protect, manage, and enhance the Wellington Town Belt; and*
 - (c) *Recognise the history of the original Town Belt and its significance to mana whenua and the inhabitants of Wellington.*
- 3.4.2 Section 4 (1)(a) ('Principles') of the Town Belt Act requires that the Council must, in performing its role as trustee of the Wellington Town Belt Act, "*recognise and provide for the protection and enhancement of the Wellington Town Belt for future generations*". In relation to landscape, Section 4(1)(b)(ii) identifies that Council must also have particular regard to protecting and enhancing the landscape character of the Wellington Town Belt, including by recognising it was the New Zealand Company's intention that the original Town Belt not be built on. Notwithstanding this, Section 20 of the Act enables public services to occur within the Wellington Town Belt subject to certain considerations including the effect on the Wellington Town Belt, the benefits of the proposed services and alternative sites, routes or other methods for achieving the objectives of the proposed public service.

3.5 Wellington Town Belt Management Plan

- 3.5.1 The Wellington Town Belt Management Plan was adopted in June 2013 prior to formal adoption of the Wellington Town Belt Act. Section 11 of the Wellington Town Belt Act provides that:
- In exercising its powers with respect to the Wellington Town Belt, the Council must comply with the management plan*
- 3.5.2 Part 2 of the Wellington Town Belt Management Plan sets out guiding principles in relation to landscape which state:
- The Town Belt's landscape character will be protected and enhanced.***
The landscape character of the Town Belt has changed and been modified since humans first interacted with it. The Council will protect and enhance the key features of this landscape character (acknowledging that vegetation change will occur over time). These features are:
- *the continuous 'horseshoe' shape of natural landscape (hills and open space) between the central business district and surrounding suburbs*
 - *the vegetated slopes interspersed with areas of open ground*
 - *the changing patchwork of exotic and native vegetation*
 - *undeveloped skylines (ie Te Ahumairangi and Mt Victoria/Te Ranga a Hiwi etc.)*
 - *the contrast between the patchwork of native and exotic vegetation and the densely developed central business district.*
- 3.5.3 Section 4 of the Wellington Town Belt Management Plan relates directly to landscape including the following objectives:
- 4.1.1 *To protect the Town Belt as a predominantly natural environment in contrast to the built environment of the city.*
 - 4.1.2 *To recognise and protect the unique landscape character of the Town Belt and, in particular, the:*
 - *ridgeline and hilltop landscapes*
 - *diversity of landscape aesthetic and experience*

- patchwork of native and exotic vegetation
 - maintenance of a tall/large-tree framework.
- 4.1.3 To manage long-term vegetation change to enhance its ecological function while protecting the variety of functions, activities and experiences the vegetation provides.
- 4.1.4 To recognise and protect the role of the Town Belt landscape in terms of:
 - the contribution the reserves (together and as individual parts) make to the character and identity of Wellington City
 - the value of the reserves as a natural setting for a variety of recreation and leisure activities
 - providing an unbuilt visual backdrop and skyline to Wellington
 - the significant area of land that provides environmental services, such as urban biodiversity, stormwater management and as a carbon sink.
- 3.5.4 Section 8.4 of the Wellington Town Belt Management Plan sets out policies with direct relevance to the Brooklyn Hills Sector of the Wellington Town Belt Management Plan. This area extends around the city-facing slopes below Brooklyn, from Mortimer Terrace to Hutchison Road. Within this area, Policy 8.4.3.1 is relevant to native forest and states:

Extend the existing native forest to form a consistent vegetation cover based around the moister gullies and south facing slopes.
- 3.5.5 Policy 8.4.3.4, discusses provision for the reservoir within Prince of Wales Park directly and states:

Ensure the proposed water reservoir is buried and remedial planting done to mitigate its impact on the Town Belt.

3.6 Analysis against Statutory Provisions

- 3.6.1 Following the above analysis, the following can be concluded:
- The Site does not currently form part of any identified Outstanding Natural Feature or Outstanding Natural Landscape and is not likely to be subject to this classification given the level of modification already apparent in this surrounding urban context.
 - The Site is not currently identified as a Special Amenity Landscape however, the Wellington Town Belt is widely recognised and highly valued by the community for its contribution to the amenity and quality of the environment that may lead to this landscape classification in the future.
 - The Site is not identified within Wellington City Council's Ridgeline and Hilltops Overlay.
 - The Site is located within Wellington's Inner Town Belt that requires open space characteristics to be managed and protected for the benefit of future generations.
 - Further specific recognition of the importance of the Wellington Town Belt is set out in the Wellington Town Belt Act that directs Council's responsibility for ensuring protection and enhancement of the Town Belt.
 - The Town Belt Act anticipates the potential to establish public services within the Town Belt subject to a range of considerations.
 - The current Town Belt Management gives specific recognition to accommodating a buried water reservoir and associated remedial planting within the Prince of Wales Spur in order to mitigate its impact on the Town Belt. It clearly contemplates that the proposed reservoir will be established.

4.0 The Proposal

- 4.1.1 The proposed reservoir will hold 35,000 m³ of water contained within a circular concrete structure with an internal diameter of 67 metres and maximum height of 15.5 metres. The covered reservoir will reach a maximum elevation of approximately 97.5 masl in its centre. This will extend approximately 2.5 metres above the highest point of the existing ground level along Prince of Wales Spur once completed.
- 4.1.2 The reservoir will be constructed from precast panels supported by internal concrete columns to create a cylinder with a domed top with a flat 10 metre diameter area in its centre. The roof structure of the reservoir is proposed to be sloped at a gradient of 1(v):10(h) to better resemble the existing rounded form of Prince of Wales Spur within which it will be located.
- 4.1.3 During construction, the proposed platform used to accommodate the reservoir will be dug into the existing spur landform to create a level platform at approximately 81 masl. A total volume of approximately 56,000 m³ of material will be excavated during construction with an additional volume of 5,500m³ imported. 25,000m³ of this material will be retained on Site during construction and used to backfill and cover the completed reservoir. The balance, approximately 31,000m³ is intended to either be retained and used to raise the Upper and Lower Parks or removed for disposal offsite.
- 4.1.4 The final landform will be formed by covering the reservoir approximately 0.5m below the final ground level with 200mm of drainage material beneath 300mm of topsoil. The edges of the reservoir will be built up with backfill to tie it into the existing landform, typically forming a maximum gradient of 1(v):2(h). The proposed contours associated with the reservoir during construction and at completion are illustrated in **Figure 5**. In addition, and subject to geotechnical and material suitability, the Upper and Lower Parks will be raised by up to 1.5 m above existing ground level using excess spoil from the reservoir excavation during this process.

4.2 Sequence of Works

- 4.2.1 The sequence of works involves several activities that have potential to generate landscape and visual effects. This sequence of works are expected to last approximately 2 years and cover the following stages:
- Stripping any existing vegetation and topsoil in the area where the reservoir is proposed as well as areas of Upper and Lower Parks required during construction for field raising and material storage;
 - Excavation of the reservoir platform and associated pipe tunnels with suitable materials used to raise the upper and or lower playing fields, and material needed for backfilling the reservoir stockpiled upon the Upper and Lower Parks. Surplus materials would be disposed offsite.
 - Construction of the reservoir within the excavated reservoir platform;
 - Rehabilitation of the landform to integrate the reservoir within Prince of Wales spur and to re-establish playing fields modified during construction; and
 - Reinstatement of playing fields and rehabilitation of vegetation to assimilate development within its open space setting.

4.3 Landscape Concept

- 4.3.1 The landscape concept for the Proposal, as shown in **Figure 6**. This has been developed to assist integrating the completed reservoir and playing fields within the existing vegetated open space context characteristic of Prince of Wales Park. The resultant landscape treatment should be addressed as an integral part of the project in accordance with the following objectives:
- Create a final landform that supports a smooth integration with adjacent areas of topography and optimises effective revegetation conditions;
 - Establish native vegetation, amenity trees and areas of open grass which assist the final landform becoming assimilated within its surrounding open space setting and maintains a wider green backdrop; and
 - Maintain and enhance recreation opportunities, including recreation tracks, lookout opportunities and playing fields.

5.0 Visual Appraisal

- 5.1.1 The process of visual appraisal has included an analysis of the likely visibility of the Site and the proposal based on the existing landform followed by fieldwork to identify the viewing audience and obtain representative photographs.

5.2 Visibility Analysis / Zone of Theoretical Visibility (ZTV)

- 5.2.1 As an initial step in the visual analysis, Zone of Theoretical Visibility (ZTV) mapping was undertaken of the maximum height of the proposed ground level covering the reservoir in order to determine its potential visibility in the wider landscape. This analysis has been included on **Figures 7 and 8** and has helped inform the potential viewing audience with an ability to see the proposed reservoir.
- 5.2.2 This ZTV analysis has taken account of topographic data based on existing one metre contours in order to identify the potential for views towards the completed reservoir location. It has not taken into account any intervening structures or vegetation that may in reality limit any ability for views towards the Site and therefore represents a worst-case scenario. Similarly, any increase in viewing distance or changes in view duration and orientation are not taken into account when identifying that the Site is theoretically visible. The extent of visibility represented through any ZTV analysis must always be confirmed in the field.

5.3 Representative Viewpoints and Potential Viewing Audience

- 5.3.1 With assistance of the ZTV analysis, field work was carried out to determine the actual extent of visibility of the Site and to check the localised screening of topography, buildings, other structures and vegetation from publically available viewpoints. This included visiting adjoining areas of Town Belt as well as roads and open spaces within the surrounding landscape. Based on this analysis, the potential to obtain views towards the proposed development was identified.

- 5.3.2 Within Prince of Wales Park, the Site will be visible in the immediate context from existing walking tracks, including the City to Sea Walkway which passes over the proposed reservoir site. The Site is also visible from the Upper and Lower Park, from which existing vegetation currently limits views of the Prince of Wales Spur.
- 5.3.3 To the south-west of the Site, there are potential views from dwellings adjoining the Town Belt, including dwellings along Dorking Street that overlook Prince of Wales Spur and obtain longer distance views overlooking the city. Beyond Dorking Road to the south-west of the Site, views from within the wider area of Brooklyn are typically concealed by intervening areas of topography and vegetation. There is potential to see the Site from the vicinity of Connaught Road to the south of the Site, however views from this area are largely screened by vegetation established within intervening areas of the Town Belt.
- 5.3.4 To the north of the Site, there are views of the Upper Park from adjoining dwellings on Rolleston Street and Hargreaves Street. From these areas, views of Prince of Wales Spur in the area where the reservoir is located will remain partially screened by intervening pohutukawa trees retained on the cut slope the south of the Upper Park. Further to the north and north-east, including parts of Mount Cook, Te Aro and Mount Victoria, middle and long distance views towards the Site are more typically curtailed beyond intervening urban development established throughout this part of Wellington. The alignment of Taranaki Street means that potential views will be available from this direction, however these will generally be from distances of 1km or more.
- 5.3.5 There are potential middle and long distance views to the east and south-east of the Site, encompassing parts of Newtown and including Wellington Hospital and Government House. From these areas, intervening development typically restricts available vantage points with potential views mostly limited to upper story windows orientated towards the Site. In such views, the Site will likely be seen in the context of the broader band of vegetated open space and residential development in Brooklyn.
- 5.3.6 The Site is also visible in very long distance views from Mount Victoria, including from the summit lookout over 2 kilometres away. From here, the Site forms part of the larger band of Town Belt that separates Mount Cook from Brooklyn.

Representative Viewpoints

- 5.3.7 During the visual assessment, representative panoramic photographs were taken from publically accessible viewpoints to demonstrate the existing visibility of the Site within its landscape context. Representative viewpoints do not include views from private properties as access to private property has not been obtained for the purpose of this assessment. The selection of representative viewpoints was based on the following criteria:
- The requirement to provide an even spread of representative viewpoints within the visual envelope, and around all sides of the Site;
 - From locations which represent a range of near, middle and long distance views; and
 - Whilst private views are relevant, public viewpoints are used to provide representative worse case views from private dwellings. Views from dwellings may also be curtailed by building location and orientation, intervening fences, vegetation or other buildings which cannot be assessed without gaining access to private property.
- 5.3.8 Based on the identified viewing audience and using the above criteria, eleven publically accessible representative viewpoints were identified to assist with assessing the visual effects of the proposal⁵. Panoramic photographs taken from these viewpoints are included at the end of this report (as **Viewpoints 1-11**) and described in **Table 1** below:

⁵ Representative viewpoints were identified through consultation with Becs Ramsay, Wellington City Council Reserves Planner.

Table 1: Publically Accessible Representative Viewpoints

Viewpoint Number	Location	Description
1	WCC Walkway (east of Dorking Road)	From here, the proposed reservoir location is visible as the northern end of an open grass spur framed by mature pine trees to the right and seen in the foreground of more extensive panoramic views towards Wellington City that encompass part of the western edge of Wellington Harbour.
2	Upper Park (adjoining Rolleston Street)	From here, the flat expanse of the Upper Park is visible throughout the foreground and adjoins an existing cut slope supporting mature pohutukawa trees in the direction of the proposed reservoir to the right. The City to Sea Walkway is visible in the far right hand side of the photograph climbing above the Upper Park.
3	Upper Park (adjoining Hargreaves Street)	From here, the Upper Park is visible throughout the foreground against a backdrop of mature pohutukawa trees established on a cut slope to the north of Prince of Wales Spur. Dwellings to the west of Rolleston Street are visible in the far right hand side of the photograph.
4	South-east corner of Lower Park	From here, playing fields within the Lower Park are visible against a backdrop of native vegetation and mature pine trees within the Town Belt on the slopes down to the east of the proposed reservoir site. An existing pavilion is visible at the northern end of the playing fields with access to the Lower Park adjoining dwellings along Salisbury Avenue visible to the right.
5	Local walkway connecting Dorking Road and Heaton Terrace	From here, much of the reservoir site and all of the Upper and Lower Parks are concealed beyond vegetation in community gardens and adjoining areas of the Town Belt. Beyond this, the southern end of Mount Victoria is visible alongside a more distant backdrop of the Rimutaka Ranges.
6	Salisbury Terrace	Views from here into the Lower Park are filtered through mature pohutukawa trees established above batter slopes along its north-eastern boundary. Existing vegetation in the Town Belt including mature pine trees are visible beyond this and form the skyline.
7	Intersection of Wright Street and Papawai Terrace	Single and double storied residential dwellings within Mount Cook are visible throughout much of this photograph. Beyond this, mature vegetation within the Town Belt in the vicinity of the proposed reservoir is visible along the skyline.
8	Connaught Terrace	Long distance views across the western edge of Wellington Harbour are visible from this viewpoint. Below this, vegetation within the Town Belt is visible in the foreground and largely obscures the proposed reservoir site.
9	Alexandra Road	This represents a long distant view obtained from within elevated areas of the Town Belt to the east of the suburban area of Newtown. From this location, the vicinity of the Site makes up part of the mosaic of vegetation and development, rising above a foreground of built development established throughout Newtown and Mount Cook.
10	Taranaki Street	Taranaki Street aligns north to south in the same general direction towards the proposed reservoir. From this viewpoint, the Site is therefore visible as part of the

		open space context to residential development in Brooklyn.
11	Mount Victoria Lookout	Mount Victoria affords broad panoramic views across Wellington City and South Coast and includes very long distance views to the south-west that encompass the Site.

