

NOTICE OF REQUIREMENT FOR A DESIGNATION OF LAND & RESOURCE CONSENT APPLICATION

Tasman District Council –
Richmond South Low Level Reservoir

7 June 2024



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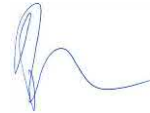
Date: 7 June 2024
Reference: 5-G3445.59
Status: FINAL

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Approved for release by



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Document History and Status

Revision	Date	Author	Reviewed by	Approved by	Status
A	19 Jan. 23	Susi B. Solly	Reuben Peterson	Darren Rodd	Draft
B	3 April 2023	Susi B. Solly	Reuben Peterson	Darren Rodd	Final
C	7 June 2024	Susi B. Solly	Reuben Peterson	Petra Burns	Final

Revision Details

Revision	Details
A	Issued for client review
B	Issued to client
C	Changes to reservoir size and construction methodology - issued to client

Disclaimers and Limitations

This report (**'Report'**) has been prepared by WSP exclusively for the Tasman District Council (**'Client'**) in relation to the Notice of Requirement to designate the site at 520 Hill Street South, Richmond, for water supply purposes and the associated application for regional resource consents. The findings in this Report are based on and are subject to the assumptions specified in the Report. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose.



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Application Form

Notice of Requirement by the Tasman District Council for Designation for “Water Supply Purposes” and Application for Resource Consent

Pursuant to Sections 88 and 168A of the Resource Management Act 1991

TO: Tasman District Council (Consents)
Private Bag 4
Richmond 7050

FROM: Tasman District Council (Utilities)
C/- WSP
Private Bag 36
Nelson 7010
Attn: Susi B. Solly

1. Notice of Requirement (NOR):

Tasman District Council (TDC) is a requiring authority pursuant to Section 166 of the RMA.

TDC, in its capacity as requiring authority gives Notice of Requirement for the Richmond South “water supply purposes” designation to be shown in the Tasman Resource Management Plan (TRMP). The designation is for the provision of a new water supply reservoir (WSR) for the purpose of providing a reticulated water supply to existing and developing residential zones, including the deferred residential zones.

2. Regional Resource Consents

TDC applies for the following types of resource consent associated with the installation of the proposed water supply infrastructure:

RMA	Consent	Activity	Term
s13	Land Use consent	Installation of a new outfall / discharge structure in upper Borck Creek that is > 2m ² in area.	35 years
s15	Discharge Permit	Discharge of water from reservoir integrity testing/ commissioning of reservoir.	5 years
		Incidental discharges during installation of the outfall structure.	5 years
		Discharges during reservoir maintenance and from overflow (emergency) events.	35 years

3. The site to which the resource consent application and requirement applies is as follows:

Address	Legal Description	Owners/ Occupiers
520 Hill Street South, Hope	Section 1 Survey Office Plan 533003, RoT 915673	Tasman District Council

A copy of the Record of Title and Gazette Notice are contained in Appendix A.

The extent of the proposed designation comprises all of Section 1 Survey Office Plan 533003 as per Record of Title 915673 (1.3740 hectares more or less). This is shown in Appendix B (Land Requirement Plan).

4. The nature of the proposed conditions that would apply to the NOR are:

Conditions are proposed to manage the level of effects associated with the establishment of the water supply reservoir. Refer to Appendix C.

5. The nature of the proposed work is:

The construction, operation and maintenance of the Richmond South water supply reservoir to serve and supply the existing and developing residential zones, including the deferred residential zones, around Richmond with a reticulated water supply.

The works will involve the following specific activities:

- Removal of the existing house, garage, and garden at 520 Hill Street South;
- Earthworks, retaining walls and driveway realignment to create access and a platform for the reservoir to be constructed on;
- Construction of a cylindrical, 22 m internal diameter above ground water reservoir (2,500 m³ capacity), including external valve chamber and seismic shutoff valve.
- Landscape planting carried out around the site;
- Overflow pipe/ scour line to upper Borck creek with associated outfall; and discharges during commissioning of the reservoir, maintenance and emergency situations;
- Potential future water pumpstation.
- Temporary access for construction purposes across the neighbouring property at 177 White Road (subject to negotiations with the neighbouring property owner).

6. The effects that the proposed work will have on the environment, and the ways in which any adverse effects will be mitigated are:

The effects that the proposed work will have on the environment, and a summary of the proposed measures to avoid, remedy or mitigate any potential adverse effects, are set out in Section 6 of this report.

This includes an assessment of the proposed activity's effect on the environment that –

- a) includes the information required by clause 6 of Schedule 4 of the Resource Management Act 1991; and
- b) addresses the matters specified in clause 7 of Schedule 4 of the Resource Management Act 1991; and
- c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

7. Additional resource consents required in relation to the proposal:

No other consents are required. Earthworks to form a temporary construction access and laydown area at 177 White Road are likely to comply with permitted activity standards. Details of this temporary access and laydown area are subject to negotiations with the neighbouring property owner and will be developed during detailed design. If required, a separate consent for land disturbance will be sought at a later date.

8. Alternative sites and methods have been considered to the following extent:

Alternative sites and methods have been considered and are described in Section 7 of this report. The site has been chosen, based on the factors outlined in Section 7, as the best overall solution for providing a water supply to serve the growing Richmond community. In short, the

site was selected due to its ability to serve the intended areas of the Residential Zone, and its elevation, which is important as the proposed reservoir will form part of the wider Richmond reticulated water supply network and must balance with other parts of the network. The reservoir is on the 62 m contour with an efficient connection route for the water main. The designation is located on land purchased by TDC. No significant loss of vegetation, or any public open space is required.

9. The proposed work and designation are reasonably necessary for achieving the objectives of the requiring authority because:

The objective of the project is to provide a reticulated water supply to existing and developing residential zones, including the deferred residential zones, around Richmond.

The Local Government Act 2002 (LGA02), Section 10 sets out the requirement for “the provision of efficient and effective infrastructure that meets the existing and foreseeable needs of the community”.

In this case, it is necessary to utilise the designation provisions of the Resource Management Act 1991 (RMA) to ensure that the land necessary for this public work is protected and available for the works to proceed.

The principal reasons for requiring a designation to facilitate the work to which this requirement relates are:

- It will allow the land required to be identified in the TRMP, giving a clear indication of the intended use of the land;
- It will provide certainty for Council, as infrastructure provider, and surrounding landowners of the intended use of the land and the work to be undertaken; and
- It will protect the land from future development which may otherwise preclude construction of the Project.

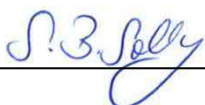
10. The consultation undertaken is described in Section 5 of this report.

11. Proposed Lapse Period:

Construction of the reservoir is expected to commence in early 2025. The standard 5-years lapse period is therefore considered sufficient.

12. An assessment of the proposed activity against the matters set out in Part 2 and against any relevant statutory provisions is attached.

13. No other information is required to be included in the application by the regional plan, the Resource Management Act 1991 or any regulations made under the Act.



Susi B. Solly | Signed on behalf of Tasman District Council
Date: 7 June 2024

Address for service (note separate address for invoicing):

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1 Introduction

1.1 Purpose of this Document

Tasman District Council (TDC), as the Requiring Authority, gives notice of its requirement to create a designation within the Tasman Resource Management Plan (TRMP). This notice is given in accordance with section 168A of the Resource Management Act 1991 (RMA).

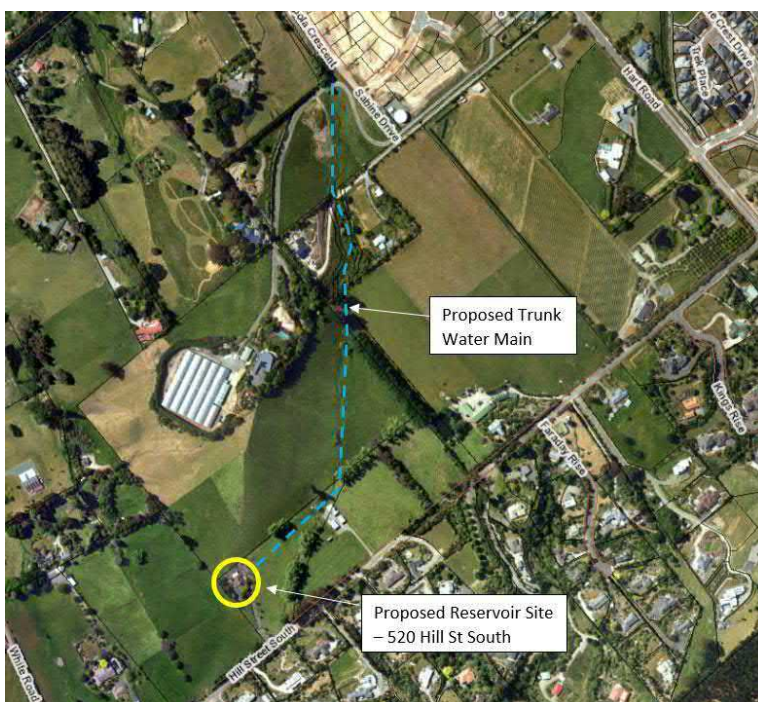
The necessary details of the proposed works are to be incorporated into the designation, such that an Outline Plan (section 176A RMA) will not be necessary. The designation is referred to as the Richmond South Water Supply Purposes (RSWSP) Designation. This document also seeks regional resource consents for the installation of the proposed scour line and associated incidental discharges, discharge of water from reservoir integrity testing/ commissioning of the reservoir and discharges during reservoir maintenance and from overflow (emergency) events.

1.2 Overview

The proposed water supply reservoir is required to serve the growing Richmond community. The reservoir will be located at 520 Hill Street South in the location of an existing house and gardens. This site was selected due its ability to serve the intended areas of the Residential Zone, and its elevation. Elevation is important as the reservoir will form part of the wider Richmond reticulated water supply network and must balance with other parts of the network.