Potential Viewing Audience

- 5.3.9 Based on the above analysis, **Table 2** identifies the potential viewing audiences based on the ability to obtain views towards the Site. As stated above, access to private dwellings has not been part of this assessment with the subsequent assessment of visual effects assisted by the nearest available publically accessible representative view.

Table 2: Reference, viewing audience and description

Reference	Viewing Audience / Address	Description
A	Users of Recreation Tracks within Prince of Wales Park	The City to Sea Walkway, WCC Recreation Tracks and associated passive and active recreation opportunities on Prince of Wales Spur.
B	Users of Upper Park (Prince of Wales Park)	Formal and informal recreation use of playing fields within Prince of Wales Park.
C	Users of Lower Park (Prince of Wales Park)	Formal and informal recreation use of playing fields within Prince of Wales Park.
D	1 and 3 Dorking Road	Residents of dwellings to the east of Dorking Road that have the potential to obtain oblique elevated views above vegetation towards the Site.
E	2 - 26 Dorking Road (even numbers only)	Residents of dwellings along the northern side of Dorking Road that have the potential for oblique views towards the Site.
F	28, 30 and 32 Dorking Road	Residents of dwellings at the western end of Dorking Road orientated to have the potential to obtain elevated views to the east that will include the Site.
G	5 – 25 Dorking Road (odd numbers only)	Residents of dwellings along the southern side of Dorking Road that have the potential to obtain elevated frontal views beyond intervening development towards the Site.
H	82 -102 Rolleston Street (even numbers only)	Residents of dwellings elevated to the west of Rolleston Street that have the potential to obtain frontal views towards the Upper Park and oblique views towards Prince of Wales Spur.
I	64 – 80 Rolleston Street (even numbers only)	Residents of dwellings on the western side of Rolleston Street which extend to the north of the Upper Park and have the potential to obtain oblique views towards the Site.
J	73 Rolleston Street	Residents of a dwelling adjoining the northern boundary of the Upper Park along Rolleston Street with potential to obtain views of Upper Park.
K	63 – 71 Rolleston Street (odd numbers only)	Residents of dwellings that continue along the eastern side of Rolleston Street beyond adjacent dwelling with potential to see the Upper Park.
L	46 Hargreaves Street	Residents of a dwelling adjoining the northern boundary of the Upper Park along Hargreaves Street with potential views of the Site.
M	38 – 44 Hargreaves Street (even numbers only)	Residents of dwellings that continue along the northern side of Hargreaves Street with the potential ability to obtain oblique views towards the Site.

N	15 – 23 Hargreaves Street (odd numbers only) and dwellings along Papawai Terrace	Residents adjoining a vegetated embankment that forms the eastern edge of the Upper Park.
O	1-7 Westland Road (odd numbers only), 1, 7 and 9 Salisbury Avenue, 2-10 Salisbury Avenue (even numbers only) and 11 Salisbury Terrace	Residents of dwellings that adjoin or overlook the eastern boundary of the Lower Park.
P	Dwellings along Salisbury Terrace	Residents of dwellings along Salisbury Terrace with potential oblique views towards the Site.
Q	Dwellings along Wright Street and 2, 4 and 6 Westland Road.	Residents of dwellings within Mount Cook with potential views of the Site beyond dwellings that adjoin the eastern boundary of Prince of Wales Park.
R	1 - 51 Connaught Terrace (odd numbers only)	Residents of dwellings along Connaught Terrace with potential views towards the Site.
S	Wider Mount Cook suburban area	Residents of wider surrounding area of Mount Cook with potential opportunities to obtain partial and glimpsed views towards the Site.
T	West Newtown suburban area	Residents in Newtown to the west of Riddiford Street with potential for partial and glimpsed views towards the Site.
U	East Newtown suburban area	Residents in Newtown to the east of Riddiford Street with potential for partial and glimpsed views towards the Site.
V	Wellington Hospital	Patients, staff and visitors to Wellington Hospital with potential views towards the Site.
W	Governor House	Staff and visitors to Governor House with potential views towards the Site.
X	Te Aro urban area	Residents, staff and visitors to Te Aro, including commuters traveling south along Taranaki Street with potential views towards the Site.
Y	Mount Victoria suburban area	Residents of dwellings in Mount Victoria with potential for partial and glimpsed views towards the Site.
Z	Visitors to Mount Victoria Lookout	Locals and visitors observing the wider area of Wellington from Mount Victoria Lookout, including potential views towards the Site.

6.0 Landscape and Visual Assessment

- 6.1.1 Landscape and visual assessments are separate, although linked, procedures. The existing landscape and its existing visual context all contribute to the existing 'baseline' for landscape and visual assessments. Visual effects are assessed as one of the interrelated effects on people. The potential effect on landscape is assessed in terms of the effect on an environmental resource, i.e. landscape features or landscape character. Such effects can be summarised as follows:

Landscape effects derive from change in the physical landscape, which may change its character or value.

Visual effects relate to the change to specific views that may change the visual amenity experienced by people.

- 6.1.2 In summary, the assessment of landscape and visual effects aims to:
- Systematically identify, the landscape resource and viewing audience;
 - Assess the potential magnitude of landscape and visual change which will result from the proposed development;
 - Indicate the measures proposed to avoid, remedy or mitigate those effects; and
 - Provide an overall assessment and professional judgement as to the nature and significance of the anticipated landscape and visual effects, considering the proposed mitigation.
- 6.1.3 Landscape or visual effects may be positive (beneficial), neutral (no discernible change), or negative (adverse). Effects can also be temporary (short, medium, or long term), permanent or cumulative. They can also arise at different scales (local, regional, or national) and have different levels of significance.

6.2 Approach and Methodology

- 6.2.1 This assessment considers the potential landscape effects of the proposal in the context of the Site and wider landscape, together with effects on views. The methodology used for the assessment has involved a combination of fieldwork, visibility analysis and indicative visual simulations prepared from key representative viewpoints. The findings of this assessment are set out in Sections 7.0 and 8.0 below and adopt the following seven-point scale to determine the overall significance of effect:

Very Low	Low	Moderate – Low	Moderate	Moderate-High	High	Very High
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- 6.2.2 The full methodology used to assess and identify the significance landscape and visual effects is set out in **Appendix 1: Landscape and Visual Assessment Methodology**.

7.0 Landscape Effects

- 7.1.1 Landscape effects are considered in terms of biophysical effects on landscape elements and effects on the character and amenity of the landscape encompassing Prince of Wales Park as an integral component of the Town Belt.

7.2 Biophysical Effects

Landform

- 7.2.1 During construction, the Prince of Wales spur will be excavated to form the footprint for the reservoir. This will create a major temporary disruption and exposed pit along an existing spur. This landform is currently accessible as public open space, including an elevated flattened lookout and seating which provides views north across the city. Material excavated during this process will either be:
- Transported from the Site and used to raise the upper and/or lower playing fields;

- Temporarily transported from the reservoir site and stockpiled on the Upper and Lower Parks; or
 - Permanently removed and disposed offsite.
- 7.2.2 The process of landform modification will occur over a period of up to two years, during which the raw appearance of excavated surfaces and exposed earth will contrast with existing areas of grass and vegetation. Excavated material required to construct the reservoir will be transported through the south-west corner of the Upper Park and will involve the formation of haul roads and the addition of stockpiles and sedimentation ponds extending a raw worked appearance across the upper and lower playing fields.
- 7.2.3 Within the Upper Park, temporary stockpiles will be required up to 5 metres above existing ground level and formed with side slopes of 1 (v):1.5(h). Similar temporary stockpiles may also be required within the Lower Park up to 6 metres above existing ground level. This will substantially transform the existing flat open character of both playing fields, albeit for a temporary period. Such stockpiles will be visible together with the operation of machinery. Stored equipment, worker accommodation and car parking will also potentially be visible on the Lower Park, all of which contributes further disruption throughout this area.
- 7.2.4 Once completed, the final landform associated with the reservoir will appear more rounded and regular within an existing gently sloping spur. The top of the proposed reservoir will create a domed form over which grass and low-level vegetation will become established in order to maintain panoramic views across the city towards Te Aro and towards Mount Victoria. The southwest edge of the reservoir will adjoin the existing spur that rises more steeply towards Dorking Road. The remaining margins of the reservoir will slope more steeply to marry in to the sides of the spur. These will be configured to support areas of native planting which may require geotextile or similar on areas greater than 1 (h): 2 (v). In addition, recreation tracks will be reinstated to maintain equivalent levels of accessibility through this area of Prince of Wales Park.
- 7.2.5 To the north of the reservoir, the proposed permanent access to the pipe tunnel will be elevated approximately 6 metres above the upper playing fields and beyond replacement embankment planting defining the southern edge to the Upper Park. Once vegetation has been establishment on the adjacent embankment, the proposed change in landform including the associated pipe tunnel access will be difficult to discern from surrounding areas.
- 7.2.6 In addition to landform changes associated with the proposed reservoir, proposed changes to the final levels of playing fields will accommodate excess material excavated from the reservoir site. Both the Upper and Lower Park were formed through previous excavation and filling. Assessing proposed changes to playing field levels must therefore also take account of existing cut and batter slopes that occur in this context. Given this, an increase in the level of playing fields by up to 1.5 metres will be readily absorbed within the existing modified slopes along field margins. The lower playing field also includes earth bunding along the margins of Papawai Stream that could be tied into the adjoining playing fields during this process. The resulting change in the existing benched landform is unlikely to be visible from beyond the immediate margins of the parks. Notwithstanding this, the resultant transition between playing fields and adjoining areas will need to be resolved through detailed design to ensure the changes in level are appropriately softened and access is maintained.
- 7.2.7 In summary, during construction the nature of landform modification required will generate localised temporary **high adverse** effects in the context of disrupting the existing Prince of Wales Spur and open playing fields presently used for recreation purposes. Such effects will remain relatively contained within a localised part of the wider Town Belt. At completion, the landform created by the proposed reservoir, will resemble the surrounding rolling and more steeply sloping topography, albeit with a noticeably less natural and more regular broad rounded domed top and discrete uncovered tunnel entrance with associated

vehicle access. At completion, this will generate localised **moderate - low adverse** effects within Prince of Wales Spur compared to the less modified rolling spur landform that currently exists. The Upper and Lower Parks will be fully reinstated, albeit at a slightly higher elevation and generate **low neutral** effects consistent with existing benching carried out to form the playing fields.

Land cover

- 7.2.8 During construction, the reservoir footprint, including the area required to accommodate the proposed batter slopes and up to a 10 metre buffer allowing for site access, management and erosion control will be cleared of its existing vegetation. This equates to total area of approximately 1.6 hectares. This vegetation is predominately pasture with areas of planted and regenerating native vegetation, gorse, gum and mature pine.
- 7.2.9 In addition to vegetation clearance associated with accommodating the proposed reservoir within Prince of Wales Spur, four mature pohutukawa trees are proposed to be removed along the margins of the Upper and Lower Parks during construction. This includes three pohutukawa trees along the northern toe of Prince of Wales Spur to accommodate site access and the removal of an additional pohutukawa tree at the western end of Salisbury Terrace in order to raise the Lowe Park. It is also expected that some trimming and minor vegetation clearance may be required to enable vehicle access along the existing track that extends between the Upper and Lower Parks. This change will affect the landscape setting in these localised areas.
- 7.2.10 Similar to effects on the existing landform, the loss of vegetation will be restricted to a discreet area of Town Belt. The retention of existing vegetation along the remaining periphery of the construction area and the remaining pohutukawa trees along the northern toe of Prince of Wales Spur will limit the landscape impact of vegetation removal as seen from wider areas. Retaining this vegetation will also help ensure that views towards the modified spur landform remain partially enclosed during construction and retains an established framework within which rehabilitation of the Site can occur. In the event that additional vegetation is removed, this would need to be resolved through an alternative landscape treatment developed for these areas subject to consultation with adjoining residents and approval from the Parks Manager.
- 7.2.11 Whilst the removal of established exotic and native vegetation throughout the construction footprint will generate adverse landscape effects, the process of rehabilitation and the visual 'greening' that will result will ensure that the potential magnitude of landscape change will be progressively reduced. As vegetation planted on completed slopes becomes established over a five-year plus period, it will assist with integrating the more regular form of the reservoir with the surrounding spur. Revegetation will also result in a more diverse canopy of native planting in areas where vegetation is currently sparse or where there is gorse. Site rehabilitation will also ensure the playing fields on the Upper and Lower Parks are retained within the existing open space network.
- 7.2.12 In landscape terms, the proposed changes in land cover will reduce from temporary **moderate adverse** effects associated with the removal of vegetation during construction. As native vegetation is re-established, such adverse effects will gradually improve through time. Five years after completion, the change in land cover is expected to establish **low beneficial** effects compared with the environment that exists now and enable the proposed reservoir to become increasingly integrated within surrounding areas of open space.

7.3 Landscape Character Effects

- 7.3.1 Effects on landscape character include:

- The temporary disruption to existing open space characteristics and values during construction; and
- The permanent modification of the existing open space character and amenity of the Town Belt, including associated effects of privacy and shading associated with raising the Upper and Lower Parks.

Construction Effects

- 7.3.2 During construction, parts of Prince of Wales Park will be transformed to create a highly modified 'raw' appearance that will be temporarily inaccessible for recreation activities. Part of the existing vegetated green backdrop will also be removed as a result of construction activity with stock piles and movement of large machinery also likely to affect the amenity and character of surrounding areas. Retaining walls will be added along the margins of the lower park and require the removal of a mature pohutukawa tree at the western end of Salisbury Terrace. Overall, such disruption will generate localised **high adverse** landscape character effects, including a temporary loss of visual amenity and associated open space values associated with Prince of Wales Park.

Effects at Completion

- 7.3.3 Once completed, the existing open space character presently associated with Prince of Wales Park will largely be re-established. This includes reinstating open grassed areas framed by native and exotic vegetation along Prince of Wales Spur. Recreation tracks and seating along the spur will be re-established, albeit in association with a more regular rounded dome landform. Slight changes in elevation to the existing playing fields will appear broadly consistent with existing benching and retaining walls, with changes in topography becoming increasingly softened by proposed planting. Over longer distances beyond Prince of Wales Park, the proposed planting surrounding the spur and adjoining the Upper and Lower Parks will complement and reinforce the Town Belt's existing green backdrop.
- 7.3.4 In essence, the Site will remain as an accessible area of Town Belt that retains existing recreation opportunities including playing fields, a network of recreation tracks including the City to Sea Walkway and open panoramic views across a large part of Wellington from an existing lookout opportunity along Prince of Wales Spur. As proposed planting matures, the changes in landform will become increasingly less apparent alongside opportunities for improvements in habitat value and biodiversity. Five years after completion of the project, any changes in landscape character will be naturalised and represent no more than localised areas of modification set within an improved mosaic of planting and open space uses. Accordingly, **low neutral** landscape character effects will result.

Privacy

- 7.3.5 No significant reduction in privacy is anticipated as a result of raising the Lower Park. The proposed configuration of the eastern margin of the playing fields includes an intervening swale below fencing and planting established along the top of the proposed intervening retaining wall (see **Figure A** below). This configuration will ensure access along the more elevated margins of the lower park remain separated from recreation opportunities provided on the raised playing fields and minimises the potential for any increased sense of overlooking neighbouring properties along this edge.

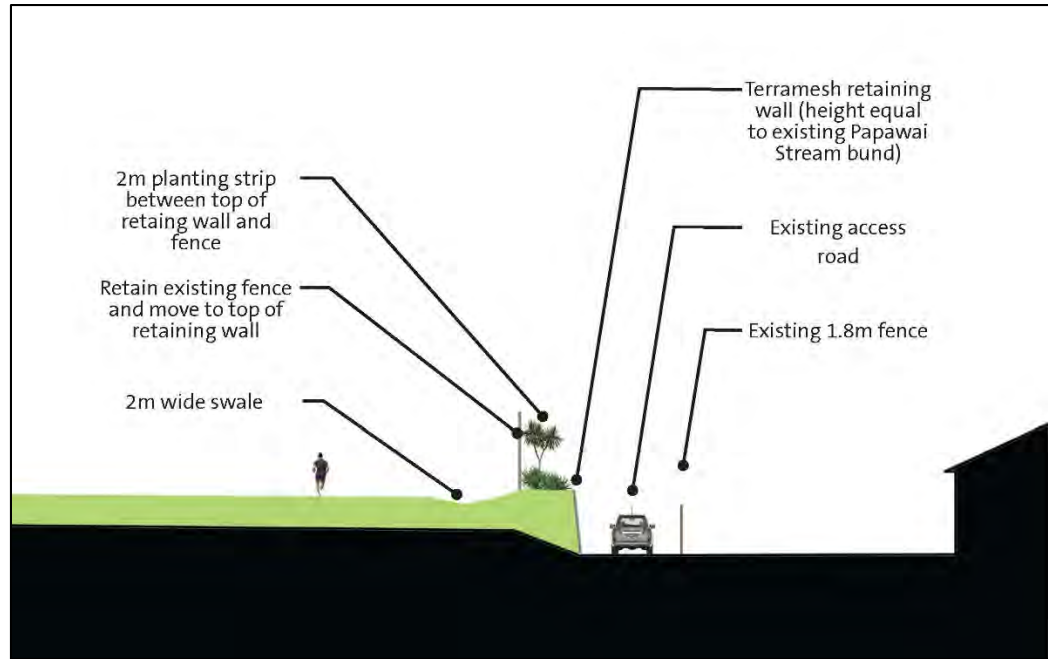


Figure A: Cross Section showing typical treatment along raised eastern edge of Lower Park.

Shading

- 7.3.6 There will be a negligible change in adverse shading effects resulting from raising the Lower Park. In assessing the impacts of shading, a series of diagrams have been prepared to compare the proposed levels of shading associated with stockpiles and raising the Lower Park with existing level of shading that include the effect of trees established along Prince of Wales Spur (see **Figure 7**). These diagrams show the worst-case scenario in terms of shading anticipated during the equinox and winter solstice on properties along Salisbury Terrace and Salisbury Avenue to the east of the Lower Park.
- 7.3.7 This detailed analysis demonstrates that existing vegetation on Prince of Wales Spur and the existing Pohutukawa Tree at the western end of Salisbury Terrace provide the most noticeable impact in terms of shading in this location. Whilst increasing the height of retaining along the eastern boundary of the Park may increase shading along the adjoining access way for a limited duration, this will have no greater impacts on shading of adjoining properties compared with the existing vegetation established in Prince of Wales Park. Conversely, the removal of the pohutukawa tree will have a beneficial effect in terms of reducing shading on properties along Salisbury Terrace.

7.4 Summary of Landscape Effects

Based on the above assessment of landscape effects the following significance and nature of effects (relative to the Site as it presently exists) have been summarised in **Table 3** below:

Table 3: Summary of significance and nature of landscape effects

Type of Effect	Stage	Description of Change	Significance of Effect ⁶	Nature of Effect ⁷
Physical Effects on Landform	Construction	Modification to the existing landform will substantially transform a localised spur and adjoining playing fields for a period of up to two years.	High	Adverse

⁶ Significance of Effect assessed as: Very High, High, Moderate-Low, Moderate, Moderate-Low, Low, Very Low

⁷ Nature of Effect assessed as: Adverse, Neutral or Beneficial

(Site)	Completion (Prince of Wales Spur)	The completed landform will resemble the steep sided gullies and a gently rolling rounded dome top within Prince of Wales Spur albeit of a noticeably more regular modified appearance.	Moderate - Low	Adverse
	Completion (Upper and Lower Parks)	Completed playing fields will be well integrated within the existing benched landform approximately 1.5 metres above existing ground level.	Low	Neutral
Physical Effects on Vegetation (Site)	Construction	Removal of exotic and native vegetation will contrast with surrounding areas and disrupt part of the larger green backdrop of the Town Belt.	Moderate	Adverse
	Completion (Year 5)	Revegetation will assimilate the Site within surrounding areas and support a more diverse canopy of native vegetation. Playing fields will be grassed and assimilated within their established open space context with improved drainage.	Low	Beneficial
Landscape Character (Site)	Construction	Construction activity will substantially affect the open space character and amenity of a local area of the Town Belt.	High	Adverse
	Completion (Year 5)	The completed reservoir and associated landform rehabilitation will become increasingly reintegrated with surrounding areas of vegetation and re-establish recreation opportunities within a broader green backdrop context. There will be no notable loss of privacy or increased shading resulting from raising the lower field.	Low	Neutral

8.0 Visual Effects

8.1.1 The methodology used to assess potential visual effects is set out in **Appendix 1**. This has included fieldwork to obtain recent panoramic photographs from representative viewpoints during December 2016 and January 2017 and generation of visual simulations to identify the proposed magnitude of visual change.

8.1.2 As illustrated on **Figures 8 and 9**, the elevated location of the proposed reservoir will mean potential views will be available from a range of near, middle and distance views, as identified:

- Recreation users within Prince of Wales Park (Viewpoints 1 to 5)
- Occupants of dwellings on the surrounding hill slopes along Dorking Road (Viewpoints 1 and 5)
- Occupants of dwellings adjoining playing fields along Rolleston Ave, Hargreaves Street and Salisbury Terrace (Viewpoints 2, 3 and 4)
- Residents and visitors with middle distance views from surrounding areas of Mount Cook and Brooklyn (Viewpoints 6, 7 and 8)
- Residents and visitors with middle and long distance views from areas of Newtown, Mount Victoria and Te Aro (Viewpoints 9 and 10)
- Visitors with very long distance views towards the Site from Mount Victoria Lookout (Viewpoint 11)

8.2 Assessment of Visual Effects

8.2.1 To assess the overall nature and significance of visual effects, the potential visual sensitivity of identified viewing audiences was considered together with the overall magnitude of change resulting from the proposed development. As noted earlier, private properties were

not visited for the purpose of this assessment, with the visual assessment relying on representative views from the nearest available public viewpoints.

- 8.2.2 When assessing visual effects, it is important to highlight that views of a development do not necessarily equate to adverse visual effects. Visual impact is not always negative and a change in view is not automatically unacceptable. Specific factors contributing to the potential significance of visual effects considered as part of this assessment are set out in **Table 4** of the landscape and visual effects methodology included in **Appendix 1**.
- 8.2.3 To understand the proposed development during construction and at completion, the assessment has included the preparation of four visual simulations from representative viewpoints. These indicate the extent of disturbance required to construct the reservoir footprint and have included the removal of a 10-metre buffer of vegetation around the proposed footprint of the reservoir to accommodate likely construction activity. At completion, visual simulations show the completed landform and proposed planting associated with covering the reservoir and reinstating the adjoining playing fields after five years. Visual simulations have been prepared in accordance with best practice as summarised in **Appendix 2**. The magnitude of change as shown in each visual simulation is described in **Table 5** below.

Table 5: Description of visual change identified in Visual Simulations

Viewpoint	Stage	Description
Walkway east of Dorking Road (Viewpoint 1)	Construction	Construction will transform the existing Prince of Wales Spur through earthworks and operation of machinery to the extent that this dominates foreground views. The removal of existing eucalypts and the western most pohutukawa trees to the north of the proposed reservoir will enable views of construction activity on the Upper Park. The removal of mature pine trees will also open up more extensive panoramic views towards Mount Victoria.
	Completion (Year 5)	Once completed, the reservoir will reinstate an open rounded landform embedded within the existing spur landform. It will also retain broad panoramic views across Mount Victoria, Te Aro and Wellington Harbour. Recreation access will continue across the top of the reservoir with planting providing a softened edge along the reservoir slopes, integrating its margins into surrounding areas.
Upper Park adjoining Rolleston Street (Viewpoint 2a)	Construction	During construction, the removal of pohutukawa trees at the western end of Prince of Wales Spur will provide views of landform modification and associated vehicle access. The retention of pohutukawa trees to the east will ensure the full extent of construction work will remain partially obscured. In the foreground to the left of this view, disruption of the Upper Park will include raising the level of the playing field by up to 1.5 metres and the inclusion of temporary stock piles up to 5 metres. Such activity will represent a significant disruption to existing views from the southern end of Rolleston Street.
	Completion (Year 5)	Once completed, the modified spur landform and permanent access will remain visible beyond the gap created to the east of the retained pohutukawa trees. Reconfigured perpendicular parking will replace parallel parking at the southern end of Rolleston Street beyond which access to the tunnel required to service the reservoir will be visible. The entrance to the tunnel itself will remain concealed from this area and will become increasingly screened by replacement planting including low-level shrubs and pohutukawa trees. Additional native shrubs and kanuka will become established on the batter slopes surrounding the reservoir and soften any changes in landform otherwise visible in this area. The playing field visible in the left hand side of the photograph will be visible at a slightly higher elevation and reinstate an open space outlook in this area.
	Construction	During construction, a one-metre high retaining wall will be constructed along the northern edge of the Upper

Viewpoint	Stage	Description
Upper Park (adjoining Hargreaves Street) (Viewpoint 3a)		Park beyond cabbage trees retained along the edge of the park. Beyond this, temporary stockpiles and machinery will be visible upon the existing playing field through chain link fencing enclosing the park and disrupt the existing open space outlook currently available. The larger backdrop of existing pohutukawa trees will remain above temporary stockpiles seen from this viewpoint.
	Completion (Year 5)	At completion, the Upper Park and associated chain link fencing will be reinstated at a slightly higher elevation along the top of the proposed one-metre retaining wall beyond intervening cabbage trees. Low level planting will soften this change in level along the base of chain link fence defining the northern edge of the Upper Park. The larger green backdrop beyond the Upper Park, including existing pohutukawa trees seen from this viewpoint will remain largely unchanged.
Lower Park (Viewpoint 5a)	Construction	During construction, part of the existing green backdrop to the west of the Lower Park will be removed to accommodate construction of the batter slopes surrounding the proposed reservoir. The foreground of open space within the Lower Park will also be disrupted through earthworks including raising and retaining the playing fields southern and eastern boundaries and the introduction of temporary stockpiles up to 6 metres. Earthwork machinery, car parking and a temporary site office may also be visible from this location.
	Completion (Year 5)	At completion, open playing fields in the foreground will be reinstated, albeit at a slightly higher elevation. Beyond this, the disruption required to construct the reservoir will be reinstated with native vegetation to complement the wider green backdrop framing the western edge of the Lower Park.
Salisbury Terrace (Viewpoint 6a)	Construction	During construction, the existing pohutukawa tree at the western end of Salisbury Terrace will be removed and replaced with a terramesh retaining wall that reaches approximately 4 metres above Salisbury Terrace. Above this temporary stockpiles, operational machinery, car parking and a site office may be visible during construction seen below the larger backdrop of retained vegetation.
	Completion (Year 5)	Following completion, the proposed retaining wall will become increasingly softened as planting becomes established and covers the terramesh surface. Filtered views through chain link fencing along the top of the retaining wall will remain and continue views of vegetated open space within the Town Belt.
Mount Victoria Lookout (Viewpoint 11a)	Construction	The construction of the reservoir and temporary stockpiles on the Upper and Lower Parks will be visible in very long distance views seen as part of an area of existing open space set within a wider vista of development evident throughout Wellington City.
	Completion (Year 5)	Once established, any change in the Town Belt will become very difficult to detect and will be indistinguishable within its surrounding open space setting.

- 8.2.4 As illustrated in the visual simulations and described above, the potential for adverse visual effects will be greatest during construction as excavation of the reservoir platform modifies the existing Prince of Wales Spur landform and disrupts views across adjoining playing fields. The assessment of visual effects from within the Site during construction has been omitted as any potential viewing audience will be prevented from accessing this area.
- 8.2.5 Once construction of the reservoir is completed, earthworks associated with covering this structure will form an integral part of the development and ensures that the resultant change in landform is integrated with the existing spur topography. Earthworks also facilitate planting which will enrich and enhance vegetation established in surrounding

areas. Similarly, playing fields will be reinstated, albeit at a slightly higher elevation and ensure the open space outlook from surrounding areas will be largely retained.