The reservoir will have a total storage capacity of 2,500 m³. The reservoir is circular, 22 m in diameter (internally) and 8.7 m tall. It will be formed from concrete precast panels and constructed on site. Earthworks will be carried out to provide a suitable platform for the reservoir to sit on. This will be accessed via a driveway in generally the same location as currently exists. During construction, temporary access may be across the neighbouring property (177 White Road, Hope). This is subject to negotiations with the neighbouring property owner.

To provide a level of screening and ‘softening’ of the reservoir, most of the existing trees will be maintained along the rear (southwestern) boundary and the existing palms along the driveway will be retained where practicable. Additional planting will be carried out around the reservoir for screening purposes.



A piped network will be installed to deliver treated drinking water to the reservoir and then to deliver this water to the reticulated supply for residential housing (refer to Figure 1-1). It is noted that the piped network, including supply pipe running from the reservoir to Cupola Crescent, are not part of this resource consent application, which only covers the proposed overflow pipe/ scour line to upper Borck Creek and associated outfall structure and discharges from the reservoir during commissioning, for maintenance purposes or overflow in the event of system failure. Any consenting requirements for this piped network will be addressed separately, if required.

Figure 1-1: Indicative connection to piped network (not part of this proposal)

The proposed works will involve the following specific activities:

- Removal of the existing house and garage at 520 Hill Street South.
- Earthworks, retaining walls and driveway realignment to create a platform for the reservoir to be constructed on.
- Landscape planting carried out on the site to screen the reservoir.
- Construction of a cylindrical, 22 m diameter above ground water reservoir (2,500 m³ capacity), including external valve chamber and seismic shutoff valve.
- Overflow pipe/ scour line to upper Borck creek with associated outfall and discharges during commissioning of the reservoir, maintenance and emergency situations.
- Potential future water pumping station.
- Temporary access for construction purposes across the neighbouring property at 177 White Road (subject to negotiations with the neighbouring property owner).

The construction of the scour line including outfall structure and apron is a discretionary activity under regional TRMP Rule 28.1.8.1 as the outfall structure will more than 2m² in size. The associated discharges from this pipe to upper Borck Creek also require regional resource consent. This application fully details the activities in relation to these matters and sets out the applicable regulatory framework. It assesses the effects of this work and sets out the mitigation available including a set of volunteered conditions.

The construction of the reservoir and associated earthworks and landscaping, i.e., the 'land use aspects' of the proposal are covered under the NOR. The proposed conditions that would apply to the NOR are detailed in Appendix C.

All works, reservoir location and design, and site selection have been carefully considered to provide for the water supply of Richmond's growing population but also to avoid, remedy or mitigate any adverse effects on the adjacent community and the environment. The project has specifically considered the status of the ridgeline, on which it sits, as an area of special visual amenity. This is further detailed in the Landscape and Visual Assessment attached in Appendix D.

1.3 Purpose and Objective of the Designation

The designation provides certainty for the requiring authority, neighbouring landowners, and the general public that the land is required for the public infrastructure works. A designation gives notice of the public works land use intended on the land and will futureproof this land for establishment and ongoing operation of a new water supply reservoir and associated infrastructure.

The objective of the Richmond South Water Supply Purposes Designation is to provide a reticulated water supply to existing and developing residential zones, including the deferred residential zones, around Richmond. This will provide a safe and reliable community water supply that meets the foreseeable needs of the community.

1.4 Purpose of the Regional Resource Consent Application

With regards to the resource consent application, this report is the Assessment of Environmental Effects (AEE) to accompany the application in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991 (RMA). This report describes the proposal and provides an assessment of the requirements under the RMA and the relevant statutory documents including

the Tasman Resource Management Plan (TRMP). It also provides information on the surrounding environment and an assessment of actual or potential effects that could occur as a result of the activities subject to this application.

2 The Existing Environment

2.1 Site Location, Topography and Observations

The site of the proposed reservoir is 520 Hill Street South, Hope. This is to the south of Richmond. The site is zoned Rural 1 and is located adjacent to the southern extent of a large area of land zoned Rural 1 deferred Residential.

Designation D247 applies along the creek. As set out in Part II Appendix 1 'Designations' of the TRMP, designation D247 is for 'Local purpose reserve – stormwater and recreation' with TDC as the requiring authority.

The location of the site is shown in the images below:



Figure 2-1: 520 Hill Street South highlighted in yellow outline. Yellow shading shows the Rural 1 Zone, Lighter Pink shading shows the Rural Residential Zone on the slopes above Hill St South, Purple shading shows the Residential Zone and Pink hatching over yellow shows Rural 1 deferred Residential zoning. Image source: Top of the South Maps



Figure 2-2: 520 Hill Street South – reservoir to be located in the position of the existing house and garden. Image source: Top of the South Maps.

The topography of the site is characterised by a ridgeline which extends in a north-south direction and is situated on the western part of the site. From this ridgeline, the site slopes downhill towards upper Borck Creek. This creek flows through the application site, with the eastern property boundary running parallel to the creek and around 10 – 12 m to the east from it. The slope between the existing driveway and the creek is grassed and used for grazing.

The application site contains an existing dwelling and garage. The area from the driveway to the house and its curtilage is developed as a large residential property. The planting is well established and surrounds the house and garage. There is a row of palm trees running up the driveway. There is also a row of trees present on the southwestern boundary between the driveway as it wraps around the house and the fence line. These trees are well established and around 7 m in height. The house itself is two storied with a steeply pitched roof.

The house is located approximately on the broad ridge line and saddle between the hills to the east, and the slope and hilltop as it rises towards 52 Cupola Crescent to the north and west. The images below are representative of the site and surrounds. More detail is found within the Landscape Assessment included in Appendix D to this application.



The site viewed from below at Hill Street South (looking northwest)



The site viewed from above at the end of Sunview Heights



Looking east from the site towards Sunview Heights



The existing dwelling on site



View to the north towards 52 Cupola Crescent



View to the southwest

Figure 2-3: Site images from site visit 9 December 2019.

2.2 Surrounding Environment

The site is situated on the fringe of the rural land to the south of Richmond. To the southeast / east and located on the lower hill slopes overlooking the site are a number of rural-residential properties. The view in this direction is of housing with dwellings set within established well-planted gardens on the hill slopes.

To the northeast there are currently paddocks used for grazing and then the developed residential housing and roading. The paddocks are zoned Rural 1 deferred Residential. This land is generally flat or gently sloping. The reason for zone deferral is identified in the Tasman Resource Management Plan (TRMP) Schedule 17.14A as 'Reticulated water supply service required'. This land will become Residential Zone (serviced) once the deferral is lifted by Council after suitable water supply is provided. The view in this direction is currently of trees and paddocks.

The land to the west of 520 Hill Street South consists of larger lots containing paddocks and various rural and rural residential uses. This land is all zoned Rural 1. The topography is undulating hill slopes nearer to the site and flattening off towards the Waimea plains generally after Paton Road. The views in this direction are general rural and open in nature, with buildings and groups of trees visible in many locations. The landscape report in Appendix D includes further details of the site and surrounding environment.

2.3 Freshwater Environment

As noted under Section 2.1 above, upper Borck Creek is running through the application site and will be subject to discharges from the proposed reservoir. The creek is narrow (approximately 1-2m wide) with a clay-based streambed. Robertson Environmental Limited was engaged to undertake an assessment of the existing freshwater environment and its values and the potential effects associated with the proposal. This is attached in Appendix E.

The assessment concludes that the in-stream and riparian habitat of upper Borck Creek at the subject site is “*highly degraded*” and of “*relatively low value ecologically*”. The assessment states that “*No natural wetlands, rare plant species or vegetation communities were recorded within the proposed discharge location or wider surveyed reach*”. More detail is found within the Ecological Impact Assessment included in Appendix E.

2.4 Geotechnical Setting

A geotechnical investigation was carried out in January 2021 and included a desktop study, geological walkover and drilling of boreholes. A detailed geotechnical assessment has subsequently been carried out to evaluate the ground and groundwater conditions and other geotechnical issues to be addressed in the reservoir design (refer to Geotechnical Assessment Report (GAR), Issue 2, 17/02/2022, Appendix G).

The 2022 GAR was prepared for a previous reservoir layout (4,300 m³ volume, 25.7 m internal diameter) and concludes that the potential for liquefaction and hence lateral spread at the reservoir site is low. The recommendations in the report will be considered in the detailed design stage. The reservoir size has since been reduced (2,500 m³, 22 m internal and 22.6 m external diameter), however, the previous recommendations made in the 2022 GAR are still applicable, as confirmed in the Geotechnical support letter, dated 14 May 2024 and also attached in Appendix G.

3 Description of Proposal

3.1 Overview

This section describes the project in greater detail, outlining the construction activities required and the nature of the physical infrastructure. It will describe various mitigation actions carried out during construction or built into the design. This is expanded on to a greater degree in the assessment of effects section. The overall design of the reservoir and its positioning has been carried out. A number of the key desired outcomes relate to this NOR and resource consent application. These were:

- 1) Achieving optimum landscape value, including retaining as much as possible of the existing mature tree line on the southwest boundary; surface treatment, and provision of screen planting.
- 2) Minimising the reservoir platform extent, batter extent and therefore associated earthworks extent and costs.
- 3) Minimising the reservoir construction costs.
- 4) Ensuring access for construction and future maintenance.

A set of drawings is included within Appendix F which show the detail of the proposed works. The map below shows the areas that will be serviced by the new reservoir at 520 Hill Street South.



Figure 3-1: Proposed reservoir supply area (source: TDC)

3.2 Related Projects

TDC is planning to enhance freshwater ecological environments and develop the stormwater system in Richmond South by re-establishing former waterways and enhancing old, degraded farm drains. The Richmond South Stormwater Project involves the development of a multi-use, greenway corridor from the foothills which will link with upper Borck Creek and the corridor already constructed in Richmond West's Berryfields subdivision. These corridors will also provide direct safer off-road active transport connections with pathways linking Richmond South, central Richmond and the schools on Salisbury Road.