- 8.2.6 Based on the anticipated change within the Site, the potential for adverse visual effects has been assessed in relation to the identified viewing audiences described in Section 5.0. This assessment is set out in full in **Appendix 3** at the end of this report from which the nature and significance of identified visual effects is summarised in **Table 6** below:

Table 6: Summary of identified visual effects

Reference	Viewing Audience	During Construction		5 Years Following Completion	
		Significance of Visual effect ⁸	Nature of Effect ⁹	Significance of visual effect	Nature of Effect
A	Users of Recreation Tracks along Prince of Wales Spur	n/a	Adverse	Moderate - Low	Neutral
B	Users of Upper Park (Prince of Wales Park)	n/a	Adverse	Low	Neutral
C	Users of Lower Park (Prince of Wales Park)	n/a	Adverse	Low	Neutral
D	1 and 3 Dorking Road	Low	Adverse	Very Low	Neutral
E	2 - 26 Dorking Road (even numbers only)	Moderate - Low	Adverse	Low	Neutral
F	28, 30 and 32 Dorking Road	Moderate	Adverse	Very Low	Neutral
G	5 - 25 Dorking Road (odd numbers only)	Moderate	Adverse	Very Low	Neutral
H	55 Bidwill Street, 82 -102 Rolleston Street (even numbers only)	Moderate - High	Adverse	Low	Neutral
I	64 - 80 Rolleston Street (even numbers only), 49-53 Bidwill Street (odd numbers only).	Moderate - Low	Adverse	Low	Neutral
J	73 Rolleston Street	Moderate - Low	Adverse	Very Low	Neutral
K	63 - 71 Rolleston Street (odd numbers only)	Low	Adverse	Very Low	Neutral
L	46 Hargreaves Street	Moderate - High	Adverse	Low	Adverse
M	38 - 44 Hargreaves Street (even numbers only)	Moderate - Low	Adverse	Low	Neutral
N	15 - 23 Hargreaves Street (odd numbers only) and dwellings along Papawai Terrace	Very Low Adverse	Neutral	Very Low	Neutral
O	1-7 Westland Road (odd numbers only), 1, 7 and 9 Salisbury Avenue, 2-10 Salisbury Avenue (even numbers only) and 11 Salisbury Avenue	Moderate	Adverse	Low	Adverse
P	Dwellings along Salisbury Terrace	Moderate	Adverse	Low	Adverse
Q	2 - 46 Connaught Terrace (even numbers only)	Low	Adverse	Very Low	Neutral
R	1 - 51 Connaught Terrace (odd numbers only)	Very Low	Adverse	Very Low	Neutral
S	Wider Mount Cook suburban area	Low	Adverse	Very Low	Neutral

⁸ Significance of Effect assessed as: Very High, High, Moderate-Low, Moderate, Moderate-Low, Low, Very Low

⁹ Nature of Effect assessed as: Adverse, Neutral or Beneficial

Reference	Viewing Audience	During Construction		5 Years Following Completion	
		Significance of Visual effect ⁸	Nature of Effect ⁹	Significance of visual effect	Nature of Effect
T	West Newtown suburban area	Very Low	Adverse	Very Low	Neutral
U	East Newtown suburban area	Very Low	Adverse	Very Low	Neutral
V	Wellington Hospital	Very Low	Adverse	Very Low	Neutral
W	Governor House	Very Low	Adverse	Very Low	Neutral
X	Te Aro urban area	Very Low	Adverse	Very Low	Neutral
Y	Mount Victoria suburban area	Very Low	Adverse	Very Low	Neutral
Z	Mount Victoria Lookout	Very Low	Adverse	Very Low	Neutral

8.3 Summary of Visual Effects

- 8.3.1 During construction, recreation users will be prevented from using the Site. Once completed, recreation access and associated visual amenity values will be reinstated, including unobstructed views from beyond the top of the reservoir along a slightly more elevated domed grass clearing. Vegetation will be re-established on surrounding slopes and on the modified landform.
- 8.3.2 To the south-west of the Site, residential dwellings on the hill slopes along Dorking Road will have potential to observe temporary construction activity within Prince of Wales Spur in the foreground of more expansive views north and east across respective areas of Wellington Harbour and Mount Victoria. From these areas, construction activity will generate a range of **moderate** and **moderate-low adverse effects**. Once completed, the proposed landform associated with the reservoir will appear well integrated within its open space setting, particularly through the planting of native vegetation on the reservoir slopes, resulting in **low** and **very low neutral effects**
- 8.3.3 To the north of the Site, disruption across the Upper Park will be visible from surrounding dwellings along Rolleston Street and Hargreaves Street. This will include views towards stockpiles of up to 5 metres replacing existing open views across playing fields. Such change has potential to generate **moderate-high** adverse visual effects from some dwellings, representing the greatest visual impacts associated with the proposal.
- 8.3.4 Once the reservoir project has been completed, residents living in dwellings along Rolleston Street will see open areas of grass reinstated on the Upper Park, albeit at a slightly higher elevation. Beyond this, the proposed change to Prince of Wales spur will remain partially screened beyond retained pohutukawa trees and additional shrub and amenity planting. This will remove the potential for any longer term adverse visual effects with **low** and **very low neutral effects** anticipated from this area. **Low adverse effects** may continue to occur from an adjoining dwelling along Hargreaves Street on account of the proposed changes in level reducing the existing open relationship with the adjoining playing field. However effects in this area are somewhat limited by existing chain-link fencing enclosing the park and have the ability to be further reduced by the continuation of low level planting along the intervening embankment.
- 8.3.5 To the south-east of the Site, views from dwellings which back on to the Lower Park may also result in temporary adverse visual effects during construction, albeit to a lesser extent than the potential for more open frontal views associated with views of proposed changes to the Upper Park. During construction, views associated with the existing playing fields will be replaced with stockpiles, vehicles, site office and construction activity seen above a higher constructed terramesh retaining wall enclosing the park. Beyond this, the removal of a localised part of a wider visible green backdrop may also be observed. This transformation is expected to generate **moderate adverse** effects from adjoining dwellings overlooking this area. Once completed, the open space context and wider green backdrop will be

reinstated and similarly has the ability to address any longer term potential for adverse visual effects through any perceived change in level that will result along the margins of the intervening playing fields.

- 8.3.6 Over longer distances, views of proposed changes within the Site become increasingly concealed by intervening development. Potential low and very low adverse effects are identified in relation to any disruption within Prince of Wales Park that remains apparent during construction from areas that extend beyond the boundaries of this area of Town Belt. Once completed, the Site will become successfully reinstated as part of a wider vegetated context and remove any potential for any longer term adverse visual effects.

8.4 Mitigation

- 8.4.1 As demonstrated above, the greatest potential for adverse landscape and visual effects will occur as a result of construction, during which there are limited opportunities to remedy or mitigate the nature or significance of such effects. Mitigation employed during this time should seek to limit the duration of construction activity, ensure trees and other vegetation which is beneficial to be retained is protected and include measures to reduce the raw appearance of earthworks where practicable:
1. Prior to commencement of works, ensure that the limits of vegetation clearance are clearly known and understood to prevent vehicle access and unintended vegetation clearance or damage outside approved clearance areas.
 2. Ensure temporary fill batters and storage mounds are hydroseeded with pasture grass species during construction to soften and green their exposed 'raw' appearance.
 3. The removal of any additional trees providing landscape or visual screening benefits and located outside the area of potential vegetation clearance indicated on **Figure 4** is subject to a revised landscape plan demonstrating suitable alternatives.
- 8.4.2 Once completed, the potential for adverse landscape and visual effects will be considerably reduced with the resultant modified landform having the ability to become re-established in a mosaic of open grass and planting. **Figure 6** (Landscape Strategy) illustrates the key elements of landscape required in order to mitigate the potential for visual effects which includes adopting the following three key principles:
1. Ensure that the final landform is formed and top soiled to facilitate identified rehabilitation measures including treatment of steeper slopes to facilitate successful planting where necessary.
 2. Ensure permanent recreation access is facilitated with reference to WCC Short Walk Standards which may include steps where necessary to maintain existing recreation access and enhance recreation use.
 3. Plant areas with a range of native species that readily establish and grow well in the planting season following the completion of construction. This planting should be maintained for a period of 5 years to ensure it becomes effectively established.

9.0 Analysis against Statutory Provisions

Town Belt Act / Town Belt Management Plan

- 9.1.1 The proposed reservoir will entail a localised disruption within the Town Belt that must be carefully managed by Wellington City Council to ensure its protection and enhancement for future generations. Whilst landform modification will occur within an existing spur landform, the provision to accommodate a reservoir in this location has also already been acknowledged as appropriate in this context within the Town Belt Management Plan, provided that it is buried. Permanent access to the pipe tunnel will not be buried to the north of the reservoir, however this will remain enclosed by embankment planting to become a discreet area of the proposal which is unlikely to be noticed from beyond its immediate context.
- 9.1.2 The disturbance to adjoining playing fields is a resultant impact of constructing a reservoir in this location and enables enhanced playing surfaces to be reinstated at completion. Once established, the modified spur will be reintegrated within a patchwork of native vegetation and grass designed to retain existing recreation opportunities and protect the existing open space characteristics in the long term.

RMA (Regional Policy Statement and District Plan)

- 9.1.3 The Site does not form part of any outstanding natural features or landscapes, however it does form an important area of open space with recognised landscape and amenity values which may be classified as part of a wider special amenity landscape in the future. Whilst adverse landscape and visual effects are inevitable in this context during construction, once completed, the reservoir will be covered and planted to ensure such effects are successfully remedied or mitigated. This will enable the Site to become integrated within its surrounding landscape and ensure that no more than minor adverse effects occur. In the long term, the key characteristics and special qualities recognised in this area of Wellington's Town Belt will be effectively reinstated for the benefit of future generations. This includes the existing lookout opportunities and contribution to areas of green backdrop.
- 9.1.4 In summary, the establishment of a covered reservoir within Prince of Wales Spur provides for the efficient development of public infrastructure whilst remedying and mitigating the potential for adverse landscape and visual effects. Any disruption to the existing open space qualities within the Site will be temporary and ensure the potential for adverse visual effects will be appropriately mitigated in the long term.

10.0 Summary and Conclusion

- 10.1.1 The application seeks to construct a substantial new reservoir within Prince of Wales Park, which forms part of the Wellington Town Belt. In this context, adverse landscape and visual effects will inevitably occur during construction, including disruption to existing open space values and imposition on available views. During construction, the potential for moderate – high adverse visual effects will be limited to adjoining residential dwellings that overlook the Site. Beyond adjoining areas, construction will generate low and very low adverse visual effects on account of the nature of intervening development and the increasing viewing distances.
- 10.1.2 Once completed, the Prince of Wales / Omāroro Reservoir will create a more regular domed shaped landform along Price of Wales Spur. However, the project will also enable a mosaic of grass, amenity planting and native vegetation to be re-established, which will allow ongoing recreation access and use. Playing fields affected by the reservoir project will be re-established, albeit at a slightly higher elevation. Once planting is established, the proposed change in landform will become assimilated within its surroundings and ensure that there will be no residual long-term adverse landscape and visual effects.

Figures

Figure 1: Site Location

Figure 2: Site Context

Figure 3: Existing Landform

Figure 4: Existing Land Cover

Figure 5: Proposed Development Contours

Figure 6: Landscape Concept

Figure 7: Shadow Analysis

Figure 8: Visual Appraisal (Local Context)


Figure 9: Visual Appraisal (Broad Context)




Data Sources: Wellington City Council, Boffa Miskell

Projection: NZGD 2000 New Zealand Transverse Mercator

 Reservoir (proposed)