Part of the proposed greenway route, including where it runs through the application site, is shown in Figure 3-2 below. The works include stream rehabilitation, cycle and walkway construction and installation of a water main (connecting the reservoir to the piped network). While related, these works are not part of the proposal, with separate consultation undertaken as part of the Richmond South greenway programme. The figure below, and the text within it, was generated as part of that consultation programme.

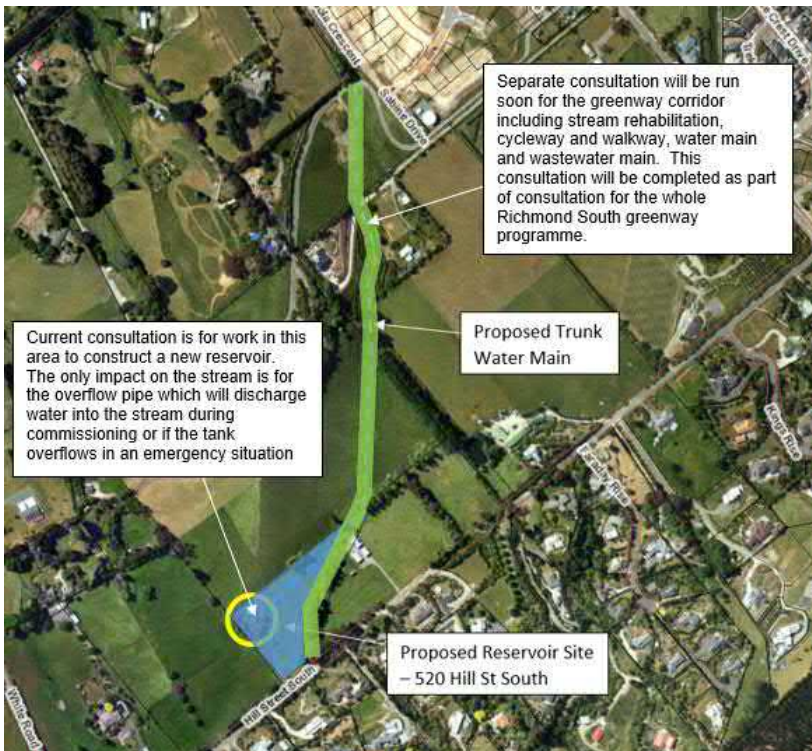


Figure 3-2: Proposed Richmond South greenway (source: TDC)

3.3 Site Layout & Design

3.3.1 Reservoir Configuration and Design

The proposed reservoir configuration is shown in the image below. The key considerations for this configuration, as they relate to this NOR and resource consent application, are outlined in section 3.1 above. Various reservoir configurations and layout options have been considered and these are detailed further under Section 7 Alternatives. The most recent of the previous reservoir layout options consulted on (a single reservoir with 4,300 m³ volume and 25.7 m external diameter) has now been reduced in size to minimise the reservoir platform extent and construction costs.

The proposed reservoir design is shown in the cross-sectional image below. The reservoir height is approximately 8.7 m at the external wall, with a partial handrail. An access ladder/ platform will be constructed at the rear (northwestern) side of the reservoir. As noted earlier in this report, the circular reservoir (22 m in internal diameter) will have a total storage capacity of 2,500 m³. The reservoir will be formed from specialist concrete tilt slabs connected together on site. The reservoir will have a solid top.

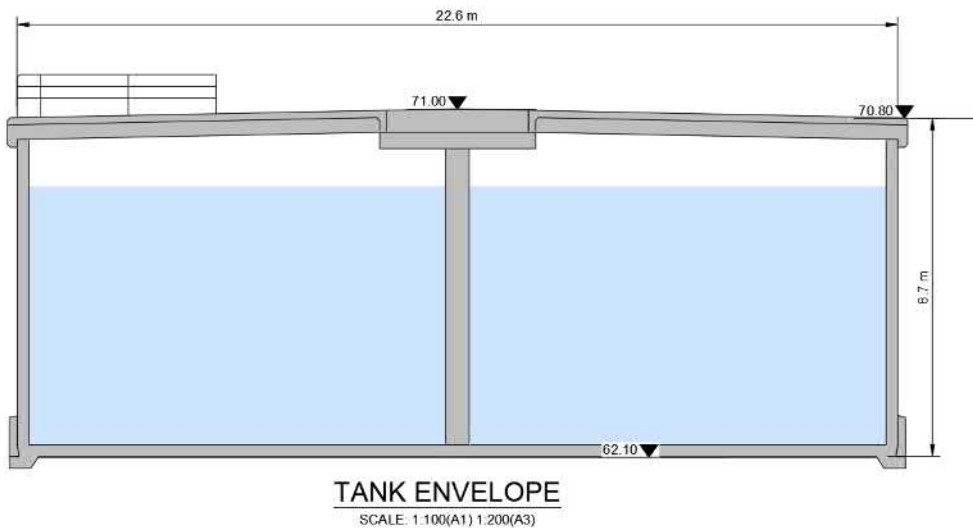


Figure 3-3: Cross-sections of reservoir concept design



Figure 3-4: Preferred site configuration, including indicative location of future pumpstation

3.3.2 Site and Construction Access

Vehicle access will be from Hill Street South in the general location shown in Figure 3-4. This largely follows the alignment of the existing driveway. A separate crossing may be constructed in the future for the proposed greenway corridor along upper Borck Creek, including stream rehabilitation, cycle and walkway (refer to Section 3.2). However, this is not part of this application.

The access to the site is relatively steep. The access may be temporarily widened with gravel to provide for construction access at the time of the reservoir construction. The final width of the access will comply with Nelson Tasman Land Development Manual (NTLDM) requirements.

Outside of the construction period there will be infrequent vehicle movements to and from the site. Vehicle movements will predominantly be for maintenance and monitoring purposes. These will generally be light vehicles and occur on average 1-2 times a day during normal operations.

During construction more frequent vehicle movements will occur. These may include heavy vehicle movements for earthworks, to deliver the reservoir components (tilt slabs) and the crane to carry out the construction of the reservoir. Nominally, construction access is proposed along the driveway, however, this may change subject to the contractor's requirements (e.g., for the crane delivery) and negotiations with the neighbours. TDC is currently in the process of negotiating construction access with the neighbouring property owners to the west (177 White Road, Hope), including for an approximately 500 m² construction laydown area adjacent to the proposed reservoir site and associated temporary construction access from Hill Street (approximately 100 m southwest of the existing vehicle entrance to 520 Hill Street). Details of this will be provided when available.

3.3.3 Potential future pumping station

The proposed designation provides flexibility for including a future pumpstation to supply a future high-level reservoir further up the hill. This is likely to involve two single stage centrifugal pumps and associated valving, which will be housed in a suitable noise attenuated enclosure. The future pumpstation would have an approximate footprint of 5m x 3m and, if above ground, a maximum height of approximately 3.5m.

3.3.4 Reservoir Overflow, Scour Line, Outfall and Apron Design

The proposal involves the installation of a reservoir overflow, scour line and associated outfall works in upper Borck Creek. An indicative scour line route is shown in Figure 3-5 below. Details of the scour line and route will be developed during detailed design in conjunction with the Borck Creek upgrade project/ Richmond South greenway programme.

Opportunities to shorten the scour pipe prior to discharging into upper Borck Creek will be explored during detailed design. This approach would seek to provide opportunities for a natural swale, which will help with energy dissipation, filtering and infiltration of the discharged water prior to discharging into Borck Creek. A swale option would require additional rock riprap and geofabric to prevent scour due to the grade of the channel and the velocity of the water.

Details of an indicative outfall design and alignment options are illustrated in Figures 3-5 and 3-6.

The overflow will be used during reservoir commissioning (refer to Section 3.5.2 of this report) and during emergency situations, e.g., process malfunctions at the water treatment plant, which provides water to the reservoir, and/or the level transmitter at the reservoir failing to provide an accurate reading, resulting in excess water in the reservoir and overflow conditions. It is important to note that these situations are extremely unlikely to occur, and loss of communication from the water treatment plant to the pumps will cause the pumps to stop.



Figure 3-5: Proposed scour line to upper Borck Creek (pipe option)