 Prince of Wales Park

Town Belt Management Sector

 Aro Valley/Polhill Gully

 Brooklyn Hills

 Hataitai Park

 Macalister Park

 Mt Victoria/Matairangi

 Newtown/Crawford Road

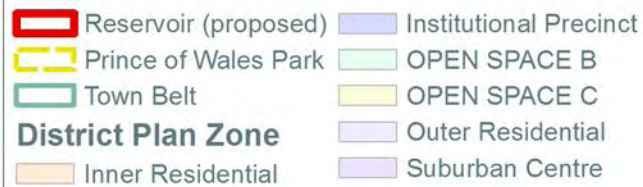
PRINCE OF WALES RESERVOIR

Site Location

| Date: 25 August 2017 | Revision: 1 |

Plan prepared by Boffa Miskell Limited

Project Manager: rhy.girvan@boffamiskell.co.nz | Drawn: HHM | Checked: PMO

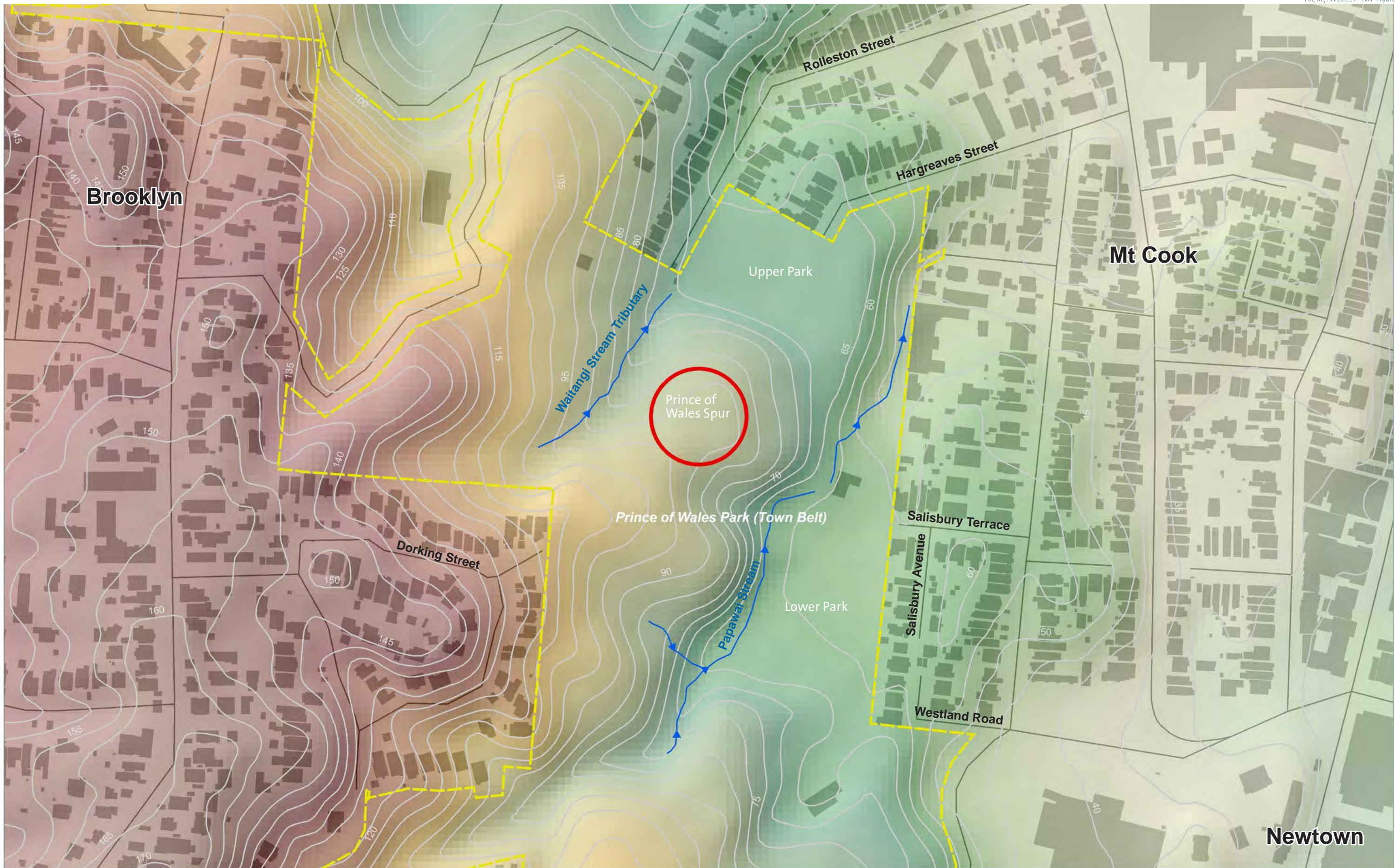


PRINCE OF WALES RESERVOIR
Site Context

| Date: 25 August 2017 | Revision: 1 |

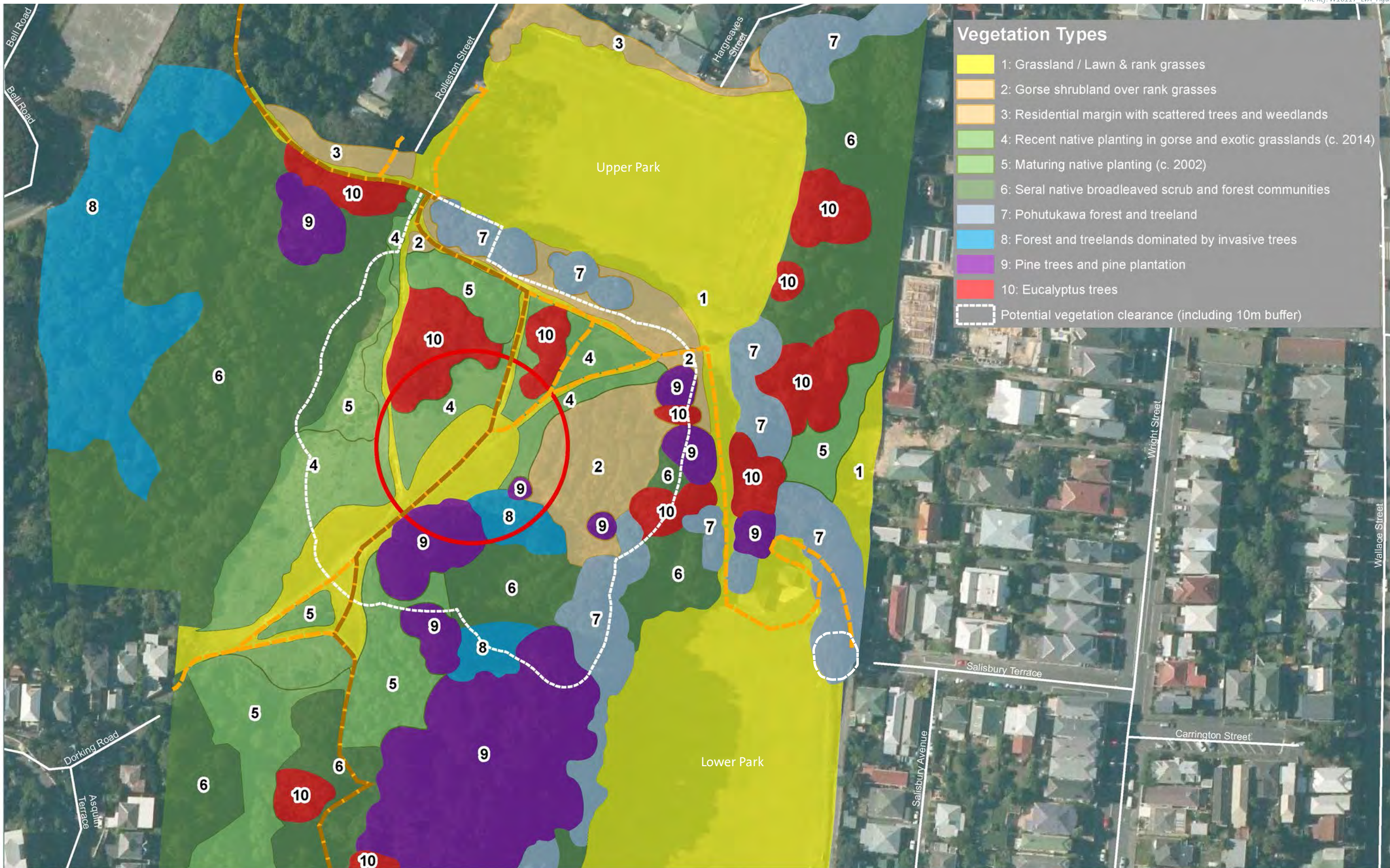
Plan prepared by Boffa Miskell Limited

Project Manager: rhys.girvan@boffamiskell.co.nz | Drawn: HHM | Checked: PMO



-  Reservoir (proposed)
-  Prince of Wales Park
-  Streams





Data Sources: Ministry for the Environment, LINZ

Projection: NZGD 2000 New Zealand Transverse Mercator

- Reservoir (proposed)
- City To Sea Walkway
- WCC Tracks

PRINCE OF WALES RESERVOIR

Existing Landcover

| Date: 25 August 2017 | Revision: 1 |

Plan prepared by Boffa Miskell Limited

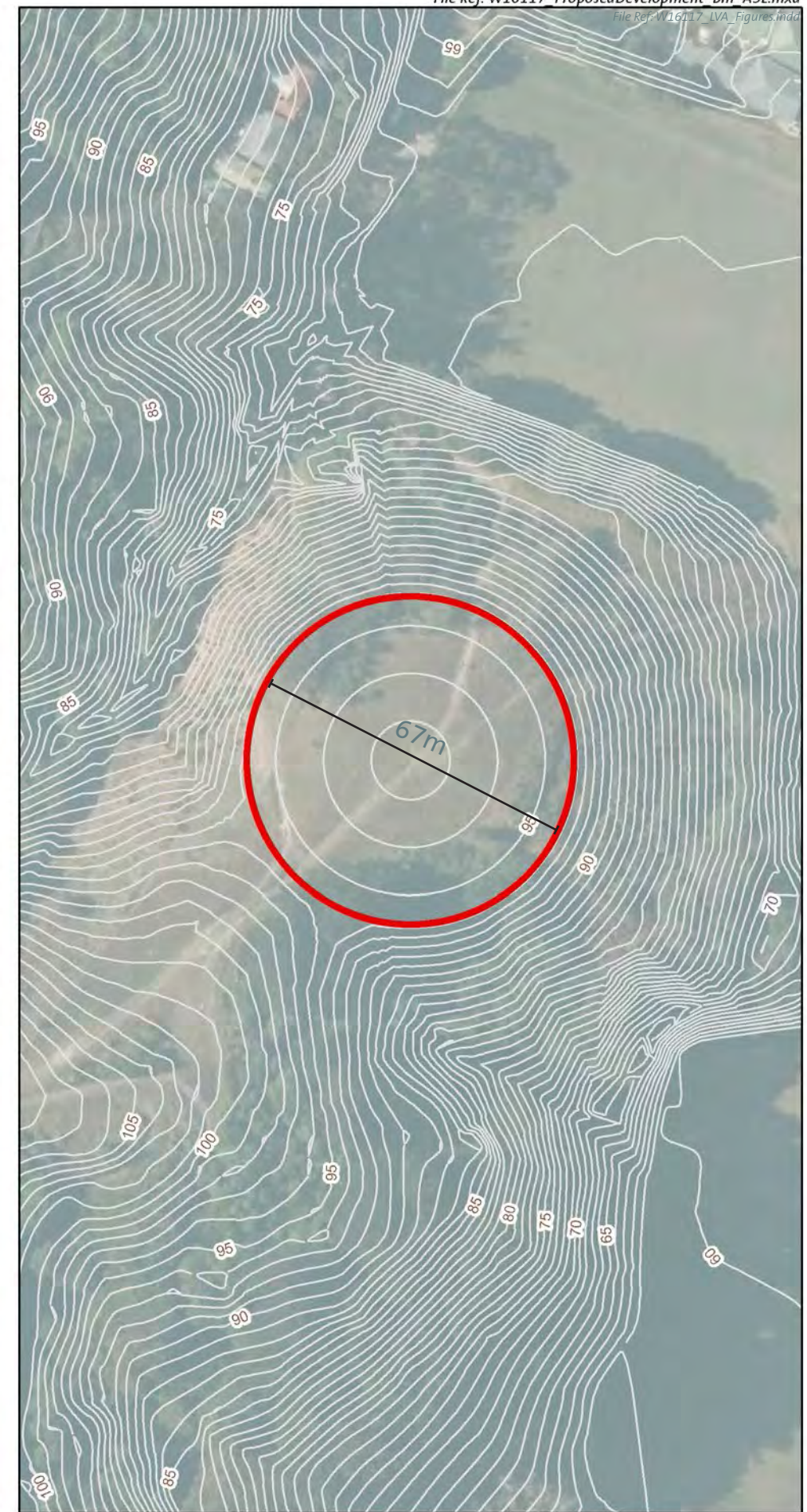
Project Manager: rhys.girvan@boffamiskell.co.nz | Drawn: HHM | Checked: PMO



Existing Contours



Proposed Excavation



Proposed Contours (Final Landform)





LEGEND

	Proposed Reservoir		City to Sea Walkway
	<i>Metrosideros excelsa</i>		Other Recreation Track
	<i>Eucalyptus rosacea</i>		Timber Retaining Wall
	Tree to be Removed		Existing Timber Retaining Wall
	Open Grassed Area		Chainlink Fence
	<i>Leptospermum scoparium</i>		Swale & Manhole
			Existing Stream
			Existing Bund
			Grass Reinforced with Plastic Cell

Green Terramesh Wall Planting

	<i>Muehlenbeckia complexa</i>	Mingimingi
	<i>Poa anceps</i>	Meadow grass
	<i>Poa cita</i>	Silver tussock

Native Low Planting (0 - 1 m)

	<i>Coprosma propinqua</i>	Mingimingi
	<i>Muehlenbeckia complexa</i>	Pohuehue
	<i>Olearia solandri</i>	Coastal shrub daisy
	<i>Phormium cookianum</i>	Mountain flax
	<i>Poa anceps</i>	Meadow grass

Native Shrubs (1.0 - 6 m)

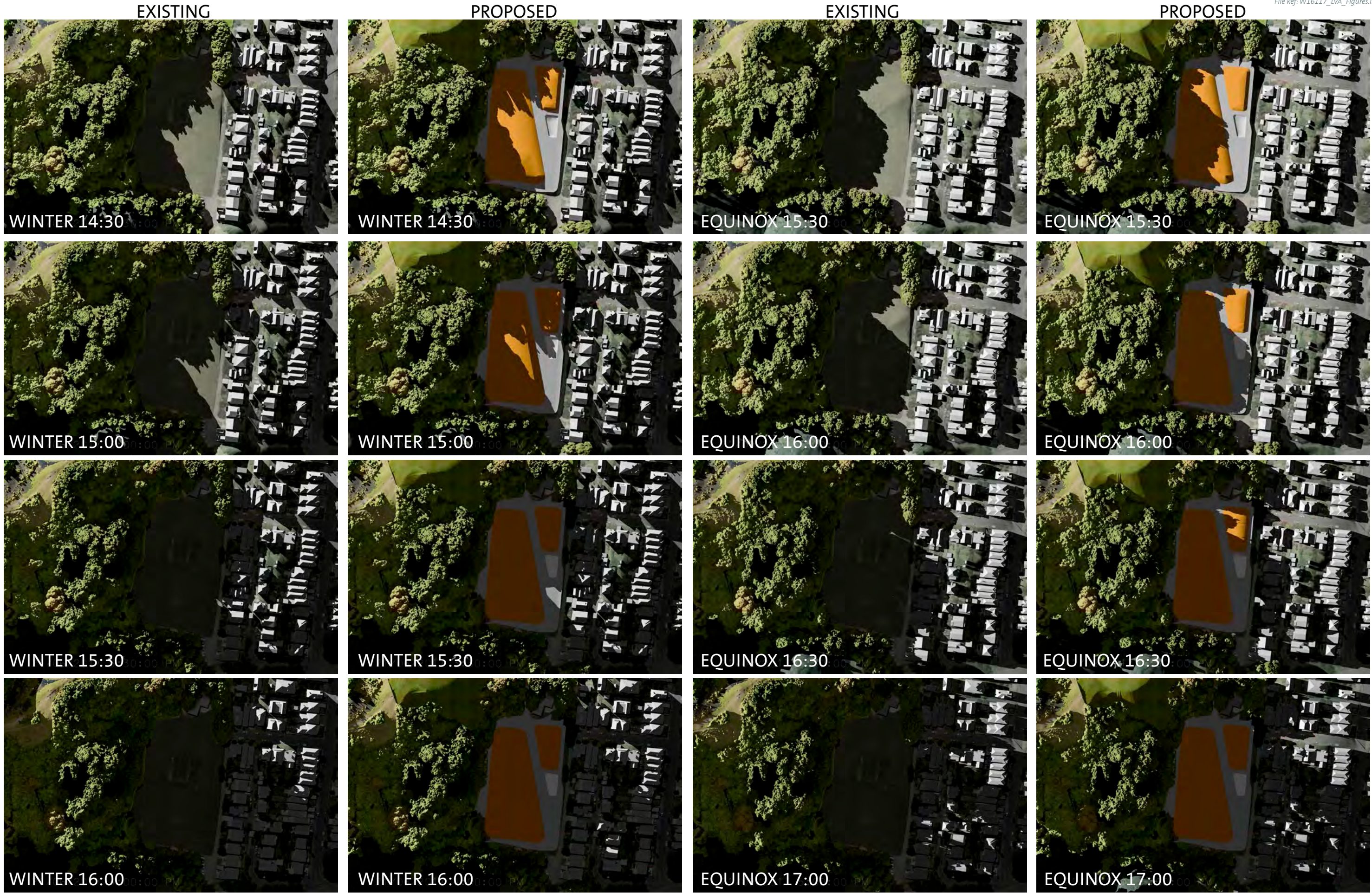
	<i>Coprosma propinqua</i>	Mingimingi
	<i>Coprosma robusta</i>	Karamu
	<i>Cortaderia fulvida</i>	Toetoe
	<i>Griselinia littoralis</i>	Broadleaf
	<i>Hebe stricta</i>	Koromiko
	<i>Phormium cookianum</i>	Mountain flax

Native Revegetation (1.5 - 20 m)

	<i>Aristotelia serrata</i>	Wineberry
	<i>Beilschmiedia tawa</i>	Tawa
	<i>Carpodetus serraus</i>	Putaputaweta
	<i>Coprosma propinqua</i>	Mingimingi
	<i>Coprosma robusta</i>	Karamu
	<i>Cortaderia fulvida</i>	Toetoe
	<i>Dysoxylum spectabile</i>	Kohekohe
	<i>Elaeocarpus dentatus</i>	Hinau
	<i>Fuchsia excorticata</i>	Kōtukutuku
	<i>Griselinia littoralis</i>	Broadleaf
	<i>Hebe stricta</i>	Koromiko
	<i>Knightia excelsa</i>	Rewarewa
	<i>Kunzea ericoides</i>	Kānuka
	<i>Metrosideros robusta</i>	Northern Rata
	<i>Myoporum laetum</i>	Ngaio
	<i>Pennantia corymbosa</i>	Kaikomako
	<i>Phormium tenax</i>	Flax
	<i>Pittosporum eugenioides</i>	Lemonwood
	<i>Pittosporum tenuifolium</i>	Kōhūhū
	<i>Podocarpus totara</i>	Tōtara
	<i>Prumnopitys taxifolia</i>	Mataī
	<i>Pseudopanax arboreus</i>	Five Finger
	<i>Sophora microphylla</i>	Kōwhai

Notes:

- 1) Geogrid reinforcement or similar to be used along slopes exceeding 1:2 to facilitate revegetation.
- 2) The location and gradient of the proposed walkways to be confirmed with reference to WCC Short Walk Standards,



NOTES

1. Tree canopy model derived from UAV aerial survey flown by BML on 30 January 2017.
2. Winter shadow analysis calculated for June 21 (New Zealand Standard Time).
3. Equinox shadow analysis calculated for September 21 (New Zealand Standard Time).