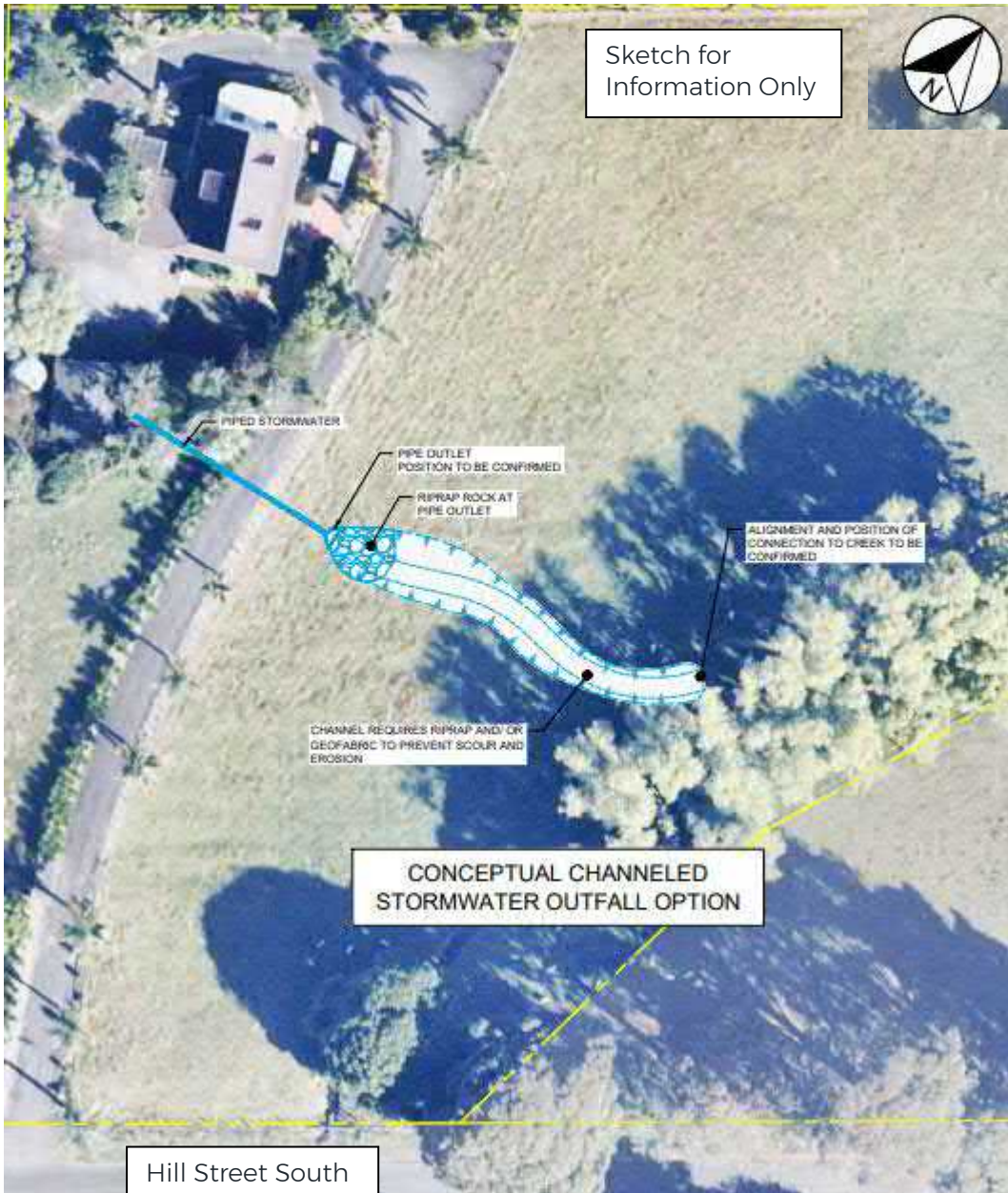


Figure 3-6: Proposed scour line to upper Borck Creek (channelled outfall option)

3.3.5 Landscaping

The visual effects of this proposal have been recognised at an early stage and the design has set out mitigation measures to minimise the adverse effects. A large proportion of the row of established trees on the southwestern boundary is being retained (refer to Figure 3-7). This ensures that from most viewpoints the reservoir will be seen with a vegetated backdrop. From the south and west the trees will screen the reservoir. In addition, a significant amount of new planting is proposed for the site. The detailed planting plan is included in Appendix D, with a snip provided in Figure 3-8 below.



Figure 3-7: Existing row of trees on the southwestern boundary, largely to be retained

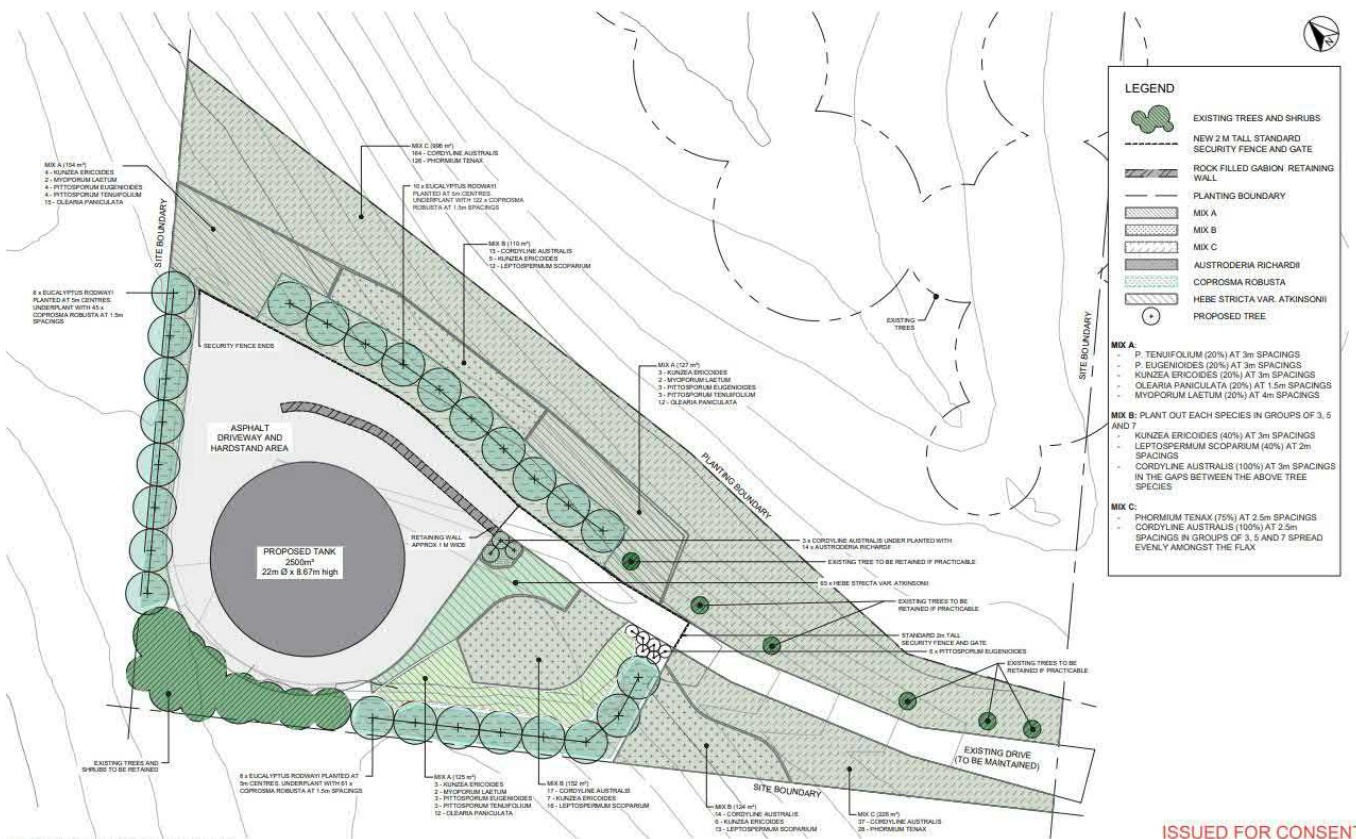


Figure 3-8: Proposed Landscape Plan

3.4 Earthworks and Construction Methodology

Works are expected to commence in early 2025 and completed within 12 - 15 months (reservoir construction and commissioning). The hours of operation during construction are projected to be 6am to 6pm Monday to Saturday. The works are expected to comply with construction noise standards and a condition to this effect has been volunteered (refer to Appendix C).

3.4.1 Enabling Works

The following activities will be undertaken during the Enabling Works stage.

Site Establishment and Preparation (Duration: approximately 3 - 5 weeks)

All existing services will be disconnected and clearly marked on the ground. Vegetation to be retained for reservoir screening will be clearly identified and marked on site as per the landscape plan (Appendix D).

The Contractor will install all erosion, sediment and dust control measures prior to the commencement of any land disturbance, and this will be maintained until all disturbed areas are stabilised and/or revegetated (refer to Section 3.4.3 below for more detail on the proposed dust, erosion and sediment control measures).

A specialist Sub-contractor will then remove the house and ancillary minor buildings. Once the house is removed, the Contractor will remove the septic tank and retaining walls local to the house pad and driveway. The existing driveway will be partially stripped, including all associated site vegetation not required.

Earthworks and Retaining Walls (Duration: approximately 26 weeks)

Work on the reservoir platform will commence with the contractor stripping off the overburden nominally 1.2m deep and transporting this off site. The maximum cut height is approximately 3.5 m and the estimated volume of material to be transported off site is 2,000 m³.

In addition to the reservoir, space needs to be provided to allow for construction to occur and for future maintenance access. The reservoir plus 3-4 m area of asphalt hardstand around it requires a flat platform of approximately 31 m in diameter. The approximately 4 m wide driveway is located below, and sloping up to, the reservoir platform. The extent of the platform is shown in Figures 3-4 and 3-8. The cross sections below (Figure 3-9) and in Appendix F illustrate the extent of earthworks required.

At the western edge of the reservoir pad a low retaining wall may be required to protect the established trees. Detailed design will confirm whether this wall can be eliminated from the design and the ground level raised in this location against the side of the reservoir.

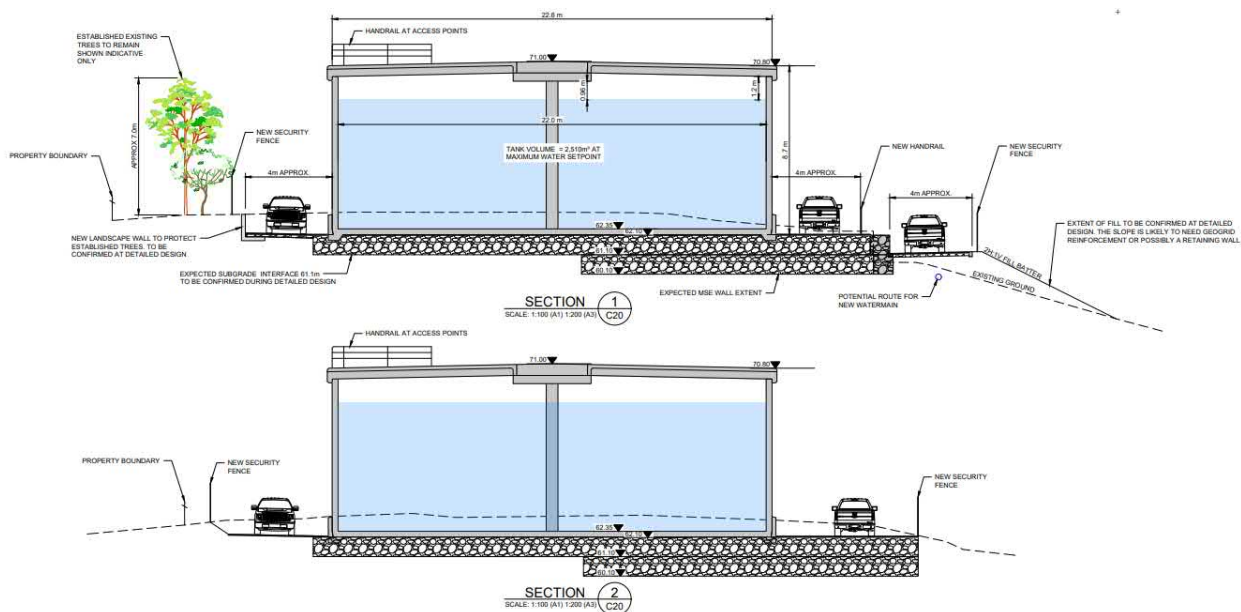


Figure 3-9: Proposed Cross Sections (to: West – East, bottom: Northwest - Southeast)

Work will then commence on the new Mechanically Stabilised Earth (MSE) retaining wall, which will form an integral part of the reservoir pad. Note: The reservoir services construction (underground pipe work detailed in Section 3.4.2 below) will likely occur before or alongside the MSE wall construction.

The formation of the reservoir platform will then commence, requiring approximately 1,200 m³ of structural fill to be transported to site. The structural fill will be installed in 200mm layers and extended out to include the backfilling of the retaining wall. Each layer will be compacted by a machine roller to the finished ground level.

Nonloadbearing fill may be placed on the downslope side of the MSE wall and driveway to support the realigned driveway and plantings on the eastern slope. Planting of the proposed species detailed in the Landscape Plan and Plant Schedule (refer to Appendix D) will be undertaken, including mulching to keep the soil moist, weed control and maintenance.

The access driveway will be left unsealed during construction. Equipment required during the Enabling Works phase includes: 25 Tonne excavator, drill rig, 10 Tonne roller, concrete pump truck, concrete trucks, and delivery trucks for cartage of material.

3.4.2 Reservoir Construction Works

The following activities will be undertaken as part of the Reservoir Construction works. As noted above, the underground services will likely be installed prior to or alongside the MSE wall construction.

Reservoir Services Construction (Duration: approximately 6 weeks)

This includes the following activities:

- Installation of the valve concrete chamber and connected inlet and outlet piping
- Installation of the overflow, scour line and associated outfall works in upper Borck Creek. (Note: the timing of this is dependent on the associated Borck Creek upgrade project/ the Richmond South greenway programme and may occur earlier or later in the project)
- Install electrical ducts to the reservoir and hook up of reservoir instrumentation. (Note: the electrical ducts need to be installed prior to constructing the reservoir base slab)

Equipment required during this phase includes: 10 Tonne excavator, delivery trucks and elevated work platforms.

Reservoir Construction (Duration: approximately 20 weeks)

Construction access will be from the existing property entrance and/ or the neighbouring property (177 White Road, Hope), where a laydown area is planned to be provided. TDC is currently in negotiations with the neighbouring property owners regarding this, and details of this will be provided when available.

The proposed sequence for the reservoir construction is as follows:

- Wall ring beam footing boxed on site and constructed with poured in-situ concrete
- Precast wall panels transported to site and propped into position
- The reservoir base slab constructed with poured in-situ concrete
- Pipe penetration infills completed
- Wall panel in-situ stitch joints completed
- Roof precast panels installed, complete with a topping slab
- Reservoir trim completed, including handrails, access hatches and access ladder

Equipment required during this phase includes: 100-150 Tonne crawler crane, 40 Tonne mobile crane, concrete pump truck, concrete trucks, pre-cast panel delivery trucks, elevated work platforms and scaffolding.

Project Completion (Duration: approximately 2 weeks)

This involves the following minor work activities:

- Asphaltting driveway and handstand areas around the reservoir
- Installing security access gates and installation of a 2 m tall security fence across and along the eastern slope of the driveway, as shown in the Landscape Plan (Sheet 7 of the Graphics, Appendix D)
- Disestablishment of all construction equipment and facilities
- Reinstatement of construction laydown areas

Planting and landscaping will be carried out in the first planting season following construction.

3.4.3 Dust, Erosion and Sediment Control

Dust, erosion and sediment controls will be required on the site during the period of earthworks. This will be the responsibility of the contractor for the project and as such they will develop a Dust, Erosion and Sediment Control Plan (DESCP) which will be provided to Council for certification prior to physical works commencing on the site. The site has sufficient room to accommodate adequate control measures. As there is no constraint on the ability to control these matters, it is not considered necessary to develop a plan at this stage of the process.

The DESCPC will follow the key principles and management concepts of the Nelson Tasman Erosion and Sediment Control Guidelines 2019. This places emphasis on the control of sediment generation in the first place and then enhancement of deposition to retain sediment onsite. The plan will also include the management of any dewatering that may be required during the construction period.

A number of potential measures can be utilised on the site. These include:

- Minimising the extent of disturbance
- Stabilising and isolating erodible surfaces such as bare soil and stockpiled areas
- Stabilising the construction entrances to the area to limit soil tracking onto the road
- Silt fencing and filter socks to be used to reduce overland flow to upper Borck Creek
- Sediment control, such as settlement tanks or other settlement devices, for dewatering
- Water tanker availability for dust control

3.5 Commissioning and Operational Matters

3.5.1 Ongoing Operation and Water Supply

When the reservoir is operational, it will receive drinking water from the Richmond Water Treatment Plant on McShane's Road. This will be through a supply pipe installed (refer to indicative route on Figure 3-10). The water is pumped to the reservoir from the treatment plant and then gravity fed from the reservoir to the supply network via the same pipe (i.e., the water supply pipe shown in Figure 3-10).

The reservoir will be a static feature with no regular activity or lighting on the site. There will be occasional visits by operations and maintenance staff (approximately 1-2 times per day), to check the equipment and carry out any sampling and maintenance as required. This will also include maintenance of the planting carried out to ensure optimal growth is achieved, e.g., by controlling weed growth, watering and replacement of any individual plants that die, if required.

As noted in Section 3.3.3 above, this application also makes provision for a future pumpstation on the site to allow water to be pumped to another reservoir, or a future high-level reservoir, if required.

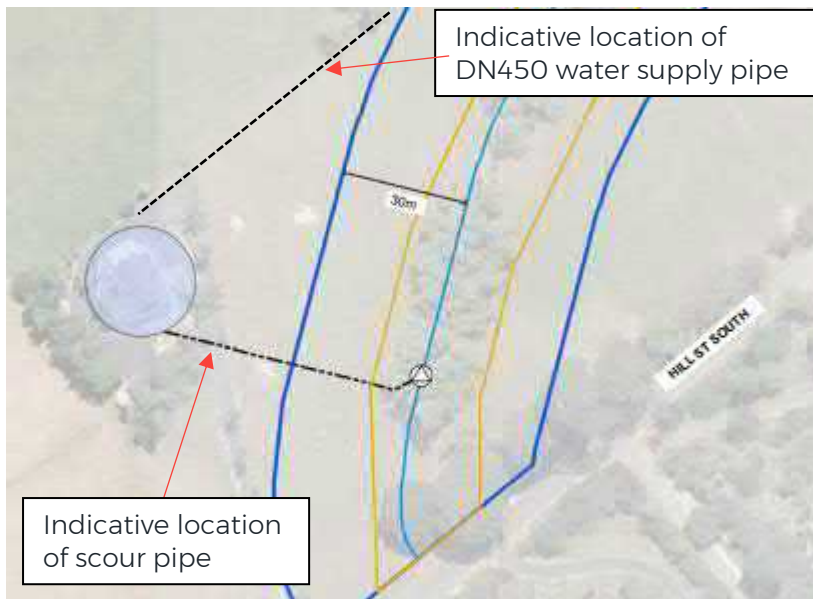


Figure 3-10: Indicative location of water supply pipe and reservoir scour pipe

3.5.2 Commissioning Works

Initial commissioning of the reservoir will be required. This follows the standard commissioning process for new reservoirs of this scale on a residential supply network. Site access may be required 24 hours a day during commissioning and other testing procedures. The following steps will be undertaken:

- 1) The internal surface of the reservoir will be mechanically cleaned through water blasting and hand tools, as required. The water and debris from this process will collect in the bottom of the reservoir and be removed by truck to an authorised disposal point. This is likely to be sewer for liquid waste and land fill for any solid debris. This part of the process will not involve discharges to the adjacent upper Borck Creek.
- 2) Once the reservoir is internally cleaned, it is filled with water from the Richmond Water Treatment Plant. This will take approximately 6 days and is for integrity testing, including to check for leaks. The reservoir will remain filled with water for 7 days to allow the concrete to absorb water and allow for any settlement. Over the 7 days, water levels will be measured to confirm watertightness. If any leakage is apparent, the reservoir will be drained, the leakage rectified, and the water tightness test repeated.
- 3) Following successful watertightness testing, the reservoir will remain filled for the next 21 days and will then be drained using a clean submersible pump and hose, with a temporary connection to sewer. Water that cannot be removed by the pump will be drained through the drainpipe into the manhole, and from there be pumped into the sewer.
- 4) At the commencement of the disinfection process, the reservoir is again filled with water from the treatment plant. Chlorine is then added at the reservoir to raise the chlorine level to approximately 20mg/l. This level is required to disinfect the interior of the reservoir prior to it receiving water for drinking water supply purposes.

Sodium thiosulphate (or a similar product) will be used to reduce the chlorine content to an approved level (**3µg/l** as detailed in the Ecological Impact Assessment attached in Appendix E) prior to discharge.

The discharge rate to the creek will be controlled via valves within the pipework, a discharge chamber at the bottom of the slope, and a rock lined overflow channel for aeration and further chlorine reduction prior to entering the creek. The maximum proposed rate of discharge is **40l/s** (as per Appendix E).

- 5) The pipework external to the reservoir will be pressure tested and disinfected as per standard TDC procedure.