Project Manager:

PRINCE OF WALES RESERVOIR SHADOW ANALYSIS

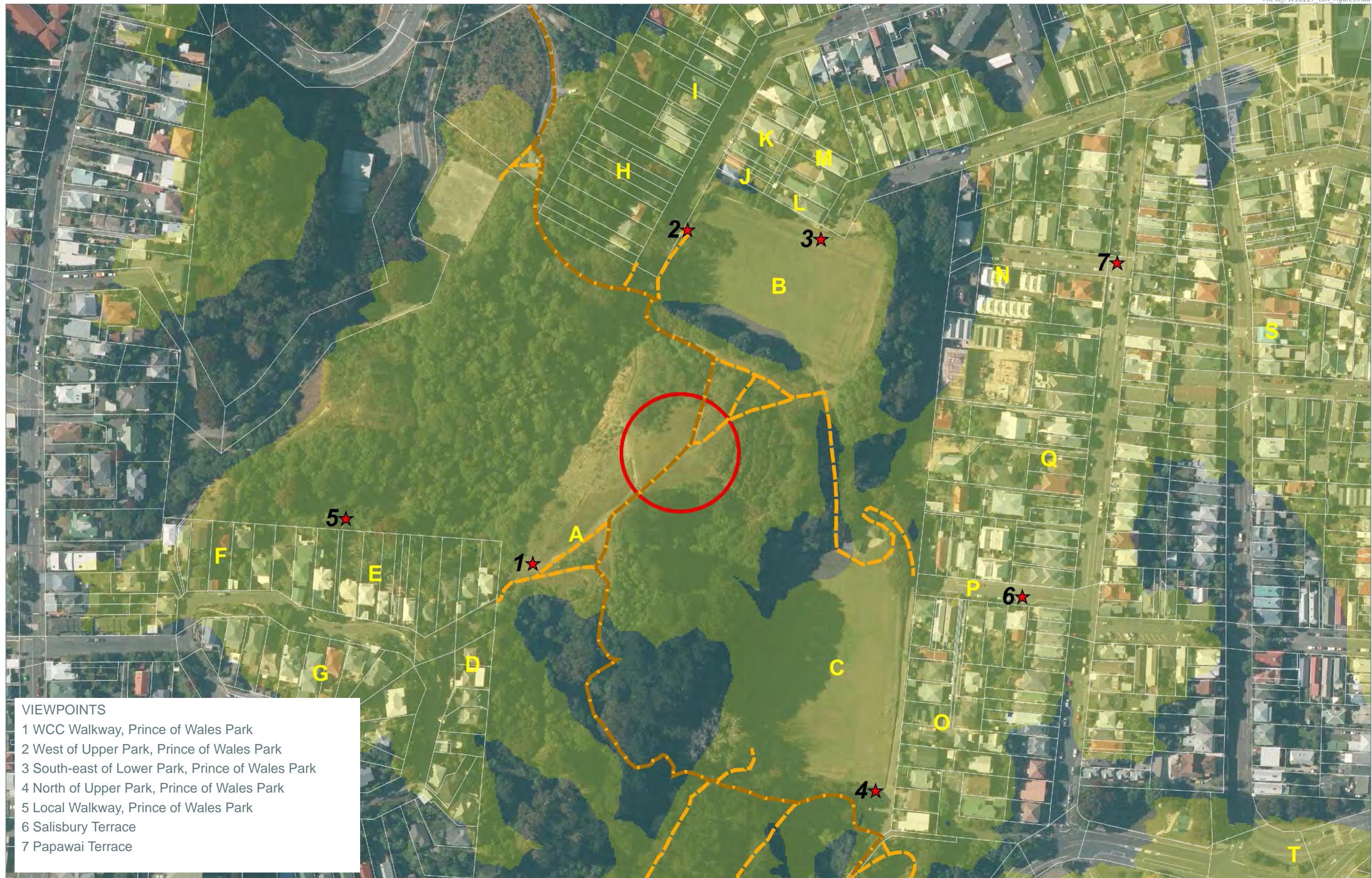
2

2

Plan prepared by Boffa Miskell Limited

| Drawn: ACA | Checked: RGI







FIGURE
7



0 40 m
1:2,000 @ A3

Data Sources: Wellington City Council, LINZ, Boffa Miskell

Projection: NZGD 2000 New Zealand Transverse Mercator

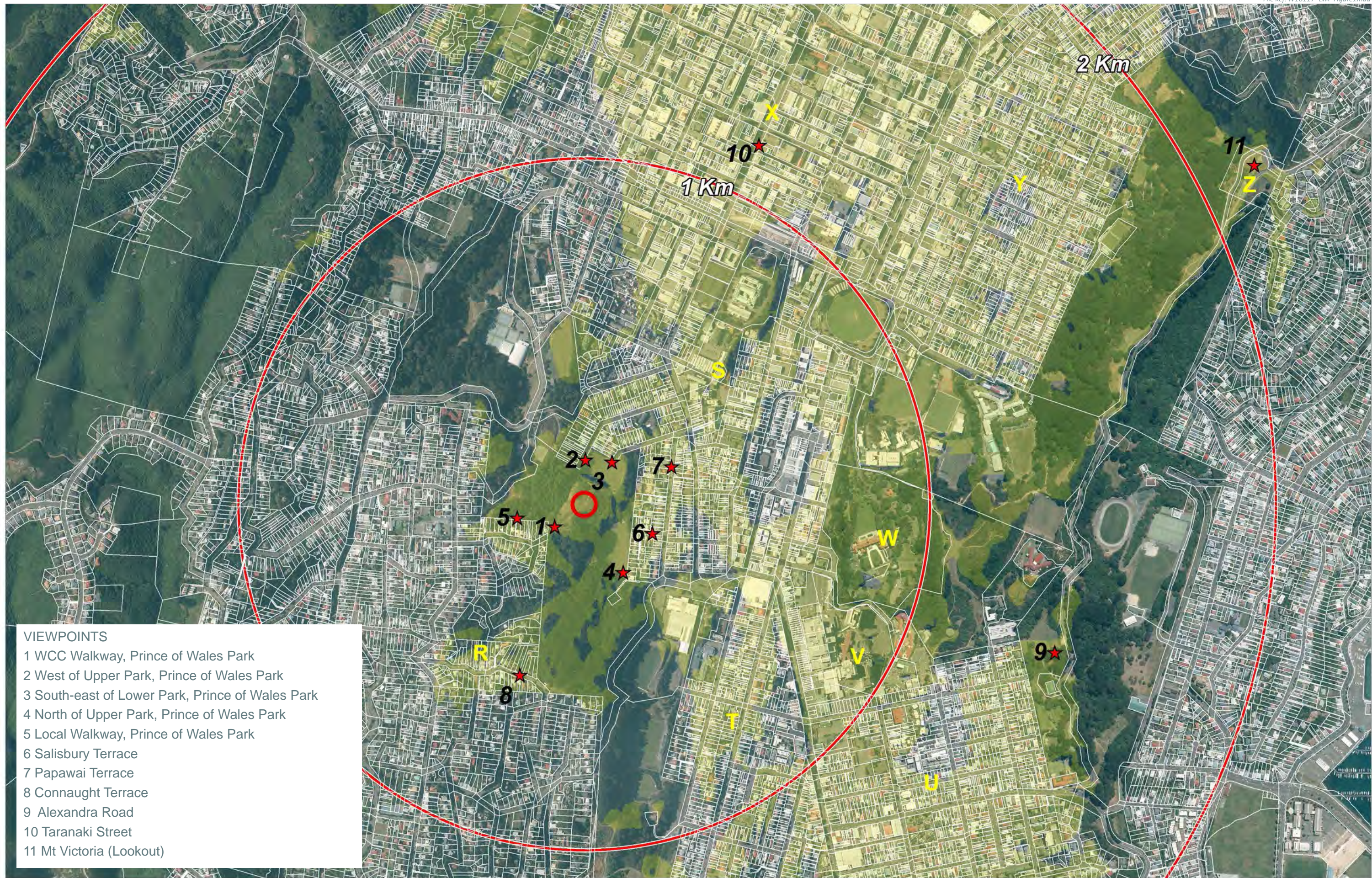
-  Reservoir (proposed)
-  Theoretical Visibility (Landform only)
-  Viewing Audience
-  City to Sea Walkway
-  WCC Tracks
-  Viewpoints

PRINCE OF WALES RESERVOIR
Visual Appraisal (Local Context)

Date: 9 February 2017 | Revision: 0





Plan prepared by Boffa Miskell Limited

Project Manager: rhy.s.girvan@boffamiskell.co.nz | Drawn: PMo | Checked:



Data Sources: Wellington City Council, LINZ, Boffa Miskell

Projection: NZGD 2000 New Zealand Transverse Mercator

-  Reservoir (proposed)
-  Theoretical Visibility (Landform only)
-  Viewing Audience
-  Viewpoints

PRINCE OF WALES RESERVOIR
Visual Appraisal (Broad Context)

Date: 14 February 2017 | Revision: 0

Plan prepared by Boffa Miskell Limited

Project Manager: rhys.girvan@boffamiskell.co.nz | Drawn: PMo | Checked:

Viewpoints

Viewpoint 1: Walking Track east of Dorking Road

Viewpoint 2: Upper Park (adjoining Rolleston Street)

Viewpoint 3: Upper Park (adjoining Hargreaves Street)

Viewpoint 4: South-east corner of Lower Park

Viewpoint 5: Local walkway connecting Dorking Road and Heaton Terrace

Viewpoint 6: Salisbury Terrace

Viewpoint 7: Intersection of Wright Street and Papawai Terrace

Viewpoint 8: Connaught Terrace

Viewpoint 9: Alexandra Road

Viewpoint 10: Taranaki Street

Viewpoint 11: Mount Victoria Lookout





Proposed Reservoir Site



Viewpoint 5: Local walkway connecting Dorkign Road and Heaton Terrace

Lower Park

Proposed Reservoir Site



Viewpoint 6: Salisbury Terrace

Wright Street

Proposed Reservoir Site



Viewpoint 7: Intersection of Wright Street and Papawai Terrace

Proposed Reservoir Site



Viewpoint 8: Connaught Terrace

Proposed Reservoir Site



Viewpoint 9: Alexandra Road

Proposed Reservoir Site



Viewpoint 10: Taranaki Street

Proposed Reservoir Site



Viewpoint 11: Mount Victoria Lookout

Visual Simulations

Viewpoint 1a: Walking Track east of Dorking Road

Viewpoint 2a: Upper Park (Rolleston Street)

Viewpoint 3a: Upper Park (Hargraves Street)

Viewpoint 4a: South-east corner of Lower Park (Westland Road)

Viewpoint 6a: Salisbury Terrace

Viewpoint 11a: Mount Victoria Lookout



Existing View



Viewpoint Location Map



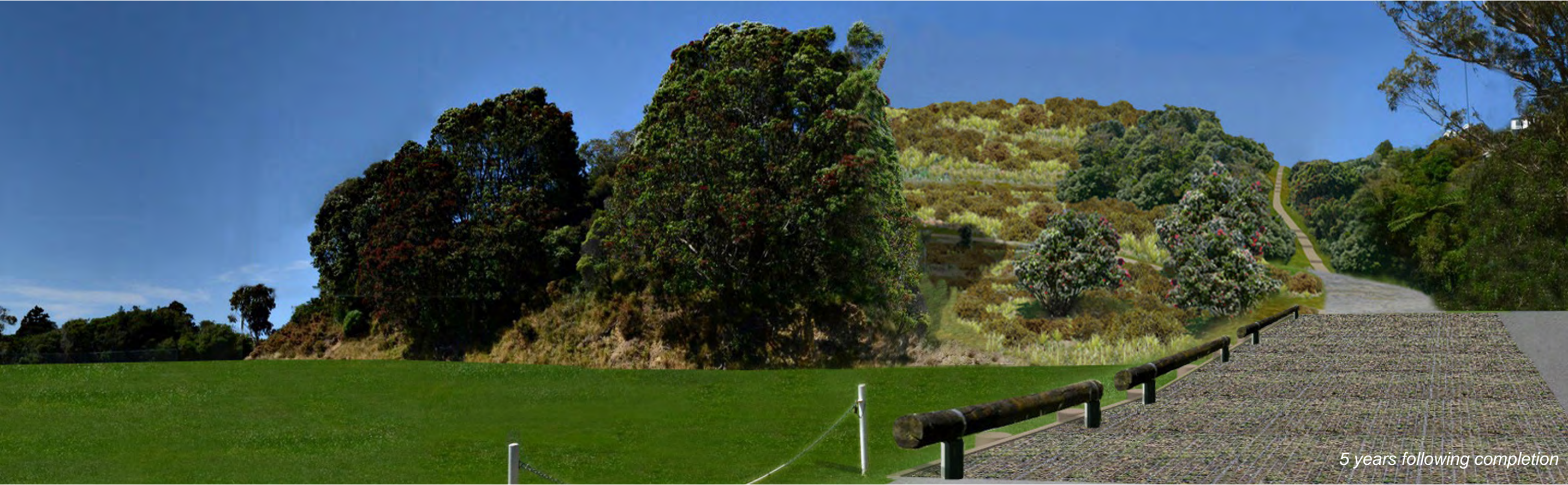
View during construction



5 years following completion



Viewpoint Location Map





Existing View



Viewpoint Location Map





Existing View



Viewpoint Location Map



View during construction



5 years following completion



Viewpoint Location Map





Viewpoint Location Map



View during construction



5 years following completion

Appendix 1: Landscape and Visual Effects Assessment Methodology

Introduction

The landscape and visual effects assessment process provides a framework for assessing and identifying the nature and significance of potential landscape and visual effects that may result from a proposed development. Such effects can occur in relation to changes to physical elements and the existing character of the landscape and impacts on viewing audiences and visual amenity. This process should include an iterative design development approach which seeks to avoid, remedy or mitigate adverse effects and where appropriate include stakeholder engagement (see Figure 1).

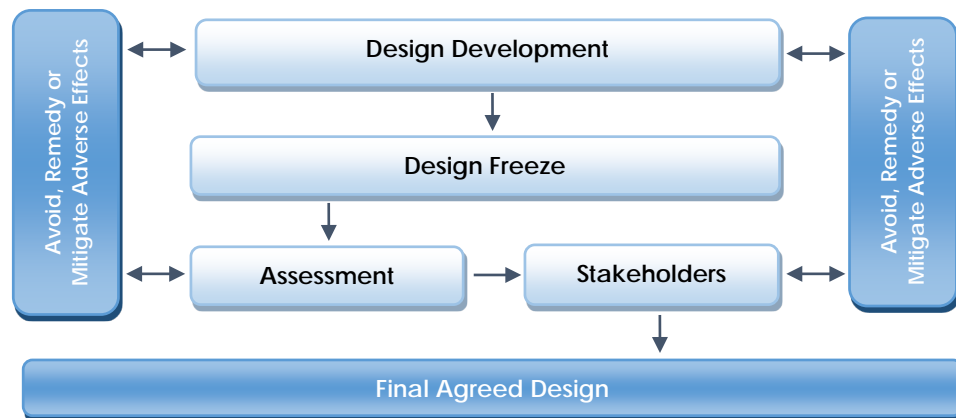


Figure 1: Design feedback loop (Adapted from GLVIA3)

When undertaking landscape and visual effects assessments, it is important that a structured and consistent approach is used to ensure that findings are clear and as objective as possible. Judgement should always be based on training and experience, and be supported by explicit evidence and reasoned argument.