3.5.3 Ongoing Maintenance and Operation

During ongoing operations, the reservoir may require internal maintenance. While the frequency cannot be specified due to unforeseen circumstances that may arise, past experience has shown that internal maintenance is typically required on a 10-yearly basis. When this occurs, the water within the reservoir is drawn down by supplying it through the reticulated network. This is possible due to the connections with the wider water supply network. The remnant water within the reservoir can then be discharged at the rate specified above, after dosing with sodium thiosulphate (or a similar product).

Once any maintenance works are completed the reservoir may require cleaning, integrity testing and disinfecting in which case the process outlined in Section 3.5.2 would be followed as required.

4 District Plan Notations & Proposal Status

4.1 Plan Notations

The Tasman Resource Management Plan (TRMP) maps show the zoning and overlays which apply to the site. The applicable items are identified on the images in Figure 4-1 below, and outlined in the text that follows. The red star indicates the approximate position of the reservoir.

4.1.1 Zoning

The site of the proposed works is located within the Rural 1 Zone.

4.1.2 Designations

Designation D247 applies along the creek. As set out in Part II Appendix 1 'Designations' of the TRMP, designation D247 is for 'Local purpose reserve – stormwater and recreation' with TDC as the requiring authority.

As detailed under s177 of the RMA (land subject to existing designation), where the land that is the subject of a designation is already the subject of an earlier designation,

(a) the requiring authority responsible for the later designation may do anything that is in accordance with that designation only if that authority has first obtained the written consent of the authority responsible for the earlier designation; and

(b) the authority responsible for the earlier designation may, notwithstanding section 176(1)(b) and without obtaining the prior written consent of the later requiring authority, do anything that is in accordance with the earlier designation or order.

In this instance, the requiring authority of the earlier designation (D247) and that of the later designation (i.e., the designation proposed by this NOR application) is TDC. As such, it is not anticipated that any conflicts between the overlapping designations arise. In fact, the earlier and later designations complement each other, with the installation of a water main (connecting the reservoir to the piped network) forming part of the proposed greenway route, including cycle and walkway construction (for recreation).

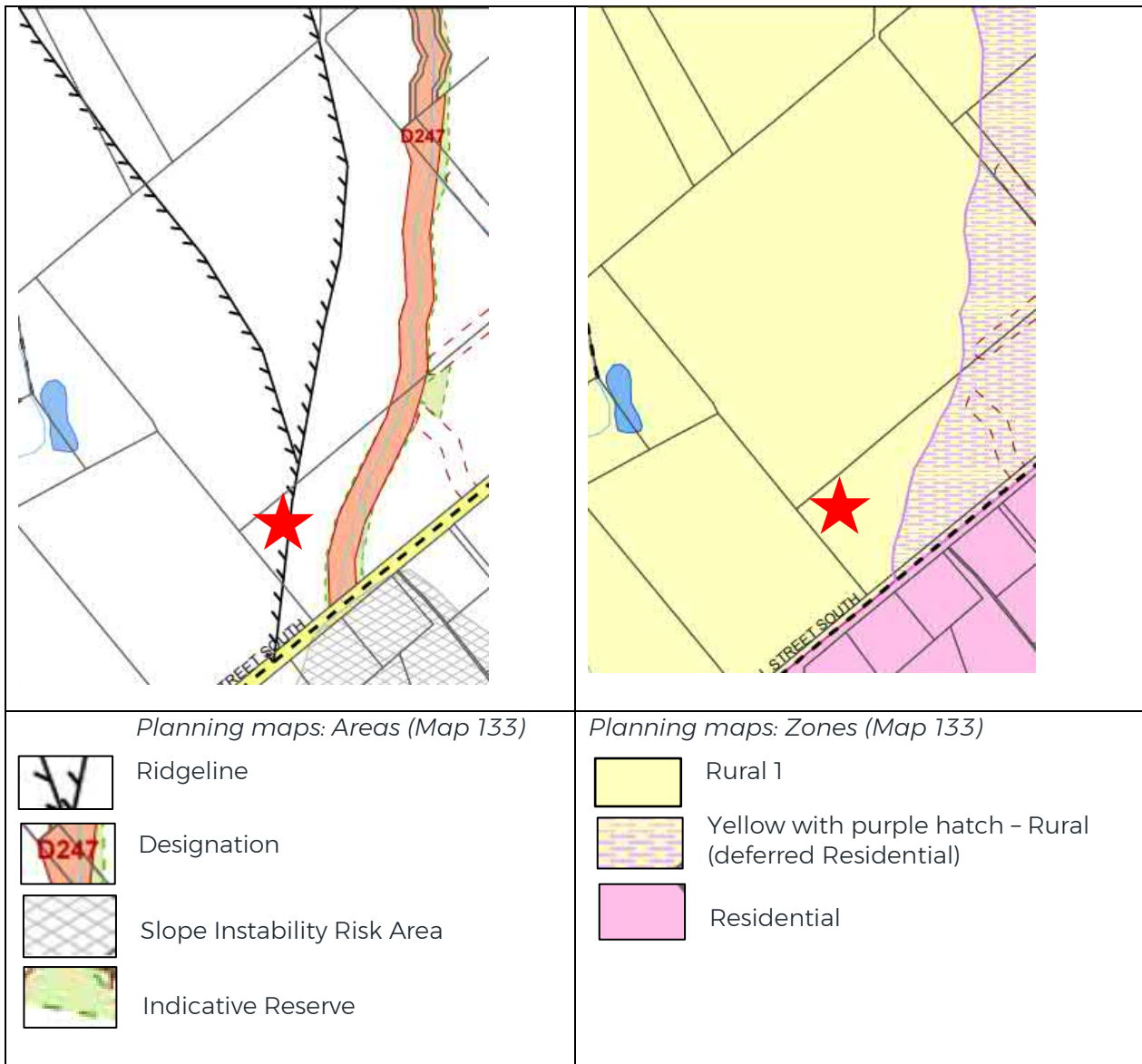


Figure 4-1: Zoning and Overlays (application site shown with a red star)

4.1.3 Area Overlays

The reservoir site is on an ‘identified ridgeline’, which indicates its landscape values. The site is also within the Land Disturbance Area 1. Portions of the pipework are located within the designation identified above and the indicative reserve which is partially obscured by the designation on the planning maps.

4.1.4 Road Hierarchy

Hill Street South is identified as a Local Road on TRMP update map 63/11 14 Dec 2019.

4.1.5 HAIL

The site of the reservoir is not identified as being a HAIL site under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CS).

4.1.6 Water Management Areas

Hope Aquifers and Eastern Hills Zone (Map 232).

4.2 Cultural Heritage and Statutory Acknowledgements

4.2.1 Heritage Sites

There are no recorded sites on the NZ Archaeological Associations register (source ArchSite) within proximity of the application site (refer to Figure 4-2).



Figure 4-2: NZAA ArchSite showing no archaeological sites in this location (the red star shows the application site location)

4.2.2 Statutory Acknowledgement Areas

No Statutory Acknowledgement Areas apply directly to this site. However, it is acknowledged that the adjacent creek does ultimately lead to the Coastal Marine Area which is included within the Statutory Acknowledgement Areas by the iwi of Te Tau Ihu.

4.3 Proposal Status

The proposed activity has been assessed against the relevant rules in the TRMP. A summary of the regional resource consent requirements under this Plan is outlined in Section 4.4 below. As noted earlier in this report, the 'land use aspects' of the proposal are covered under the NOR. In the case that TDC's Resource Consents team identifies additional rule breaches, the applicant asks that they are included with this application, out of an abundance of caution.

4.4 TRMP Rules

The table below sets out an assessment of the activity on the site in relation to the provisions of the TRMP.

4.4.1 Part II Land: Chapters 16, 17 and 18 – General, Zone and Special Area Rules
(District Rules)

Activity	RMA	Rule	Consent Status	Comment
Network Utilities and Public works	s9	16.6.2.1	Discretionary (16.6.2.4)	<p>The proposal does not meet permitted standards:</p> <p>16.6.2.1 b) it is an above ground network utility on an identified ridgeline</p> <p>16.6.2.1. e) The screen planting will not totally screen the reservoir from all roads and public places</p> <p>16.6.2.1. g) i) The reservoir has a ‘ground floor area’ greater than 50m².</p> <p>16.6.2.1 g) ii) The reservoir will exceed the permitted building height of 7.5m in the Rural 1 Zone.</p> <p>Note: As Council is applying for a NOR to designate the site, this overrides the relevant district plan requirements. This is discussed further below.</p>
Temporary Activities	s9	16.8.2.1	Permitted	Temporary activity ancillary to construction work is permitted, if the buildings are moveable, it complies with the transport rules (16.2), the Environment and Planning Manager is notified prior to commencement, and it is limited to the duration of the project or 12 months (whichever is the lesser period).
Temporary Activity (Noise)	s9	16.8.2.1A	Permitted	Temporary activities that are construction, maintenance or demolition related are permitted if the activity meets the noise limits in NZS6803:1999 Acoustics – Construction Noise. The proposal involves no temporary noise sources above standard construction activities. The applicable noise standards will be complied with.
Permanent Activity (Noise)	s9	17.5.2.1 c)	Permitted	Noise from the operation of the reservoir (and the potential future pumpstation) will comply with the existing noise standards for the zone.
Rural Zone Building Coverage	s9	17.5.3.1 g) and l)	N/A	The network utility rules take precedent over the Rural Zone rules. The zone rule would have otherwise been triggered as the building is higher than the identified ridgeline and the building coverage of the site is approximately 6% with a permitted limit of 5%.
Land Disturbance	s9	18.5.2.1	Restricted Discretionary (18.5.2.5)	<p>The duration of disturbance may slightly exceed 12 months; however, erosion and sediment control measures will be implemented throughout. No earthworks will be undertaken within 10 m of upper Borck Creek. Trenches are likely to be greater than 0.6m wide and open for longer than 24hrs. Land recontouring also exceeds 1m in height or depth.</p> <p>Note: As Council is applying for a NOR to designate the site, this overrides the relevant district plan requirements. This is discussed further below.</p>

4.4.2 Part IV Rivers and Lakes (Regional Rules)

Activity	RMA	Rule	Consent Status	Comment
Structures and bed disturbance	s13	28.1.8.1	Discretionary	The outfall / discharge structure is more than 2 m ² in area and could occupy more than 10% of the bed width at the discharge point. The general conditions of rule 28.1.2.1 can be met.