The existing landscape and its visual context form the 'baseline' for landscape and visual effects assessments. In order to assess such effects, the landscape must first be described, including an understanding of the key characteristics that make an area distinctive. This process, known as landscape characterisation, is the basic tool for understanding landscape character and may involve subdividing the landscape into distinct character areas or types and describing the characteristics of each area. The condition of the landscape (i.e. the state of an individual area of landscape or landscape feature) should also be described alongside a judgement made on the value or importance of the potentially affected landscape.

Although landscape and visual effects assessments consider the effect of the proposed development on a landscape, they form separate procedures. The assessment of the potential effect on the landscape forms the first step in this process and is carried out as an effect on an environmental resource (i.e. landscape elements, features and character). The assessment of visual effects considers how changes to the physical landscape affect the viewing audience.

The types of effects assessed can be summarised as follows:

Landscape effects:

Change in the physical landscape, which may change its character or value.

Visual effects:

Change to specific views which may change the visual amenity experienced by people.

This outline of the landscape and visual effects assessment methodology has been undertaken with reference to the Quality Planning Landscape Guidance Note¹⁰ and its signposts to examples of best practice which include the UK guidelines for landscape and visual impact assessment¹¹ and the New Zealand Landscape Institute Guidelines for Landscape Assessment¹².

A separate assessment is required to assess changes in natural character in coastal areas and other waterbodies.

Landscape Effects

Assessing landscape effects requires a thorough understanding of the landscape character and importance or value of the landscape. Using this baseline, a *determination* of landscape sensitivity and the magnitude of change which results from a proposed development can be made to determine the overall significance of landscape effects.

Landscape Sensitivity

The determination of the sensitivity of the landscape resource is described in terms of both the susceptibility of an area of landscape to change and the value of the landscape.

The sensitivity of the landscape depends upon the degree that a particular landscape or feature can accommodate change. This will vary upon the following factors:

- Physical elements such as topography / hydrology / soils / vegetation;
- Existing land use;
- The pattern and scale of the landscape;
- Visual enclosure / openness of views and distribution of the viewing audience;
- The value or importance placed on the landscape; and
- The scope for mitigation, which would be in character with the existing landscape.

The susceptibility to change takes account of both the attributes of the receiving environment and the characteristics of the proposed development. It considers the ability of a specific type of change occurring without generating adverse effects and/or achievement of landscape planning policies and strategies.

Landscape value derives from the importance that people and communities, including tangata whenua, attach to particular landscapes and landscape attributes. This may include the classification of Outstanding Natural Landscape (RMA s.6(b)) based on important biophysical, sensory/ aesthetic and associative landscape attributes which have potential to be affected by a proposed development.

Magnitude of Landscape Change

The magnitude of landscape change judges the amount of change that is likely to occur to existing areas of landscape, landscape features, or key landscape attributes. In undertaking this assessment, it is important that the size or scale of the change is considered within the geographical extent of the area influenced and the duration of change, including whether the change is reversible. In some situations, the loss /change or enhancement to existing landscape elements such as vegetation or earthworks should also be quantified.

When assessing the significance of landscape effects, it is important to be clear about what factors have been considered when making professional judgements. This can include consideration of any benefits which result from a proposed development. **Table 1** below has been compiled to help guide this process.

¹⁰ <http://www.qualityplanning.org.nz/index.php/planning-tools/land/landscape>

¹¹ Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)

¹² Best Practice Note Landscape Assessment and Sustainable Management 10.1, NZILA

Contributing Factors		Higher	Lower
Sensitivity	Susceptibility to change	The landscape is strongly distinctive with important biophysical, sensory and associative aspects. There is an absence of landscape detractors which make it highly vulnerable to the type of change which would result from the proposed development.	The landscape lacks any distinctive biophysical, sensory or associative aspects. It has many detractors and has the ability to accommodate the proposed development without undue consequences to landscape character.
	The value of the landscape	The landscape requires protection as a matter of national importance (ONF/L).	The landscape is of low or local importance.
Magnitude of Change	Size or scale	Total loss or addition of key features or elements. Major changes in the key characteristics of the landscape, including significant aesthetic or perceptual elements.	The majority of key features or elements are retained. Key characteristics of the landscape remain intact with limited aesthetic or perceptual change apparent.
	Geographical extent	Landscape character area scale.	Site scale, immediate setting.
	Duration and reversibility	Permanent. Long term (over 10 years).	Reversible. Short Term (0-5 years).

Table 1: Determining the significance of landscape effects

Visual Effects

To assess the visual effects of a proposed development on a landscape, a visual baseline must first be defined. The visual baseline identifies the area where the development may be visible, the potential viewing audience, and the key representative public viewpoints from which visual effects are assessed.

The viewing audience comprises the individuals or groups of people occupying or using the properties, roads, footpaths and public open spaces that lie within the visual envelope or zone of visual influence of the site and proposal. Where possible, computer modelling can assist to determine the actual extent of visibility together with field work which should be undertaken to confirm this. Where appropriate, key representative viewpoints should be agreed with the relevant local authority.

Visual Sensitivity

Visual sensitivity is dependent upon the susceptibility of the viewing audience to change and the value attached to views. The susceptibility of the viewing audience is determined by assessing the occupation or activity of people experiencing the view at particular locations and the extent to which their interest or activity may be focussed on views of the surrounding landscape. This relies on a landscape architect's judgement in respect of visual amenity and reaction of people who may be affected by a proposal. This should also recognise that people more susceptible to change generally include: residents at home, people engaged in outdoor recreation whose attention or interest is likely to be focussed on the landscape and on particular views; visitors to heritage assets or other important visitor attractions; and communities where views contribute to the landscape setting.

The value or importance attached to particular views may be determined with respect to its popularity or numbers of people affected or reference to planning instruments such as viewshafts or view corridors. Important viewpoints are also likely to appear in guide books or tourist maps and may include facilities provided for its enjoyment. There may also be references to this in literature or art, which also acknowledge a level of recognition and importance.

Magnitude of Visual Change

The assessment of visual effects also considers the potential magnitude of change which will result from the nature of a proposed development and its potential visibility. This takes account of the size or scale of the effect, any mitigation measures and their impact over time and the geographical extent of views. Preparation of any simulations of visual change should be guided by best practice as identified by the NZILA¹³.

¹³ Best Practice Guide: Visual Simulations BPG 10.2, NZILA

The assessment of visual effects should also distinguish between temporary (often associated with operation) and permanent effects where relevant. The duration of the temporary effects may also be a consideration when evaluating the magnitude of visual change.

The magnitude of change resulting from the proposed development is combined with the sensitivity of the viewing audience to determine the overall significance of visual effects. It should also be stressed that a change in view is not always negative and does not automatically generate adverse effects. **Table 2** below has been prepared to help guide this process:

Contributing Factors		Higher	Lower
Sensitivity	Susceptibility to change	Views from dwellings and recreation areas where attention is typically focussed on the landscape.	Views from places of employment and other places where the focus is typically incidental to its landscape context. Views from transport corridors.
	Value attached to views	Viewpoint is recognised by the community such as an important view shaft, identification on tourist maps or in art and literature. High visitor numbers.	Viewpoint is not typically recognised or valued by the community. Infrequent visitor numbers.
Magnitude of Change	Size or scale	Loss or addition of key features in the view. High degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Full view of the proposed development.	Most key features of view retained. Low degree of contrast with existing landscape elements (i.e. in terms of form scale, mass, line, height, colour and texture). Glimpse / no view of the proposed development.
	Geographical extent	Front on views. Near distance views; Change visible across a wide area.	Oblique views. Long distance views. Small portion of change visible.
	Duration and reversibility	Permanent. Long term (over 15 years).	Transient / temporary. Short Term (0-5 years).

Table 2: Determining the significance of visual effects

Nature of Effects

In combination with assessing the significance of effects, the landscape and visual effects assessment also considers the nature of effects in terms of whether this will be positive (beneficial) or negative (adverse) in the context within which it occurs. Neutral effects can also occur where landscape or visual change is considered to be benign in the context of where it occurs.

This assessment of the nature effects can be further guided by **Table 3** set out below:

Nature of effect	Use and Definition
Adverse (negative):	The proposed development would be out of scale with the landscape or at odds with the local pattern and landform which results in a reduction in landscape and / or visual amenity values
Neutral (benign):	The proposed development would complement (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values
Beneficial (positive):	The proposed development would enhance the landscape and / or visual amenity through removal of restoration of existing degraded landscapes uses and / or addition of positive elements or features

Table 3: Determining the Nature of Effects

Determining the Overall Significance of Landscape and Visual Effects

The landscape and visual effects assessment concludes with an overall assessment of the likely significance of landscape and visual effects. This step also takes account of the nature of effects and the effectiveness of any proposed mitigation.

This step informs an overall judgement identifying what level of effects are likely to be generated as indicated in **Table 4** below. This table which can be used to guide the significance of landscape and visual effects uses an adapted seven-point scale derived from NZILA's Best Practice Note.

Effect Rating	Use and Definition
Very High:	Total loss to the characteristics or key attributes of the receiving environment and /or visual context amounting to a complete change of landscape character.
High:	Major change to the characteristics or key attributes of the receiving environment and /or the visual context within which it is seen; and/or a major effect on the perceived amenity derived from it. <i>Oxford English Dictionary Definition</i> <i>High: adjective- 1. Extending above the normal level. 2. Great in amount, value, size, or intensity.</i>
Moderate- High:	A moderate - high level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate - high level of effect on the perceived amenity derived from it.
Moderate:	A moderate level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a moderate level of effect on the perceived amenity derived from it. <i>Oxford English Dictionary Definition</i> <i>Moderate: adjective- average in amount, intensity, or degree</i>
Moderate - Low:	A moderate - low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have moderate - low level of effect on the perceived amenity derived from it.
Low:	A low level of effect on the character or key attributes of the receiving environment and/or the visual context within which it is seen; and/or have a low effect on the perceived amenity derived from it. <i>Oxford English Dictionary Definition</i> <i>Low: adjective- 1. Below average in amount, extent, or intensity.</i>
Very Low:	Very low or no modification to key elements/ features/ characteristics of the baseline or available views, i.e. approximating a 'no change' situation.

Table 4: Determining the overall significance of landscape and visual effects

Determination of "minor"

Decision makers in assessing whether an application should be notified must assess whether the adverse effects of the activity on the environment will be more than minor. Likewise, when assessing a non-complying activity, consent can only be granted if the s104D 'gateway test' is satisfied. This test requires the decision maker to be assured that the adverse effects of the activity on the environment will be minor or not be contrary to the objectives and policies of the relevant planning documents.

These assessments will generally involve a broader consideration of the effects of the activity, beyond the landscape and visual effects. Through this broader consideration guidance may be sought on whether the landscape and visual effects are considered minor. In relation to this assessment of moderate-low significance would generally equate to 'minor'. **Table 5** illustrates consideration of minor in relation to adverse effects using the seven-point scale applied.

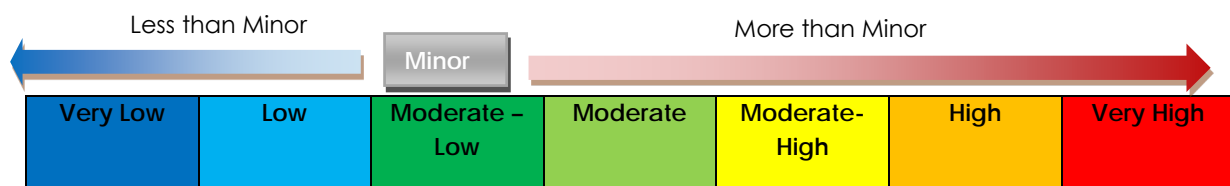


Table 5: Determining minor effects for the purpose of notification determination and non-complying activities

Appendix 2: Visual Simulations Methodology

VISUAL SIMULATIONS - METHODOLOGY

These visual simulations have been produced in accordance with the NZILA Best Practice Guidelines for Visual Simualtions - BPG 10.2. The preparation of simulations consists of three main phases:

1. Site Visit and Image Processing

This phase required travelling to the site to aquire site photos. Photos were taken with a digital SLR camera with a full frame sensor, fitted with a 50mm focal length lens and mounted on a tripod.

Overlapping photographs were captured using a panoramic head, including a set of 360° photos. The tripod was set up over predetermined viewpoint locations.

Each set of photographs was then digitally stitched to create a merged panorama with a 90° field of view.



To assist with the registration of the modelling to the photography, and to assist in the determination of which trees would be removed, a UAV flight was also undertaken to capture imagery from which a 3D point cloud was created.

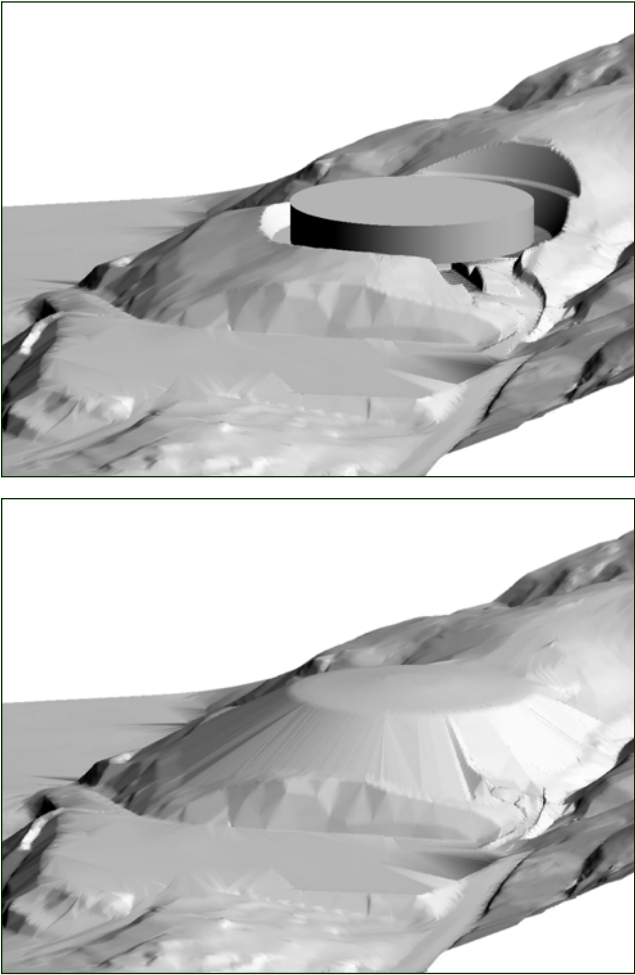


2. Creation of 3D Model and 3D Point Cloud

This phase consisted of building a computer model of the site and aligning this model view with the photographs taken onsite.