4.4.3 Part V: Water (Regional Rules)

Activity	RMA	Rule	Consent Status	Comment
Dewatering	s14	31.1.2.1	Permitted	Dewatering may be required from trenches and foundations. If so, the permitted limit is 5m ³ per day in the 'Waimea Zones'. There is no indication that a take beyond this amount will be required.

4.4.4 Part IV: Discharges (Regional Rules)

Activity	RMA	Rule	Consent Status	Comment
Discharges from land disturbance	s15	36.2.2.3	Permitted	Through a sediment and erosion control plan and with best practice methodology tailored to the site, any discharge to the creek, including water discharged from dewatering activities, will comply with the permitted requirements of this rule.
Discharges from Activities in Beds of Rivers Discharge of water from the reservoir (during testing/commissioning maintenance and from overflow (emergency) events.	s15	36.2.3.1	Discretionary	Consent is sought out of an abundance of caution for incidental discharges during installation of the outfall structure as this may temporarily change the visual clarity of Borck Creek (and contravene rule 36.2.2.4(b)). Typically, the level of drinking water chlorination is 0.6 – 0.8 g/ m ³ of free chlorine. As a precautionary measure, consent is sought for discharges that would contain more than 0.5 g/m ³ of free or residual chlorine during emergency events (36.2.2.8 (b)). There are likely to be some contaminants beyond just heat (36.2.2.8 (c)) in the discharge from the maintenance and commissioning of the reservoir. Discharge rates during commissioning of the reservoir will be limited to 40L/s, which is beyond the permitted limit of 36.2.2.8 (e) at 5L/s. In the unlikely event of an emergency overflow, the maximum discharge rate of 40L/s may be exceeded. The discharge of water from dewatering activities (if required for the proposed earthworks) are considered to fall under Rule 36.2.2.3 and are therefore deemed permitted.
Discharge of stormwater	s15	36.4.2.1	Permitted	Stormwater from the roof of the tank will be piped to the creek (likely in the same pipe as the scour line). Stormwater from the driveway runs down towards Hill Street into an existing road drain/swale and from there into the creek. This is an existing situation that will remain unchanged.

Overall, a **regional** resource consent is required as a **Discretionary Activity**.

5 Consultation

5.1 Iwi Engagement

Council approached the iwi of Te Tau Ihu as their partners in the region. This was in recognition of the importance of understanding and mitigating any actual or potential effects on matters of cultural significance to iwi. In this case this primarily related to the impact of discharges and any disturbance on the creek, and of planting.

Early consultation occurred in May 2020. The table below summarises this korero with iwi.

Iwi	Comment
Te Ātiawa	<p>Emails and phone calls exchanged between late February and early June 2020. Te Ātiawa is generally comfortable with the project and, along with Ngati Tama, has requested iwi involvement in:</p> <ul style="list-style-type: none"> • Monitoring earthworks • Working with the freshwater ecologist on mitigation actions • Carrying out a Cultural Health Indicator program • Working Council on a wider catchment restoration plan. <p>The first three points are directly relevant to this project and have been progressed. The final item is a larger project to be discussed between Council and iwi outside of the scope of this proposal.</p>
Ngāti Kuia	<p>An email response from Julia Eason of Ngati Kuia states: <i>“I see no obvious issues with the proposal, mixing mauri of water is one point to be aware of, as this is not discharging into another waterway however it is unlikely this would be an issue.”</i></p>
Ngāti Koata	<p>An email response from Alice Woodward of Ngati Koata states: <i>“At this stage I don't have any immediate concerns with the proposal, although we would potentially want some further information regarding any discharge to the stream. Also, will the pipe cross over or under the stream?”</i></p> <p>The Ecological Impact Assessment has since been shared with iwi. The proposed water main pipe connecting the reservoir with the reticulated network will need to cross the stream in one location. This aspect of work will be subject to a separate process as part of the upgrade of the stream corridor.</p>
Ngāti Rarua	<p>Emails with details of the project were sent to Ngāti Rarua. Confirmation was received from the Ngāti Rarua office that if there was no response to the original email, we can assume they have no comment to make on the proposal.</p>
Ngāti Tama	<p>As per the comment for Te Ātiawa, Ngāti Tama has requested iwi involvement in developing the mitigation actions on the project, tracking the cultural health effects, and monitoring earthworks.</p>
Ngāti Toa Rangatira	<p>A number of emails and phone messages have been left with Ngāti Toa Rangatira however no response has been received.</p>
Ngāti Apa	<p>Ngāti Kuia act for Ngāti Apa on RMA matters, this has been confirmed with Ngāti Apa and no further action is required.</p>
Rangitane	<p>Rangitane has confirmed that they have no concerns with this proposal.</p>
Ngāti Waewae	<p>Ngāti Waewae was included in the consultation although they are predominantly based on the West Coast. They replied: <i>“Thank you for this information, Ngati Waewae have no issues and are happy to support the resource consent application.”</i></p>

In summary, the key take aways of the early consultation were:

- Iwi are interested in the management of the commissioning-related discharges to the stream
- Iwi would like to have the opportunity to monitor earthworks, and be involved with mitigation actions in the stream along with the freshwater ecologist
- A Cultural Health Indicator program should be carried out
- Iwi would like to work with Council on a wider catchment restoration plan

The responses from iwi have been valuable in guiding the planning and mitigation actions for this proposal. To respond to the matters raised by iwi, Council:

- Has commissioned an ecological report on the stream, and this has been shared with iwi
- Intends to invite iwi monitors to oversee earthworks within original ground
- Will upgrade this section of creek to improve ecology and health as part of a parallel/ related project (Richmond South greenway programme, refer to Section 3.2).

Further consultation with iwi was undertaken at a hui on 28 and 29 November 2022. This included circulating material describing the proposal and the proposed mitigation. Iwi have also been updated regarding the reduced tank size and upcoming lodgement of this application in May 2024.

5.2 Community Consultation

Consultation has formed a key part of understanding the immediate communities' thoughts on this project. It has also assisted with developing the proposed mitigation options to reduce the adverse effects of the proposal. The community consultation involved the following steps:

Date	Consultation Action	Comment
3 March 2020	Public meeting - Hope School Hall	The property owners who could view the site were invited to a public meeting with Council staff. The proposal was presented including the site selection and need for the work to occur. The proposed mitigation actions were outlined, and the attendees asked about their view on required mitigation. An initiative was agreed where a smaller group would form to further explore the proposed mitigation.
20 April 2020	Richmond South Reservoir Local Resident Consultation Meeting 1 - Online	The draft landscape plan was presented and discussed. Suggestions were made as follows: <ul style="list-style-type: none"> • Trees to be as large as practically, possible prior to planting. • Good growing medium to be provided. • Tree management plan to ensure they do not grow too high. Set a maximum tree height. • Minimise protrusions above the reservoir roof (shallow pitch roof, limited handrails, ladders obscured). • Take action to minimise noise production from the potential pumpstation. The suggestions above have all been included within the proposal and feature in this application.

		Questions were also asked about the potential for a road from Hill St South beside the creek, and the development potential of the surrounding land.
21 April 2022	Online consultation event	<p>Updated information was circulated, including the landscape plan showing the change to a single reservoir.</p> <p>No-one attended the event so correspondence was sent to out advising a further in person event will be held and that a letter box drop will be made to advertise this widely.</p>
12 July 2022	Richmond South Reservoir Local Resident Consultation Meeting 2 – Richmond Town Hall	<p>Prior to the meeting, a letter box drop was made to all residents in the area who are considered to be potentially affected by the proposal. Only 4 persons attended.</p> <p>An update on the project was presented, including the following key points:</p> <ul style="list-style-type: none"> • Timing of the development has moved out, potentially to 2028. However, RMA approvals are to be sought now to enable construction to commence earlier if needed. • The design has changed from two reservoirs to one larger reservoir. • There is to be no road formed along the stream, or on any part of the site. • The planting plan was discussed as was the sequence of planting and earthworks. • The process of commissioning the reservoir, including discharges to the stream was outlined. • How the reservoir is to be built and the level that this sits at. The reservoir roof level stays the same, but the extra volume has been achieved by lowering the ground / floor level. This also allows the reservoir to sit fully on cut ground. <p>Key questions raised and points made were:</p> <ul style="list-style-type: none"> • Feedback is that a 2-stage process with early stage of earthworks/ retaining wall/ landscaping to get screening underway is preferred. • Feedback is that we should try and move or salvage the house and give consideration to selling or relocating the palms. • Clarity on how the reservoir will integrate with the water supply network was of interest. Request for firefighting water supply on Hill St South. • Pitch of the roof of the reservoir is of interest. • Suggestion is for minimum of handrail requirement. Visibility of ladder/ staircase also of interest. • Graffiti raised as a concern. • Earthquake Importance level of interest – provide

		<p>details of return period earthquake designed for.</p> <p><i>Response: The reservoir has been designed for an Importance Level IL3, a seismic design life of 50 years, a durability design life of 100 years and a seismic return period of 1/1000 years.</i></p> <ul style="list-style-type: none"> • How the balance land will be used is of interest. Preference is for a park. Noted that it is a sheltered spot. • General support for the changes that have been made to the design – reducing to a single reservoir, landscape planting, and removal of the proposal for a road.
21 Feb 2024	Letter update to residents	Update on the project regarding proposed construction start in early 2025 and lodgement of this application in March 2024.
April 2024	Letter update to residents	Update on the project regarding reduced tank size (from 4300 m ³ to 2500 m ³) and associated delay in lodgement.