This was done by creating a “virtual camera” in the 3D model that replicated the parameters of the panorama. This allowed the two views to be registered together using the LIDAR point cloud data for registration.

The 3D model was then textured with a grass material and each view rendered to incorporate lighting and shadows.



3. Final Production

This phase brought the existing photograph and the rendered model view together to create a composite “proposed” view - the visual simulation.

Foreground masking and fine tuning of materials and shadows were also applied during this phase.

“Before” and “After” images were then placed together on to a page, allowing direct comparison between the two. Viewpoint location and camera details were added to the titleblock.



Appendix 3: Summary Table of the Nature and Significance of Visual Effects

Reference	Viewing Audience	Minimum Distance to Views	Area Proposed Development is Visible ¹⁴	Extent of visibility ¹⁵	Orientation of Views ¹⁶	Transient / Fixed	During Construction		Completion (After 5 years)		Notes
							Significance of Visual Effects ¹⁷	Nature of Effect ¹⁸	Significance of Visual Effects	Nature of Effect	
A	Users of Recreation Tracks along Prince of Wales Spur	0m	Prince of Wales Spur, Upper Park	Full	Frontal	Transient	n/a	n/a	Moderate - Low	Neutral	During construction, recreation use will be prevented removing potential views. Once completed the rounded form of the reservoir will become increasingly integrated within surrounding vegetation as proposed planting matures. The accessible flattened grassed dome on the top of the reservoir will retain open views across broad area of Wellington consistent with existing views.
B	Users of Upper Park (Prince of Wales Park)	0m	Prince of Wales Spur, Upper Park	Full	Frontal	Transient	n/a	n/a	Low	Neutral	During construction, recreation use will be prevented removing potential views. Views across open playing fields will be reinstated following construction, albeit at a slightly higher elevation. Views towards Prince of Wales Spur will remain softened by mature pohutukawa trees retained along the southern edge of the Upper Park. The northern slopes of the reservoir will be reinforced by further amenity planting with additional vehicle access and car parking accommodated on the western edge of the Spur screened beyond intervening vegetation.

¹⁴ Locations where Proposed Development is Visible: Prince of Wales Spur, Upper Park, Lower Park

¹⁵ Extent of visibility: Full, Partial, Small Amount, Negligible

¹⁶ Orientation of Views: Frontal, Oblique, Rear

¹⁷ Significance of Effects: Very Low, Low, Moderate-Low, Moderate, Moderate-High, High, Very High

¹⁸ Nature of Effect: Adverse, Neutral, Beneficial

C	Users of Lower Park (Prince of Wales Park)	0m	Prince of Wales Spur, Lower Park	Full	Frontal	Transient	n/a	n/a	Low	Neutral	During construction, impacts on views from within the Lower Park will be wholly disrupted by parking, worker accommodation and the potential operation of large machinery. Views across open playing fields will be reinstated following construction, albeit at a slightly higher elevation surrounded by increased retaining. Views towards Prince of Wales Spur and modified slopes required to accommodate the proposed reservoir will become increasingly naturalised by replacement native revegetation and will complement a wider green backdrop including native planting and mature pine which will largely appear to be retained from this park.
D	1 and 3 Dorking Road	100m	Prince of Wales Spur	Partial	Oblique, Rear	Fixed	Low	Adverse	Very Low	Neutral	During construction, excavation and the operation of machinery will impact on areas of existing open space and vegetation seen in oblique views. Once completed, any change in landform associated with Prince of Wales Spur will be difficult to detect and become increasingly assimilated within surrounding vegetation as this matures.
E	2 - 26 Dorking Road (even numbers only)	80m	Prince of Wales Spur	Partial	Oblique, Rear	Fixed	Moderate - Low	Adverse	Low	Neutral	During construction, excavation and the operation of machinery will impact on views looking down over existing open space and vegetation seen in oblique foreground views which overlook existing development in Mount Cook within a wider towards Mount Victoria. Once completed, the proposed change in landform associated with Prince of Wales Spur will reinstate an open space grass outlook in the foreground which will become increasingly assimilated within surrounding vegetation as this matures.

F	28, 30 and 32 Dorking Road	200m	Prince of Wales Spur	Partial	Frontal	Fixed	Moderate	Adverse	Very Low	Neutral	During construction, excavation and the operation of machinery will impact on views looking down over open space seen below broader view towards Mount Victoria and the Rimutaka Ranges. The proposed change in landform associated with Prince of Wales Spur will reinstate an open space grass outlook in the foreground which will become increasingly assimilated within surrounding vegetation as this matures.
G	5 – 25 Dorking Road (odd numbers only)	150m	Prince of Wales Spur	Partial	Frontal, Oblique	Fixed	Moderate	Adverse	Very Low	Neutral	During construction, excavation and the operation of machinery will impact on views looking down on open space beyond intervening development seen within a broader view looking towards Wellington Harbour and Mount Victoria. Once completed, any change associated with Prince of Wales Spur will be reinstated as an open space grass outlook which will become increasingly assimilated within surrounding vegetation as this matures.
H	55 Bidwill Street, 82 - 102 Rolleston Street (even numbers only)	15m (Upper Park)	Upper Park, Prince of Wales Spur	Partial	Frontal, Oblique	Fixed	Moderate – High	Adverse	Low	Neutral	During construction, stockpiles of up to 5 metres and the operation of machinery will remove existing views open playing fields in the Upper Park, some of which will remain partially filtered through intervening trees to the west of Rolleston Street. Oblique views towards construction activity within Prince of Wales Spur will remain partially screened by intervening vegetation including mature pohutukawa trees retained along the southern edge of the Upper Park with access to the reservoir site and operation of machinery potentially visible to the right of this. Once completed, views across open playing fields will be reinstated, albeit at a slightly higher elevation with any change in topography associated with Prince of Wales Spur softened by retained pohutukawa and further amenity planting introduced along the northern slopes of the buried reservoir.

Appendix 3: Summary Table of the Nature and Significance of Visual Effects

I	64 – 80 Rolleston Street (even numbers only), 49-53 Bidwill Street (odd numbers only).	20m (Upper Park)	Upper Park, Prince of Wales Spur	Small Amount	Oblique	Fixed	Moderate - Low	Adverse	Low	Neutral	During construction, stockpiles of up to 5 metres and the operation of machinery will impact on oblique views towards existing areas of open space within the Upper Park. Oblique views towards modified areas of Prince of Wales Spur will remain partially screened by mature pohutukawa trees retained along the southern edge of the Upper Park which will be reinforced by further amenity planting. Once completed views across open playing fields will be reinstated through chain link fencing with any change in topography associated with Prince of Wales Spur limited by further amenity planting along the northern slopes of the buried reservoir.
J	73 Rolleston Street	0m (Upper Park)	Upper Park	Small Amount	Oblique	Fixed	Moderate - Low	Adverse	Very Low	Neutral	During construction views of stockpiles from windows along the southern side of this dwelling may be visible above an existing embankment and beyond existing chain link fencing which forms the northern edge of the Upper Park. Once completed, views will continue to look out on open space above a grassed and vegetated embankment and through chain link fencing.
K	63 – 71 Rolleston Street (odd numbers only)	7m (Upper Park)	Upper Park, Prince of Wales Spur	Small Amount, Negligible	Oblique, Rear	Fixed	Low	Adverse	Very Low	Neutral	With the exception of potential glimpse views of the tops of stockpiles introduced on the Upper Park and associated machinery seen during construction seen above existing chain link fencing, existing views from these dwellings will likely remain unchanged.

L	46 Hargreaves Street	0m (Upper Park)	Upper Park, Prince of Wales Spur	Most	Oblique	Fixed	Moderate - High	Adverse	Low	Adverse	During construction, stockpiles of up to 5 metres and the operation of machinery will be visible from side windows of this dwelling as well as the driveway off Hargreaves Street. Beyond this, views towards modified areas of Prince of Wales Spur will remain partially screened by mature pohutukawa trees retained along the southern edge of the Upper Park. Once completed the Upper Playing Field will be reinstated, albeit at a slightly higher elevation seen beyond existing chain link fencing. Further planting may be necessary along the northern margins of the Upper Park to soften the perceived change in level that might otherwise remain apparent from this area.
M	38 – 44 Hargreaves Street (even numbers only)	10m (Upper Park)	Upper Park, Prince of Wales Spur	Partial	Oblique	Fixed	Moderate - Low	Adverse	Low	Neutral	During construction, stockpiles and operational machinery will likely be visible within the Upper Park from the front of this dwelling. Beyond this, the retention of mature pohutukawa will partially screen construction activity within Prince of Wales Spur. Once completed the Upper Playing Field will be reinstated, albeit at a slightly higher elevation seen beyond existing chain link fencing, beyond which an open space outlook towards Prince of Wales Park will be retained.
N	15 – 23 Hargreaves Street (odd numbers only) and dwellings along Papawai Terrace	40m (Upper Park)	Upper Park, Prince of Wales Spur	Negligible	Oblique, Rear	Fixed	Very Low	Neutral	Very Low	Neutral	Potential views from these dwellings will most likely remain concealed beyond existing vegetation established to the east of the Upper Park.

O	1-7 Westland Road (odd numbers only), 1, 7 and 9 Salisbury Avenue, 2-10 Salisbury Avenue (even numbers only) and 11 Salisbury Terrace	6m (Lower Park)	Lower Park, Prince of Wales Spur	Partial, Small Amount	Rear, Oblique	Fixed	Moderate	Adverse	Low	Adverse	During construction, retaining walls will be established along the eastern and southern edges of the Lower Park adjacent the existing embankment and chain link fencing. Above these, stockpiles of up to 6 metres, machinery and storage of equipment will be visible above existing fencing and planting forming rear boundaries. Beyond this, the majority of trees established along the existing green backdrop forming Prince of Wales Spur will be retained with the exception of several mature pine trees removed to accommodate the proposed reservoir. Once completed, open space within the Lower Park will be reinstated, albeit at a higher elevation resulting from increased retaining established along the eastern boundary. Further planting including vegetation established within the terramesh structure may be necessary to soften the perceived change in elevation and the existing park edge in this area. Beyond this, vegetation re-established on the eastern embankment of the Reservoir will increasingly reinstate a wider visible green backdrop.
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P	Dwellings along Salisbury Terrace	15m (Lower Park)	Lower Park, Prince of Wales Spur	Small Amount	Oblique	Fixed	Moderate	Adverse	Low	Adverse	During construction, terramesh (or similar) retaining walls which lift the Lower Park will be visible and replace a mature pohutukawa tree established at the western end of Salisbury Terrace. Above this, construction activity and machinery may be visible within the Lower Park. Beyond this, the removal of a localised area of vegetation may be visible on Prince of Wales Spur alongside the operation of some elevated machinery, which may disrupt part of a wider green backdrop currently visible in this area. Once completed, retaining supporting the Lower Park will remain apparent albeit at a higher elevation. Planting within the terramesh wall will ensure this becomes increasingly re-absorbed within the broader vegetated backdrop. Beyond this, any change to the green backdrop visible along Prince of Wales Spur will remain difficult to detect.
Q	Dwellings along Wright Street and 2, 4 and 6 Westland Road.	170m	Prince of Wales Spur	Partial, Small Amount	Frontal, Oblique, Rear	Fixed	Low	Adverse	Very Low	Neutral	Views towards the Upper and Lower Parks will likely remain concealed beyond vegetation and intervening development. Beyond this, glimpse views may be available from some dwellings of the removal of a localised area of vegetation and construction activity along Prince of Wales Spur seen beyond vegetation retain to the east of this spur. Such views will temporarily disrupt a localised part of the green backdrop currently apparent. Once completed the proposed reservoir will become reintegrated in surrounding areas of vegetation and reinstate the wider open space green backdrop.

R	1-51 Connaught Terrace	400m	Prince of Wales Spur	Small Amount, Negligible	Oblique	Fixed	Very Low	Adverse	Very Low	Neutral	During construction the removal of mature pine trees and the operational of taller machinery may be visible above intervening vegetation within the Town Belt and seen beyond an existing backdrop of longer distance views taking in Wellington City and the western edge of Wellington Harbour. Once completed there any change in Prince of Wales Park will be difficult to detect from this area and approximates a no change situation.
S	Wider Mount Cook suburban area	160m	Prince of Wales Spur	Small Amount	Oblique	Fixed	Low	Adverse	Very Low	Neutral	The majority of views from dwellings will be concealed by intervening development. Where visible during construction the removal of mature pine trees and the operational of taller machinery may be perceived within a local area of Town Belt and open space seen below existing residential development in Brooklyn. Once completed revegetation associated with the proposed reservoir will enable any modification to become reintegrated into the wider Town Belt.
T	West Newtown suburban area	290m	Prince of Wales Spur	Small Amount	Oblique	Fixed	Very Low	Adverse	Very Low	Neutral	The majority of dwellings will remain concealed beyond intervening development, beyond which retained vegetation throughout the Town Belt will further limit views towards the Site. During construction there may be potential to see some change in the removal of taller vegetation and the operation of machinery. Once completed no change will likely be apparent.
U	East Newtown suburban area	850m	Prince of Wales Spur	Small Amount	Oblique	Fixed	Very Low	Adverse	Very Low	Neutral	Visibility from this area will be limited by intervening development and form an area of localised disruption within a wider ribbon of green belt separating Newtown from Brooklyn. Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.

V	Wellington Hospital	600m	Prince of Wales Spur	Small Amount	Oblique	Transient	Very Low	Adverse	Very Low	Neutral	Visitors and patients looking out elevated windows of the hospital may obtain long distance views towards disruption and operation of machinery present within Prince of Wales Park, forming a localised area of a wider green backdrop. Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.
W	Governor House	650m	Prince of Wales Spur	Small Amount	Oblique	Transient	Very Low	Adverse	Very Low	Neutral	Oblique views from elevated windows of Governor House may obtain long distance views towards disruption and operation of machinery present within Prince of Wales Park, forming a localised area of a wider green backdrop. Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.
X	Te Aro urban area	890m	Prince of Wales Spur	Small Amount	Oblique	Transient	Very Low	Adverse	Very Low	Neutral	Potential long distance views looking south from within this urban area may observe some disruption within the Town Belt below existing residential development in Brooklyn. Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.
Y	Mount Victoria suburban area	1km	Prince of Wales Spur	Small Amount	Oblique	Fixed	Very Low	Adverse	Very Low	Neutral	Potential long and very long distance views may observe some disruption within the Town Belt below existing residential development in Brooklyn. Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.

Appendix 3: Summary Table of the Nature and Significance of Visual Effects

Z	Mount Victoria Lookout	2.1km	Prince of Wales Spur, Upper Park, Lower Park	Small Amount	Frontal	Transient	Very Low	Adverse	Very Low	Neutral	Very long distance elevated views will observe some disruption within the Town Belt including Prince of Wales Spur and the upper Park seen within a narrow band of vegetation separating Mount Cook from Brooklyn Once completed revegetation associated with the proposed reservoir will enable any modification detected to become reintegrated into the wider Town Belt.
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