The engagement with the community near to the proposed site has helped to refine the mitigation actions. The key matters that have been included or adjusted to reflect the comments made are:

- A single reservoir is now proposed, in part, to minimise visual impacts
- Trees will be as large as possible at time of planting and a good growing medium will be provided (refer to Appendix D).
- A condition limiting the height of the trees to the east of the reservoir to be generally no higher than 2m above the highest point of the tank roof (so as not to block views), while being of a sufficient height to screen the reservoir from nearer houses.
- Protrusions above the reservoir roof to be limited and a partial, rather than a full handrail is now proposed.
- Future pumpstation placement and design to occur with the goal of minimising noise.

6 Assessment of Environmental Effects

6.1 Overview

The following effects are considered relevant to this proposal:

- Positive Effects
- Construction Effects
 - Earthworks, including Dust, Erosion and Sediment Effects
 - Noise Effects
 - Traffic Effects
- Landscape and Visual Effects
- Operational Noise, Lighting and Traffic Effects
- Cultural Effects & Archaeological Values
- Effects of the Discharge and Outfall Structure
 - Effects on Water Quality and Aquatic Ecology
 - Effects on Water Quantity (Water Levels and Flooding)

6.2 Positive Effects

There will be significant positive effects as a direct result of the water infrastructure proposed in this NOR. These include social and economic community wellbeing and administrative benefits.

The proposal to install a water reservoir is an essential element in providing a secure water supply for a large portion of the growing Richmond township. The primary area that would be serviced is Richmond West and South. This area is experiencing rapid growth and a key constraint to this is water supply. Enabling water supply for this area will allow for future development to be serviced. This will provide housing and employment opportunities. The latter will be both through the planning, design and construction of those areas, and through the occupation of the developments. Without a water supply there will be a limit to how much development can occur.

Protecting the land now through a designation provides certainty for Council, the nearby landowners, and the wider community, of the intended use of the land and the work to be undertaken. It will also protect the land from other development which may otherwise preclude construction of the project.

6.3 Construction Effects

6.3.1 Earthworks, including Dust, Erosion and Sediment Effects

Construction effects relate primarily to the effects resulting from the proposed earthworks to construct the building platform, the reservoir and to upgrade the access. The proposal will involve a substantial amount of earthworks, both cut and fill. This is principally required to form the pad on which the reservoir sits, and for the access to and around it. Works will involve lowering the earth level around the current house site to firm ground, and then building this back up to the correct level. The fill will be of an acceptable quality, placement and compaction to ensure a stable pad is created which can accommodate the weight of the filled reservoir.

As detailed in the Geotechnical Assessment (Appendix G), a geogrid reinforced gravel raft is required under the reservoir to protect it from damage due to horizontal ground displacement. Surcharge loads from construction traffic and seismic loads will be accounted for in the retaining wall design to ensure this can support crane loads. The structural fill will be installed and compacted in 200mm layers and extended out to include the backfilling of the retaining wall. The detailed design and construction methodology will follow the recommendations in the Geotechnical Assessment and thereby mitigate adverse effect on slope stability.

Earthworks of this scale have the potential to create adverse effects of dust and sediment discharge to the creek. This can occur due to poor site management allowing uncontrolled run off from rain events, or from dry and unprotected soil being exposed to wind. To ensure these effects are managed, the earthworks will be controlled through a dust, erosion and sediment control plan (DESCP) which will be developed by the contractor and implemented prior to the works commencing. Measures may include elements such as:

- sediment fences,
- settling ponds,
- control of run off,
- management of stockpiled earth and fill,
- retention of topsoil for reuse,
- prompt seeding with grass and planting to reduce exposure of soil.

The contractor undertaking the works will also implement various methods to minimise dust (e.g., water carts, dust suppressant) and following completion of the works, the driveway will be sealed to lessen dust and provide an all-weather surface.

The DESCOP will be produced by the contractor(s) that secure this work. A consent condition has been volunteered to ensure the DESCOP is provided to Council for certification prior to works commencing. The value of the DESCOP being prepared at this stage is the contractor will have more intimate knowledge of the earthworks' methodology, timing and staging and will be able to prepare an DESCOP which is specifically designed for the works proposed.

Any effects during construction will be temporary, limited to the period of construction and can be adequately managed by compliance with the DESCOP so that the adverse environmental effects are acceptable and can be considered as being minor at most.

6.3.2 Noise Effects

Construction noise will be managed in accordance with the NZ Standard NZS 6803:1999 and will not exceed the recommended limits. Given this, noise related construction effects are considered to be no more than minor.

The effects are largely confined to the earthworks and retaining wall construction phase (duration: approximately 26 weeks, refer to Section 3.4.1) and the reservoir and associated services construction phase (combined duration: approximately 26 weeks).

Operational noise and traffic effects from the operation of the WTP are considered under Section 6.5 below.

6.3.3 Traffic Effects

Construction traffic effects will be temporary, limited to the period of construction and dust from construction traffic will be adequately managed so as not to create a nuisance for adjoining properties.

Hill Street South is a Local Road and temporary construction related traffic effects will be noticeable, but not unreasonable. Similar to construction noise, traffic effects primarily relate to the effects resulting from the earthworks, i.e., the cartage of material to and from the site. Apart from transporting cut (approximately 2,000 m³) and structural fill (approximately 1,200 m³) from and to the site, most of the construction traffic will be internal to the site, with TDC negotiating construction access, including the use of a working platform/ laydown area, with the neighbouring property owners to the west (177 White Road, Hope). The new access from 177 White Road will be designed to ensure sufficient visibility is achieved and no adverse traffic safety concerns are created. Any disruption to road users as a result of the works is therefore considered to be minor.

6.4 Landscape and Visual Effects

A key consideration for the effects of this proposal are its landscape and visual effects. The application site is on a low saddle along a ridge that is identified in the TRMP for a degree of landscape value. If not designed and mitigated appropriately, locating the reservoir in this saddle could negatively impact on the visual amenity of the area beyond an acceptable level.

To better understand the landscape and visual impacts of the proposal, a Landscape and Visual Assessment (LVA) was prepared by Jeremy Head of WSP in 2019. Mr Head is a Senior Landscape Architect and is NZILA registered. The original proposal was postponed, and the design re-evaluated in 2023/24 by Rachel Hill (Senior Landscape Architect, NZILA Registered). The LVA is included within Appendix D of this application.

This LVA accurately describes the proposal and describes the site and its surrounding environment. The LVA then considers the landscape and visual effects with conclusions on effects based on a seven-point scale ranging from Very high – High – Moderate to high – Moderate – Moderate to low – Low - Very low. 'Low' effects are generally accepted as equal to a 'minor' effect in RMA language.

6.4.1 Landscape Effects

Landscape effects refer to physical changes in the landscape including changes to landscape character. The changes to the physical landscape resulting from the proposal are detailed in the LVA in Appendix D.

The LVA states the existing landscape character will change from rural-residential to a utility/infrastructure one, with the reservoir being the primary cause of the change. A scale comparison of the existing house and proposed reservoir is contained in the LVA. The LVA also identifies that people have expectations of what could occur in a rural landscape. In this case, it is considered that water reservoirs can be reasonably expected to form part of a rural setting. There are also positive effects identified, i.e., due to the reduction of general movement on the site, and in particular a lack of lighting.

In summary, the LVA identifies a reasonable degree of change in the landscape in the short to medium term (0-5 years), which primarily relates to the replacement of the existing dwelling with a reservoir. The LVA concludes that the proposal will result in a 'moderate' level of adverse effects in the short to medium term, which reduces to a 'low' level of effect as the proposed planting/trees develop and the proposal becomes a more accepted and familiar part of the setting.

6.4.2 Visual Effects

Visual effects of the proposal relate to the impact on private and public views in the vicinity of the site. In terms of private views, the LVA states the site is elevated and clearly visible from around 20 residences on the hill adjacent. There are also likely to be partial views from a number of other residences in the area. In terms of public views, the site has more limited visibility due to topography and site development.

The LVA concludes that due to the visibility of the proposal it requires mitigation. A fast-growing Eucalyptus species¹ is proposed to create vegetative screening. This species has been specifically selected due to the speed of growth, the limited maximum height (so as to not grow up and block views from neighbouring properties), and the form of the trees. The reservoir will also have a surface treatment applied which reduces the reflectivity of new concrete and blends with the foliage and bark colours of the proposed vegetation over time.

Similar to the landscape effects, the proposal is considered to have a 'moderate' degree of visual effect over the short to medium term.

¹ *Eucalyptus Rodwayi* / swamp peppermint: "A fast-growing tree with a tall, dense crown. Holds its lower limbs making an excellent shelter tree. Tolerant of both drought and wet soils. Bark is smooth and white on smaller branches, becoming rough, fibrous and grey on larger branches and the trunk. Leaves have a peppermint odour when crushed. Ok on clay. Creamy-white flowers from March-June are great for bees. Evergreen. Tolerates cold. Note: Growth, height and grade information are given in good faith but are subject to natural variables beyond our control." (from Southern Woods, Rolleston, Canterbury website).



Figure 6-1: Existing water reservoir at Marsden Valley, Stoke, Nelson with 'Permeon' colouration/oxidation process applied to the raw concrete (Photograph taken 3 February 2020, by Noelia O'Leary, design engineer, WSP).

6.4.3 Amenity Values

The LVA describes amenity values as *"aesthetic coherence of the landscape is derived from all of the senses, although the visual sense is typically pre-eminent for most people where one's appreciation of the landscape is largely obtained. The visual comes under 'amenity values' as defined in the RMA, the other attributes being pleasantness, cultural and recreational."*

The LVA identifies that the effects on visual amenity have been addressed in three ways, including the surface treatment of the reservoir and vegetative screening through planting described above. It also includes any balustrade above the top of the reservoir being in recessive colours (and only a partial handrail being proposed), and existing vegetation being retained on the site as much as possible to provide screening and buffering of the reservoir. This vegetation is noted on the landscape plan and includes existing trees and shrubs along the southwestern boundary being retained in situ.

In summary, the existing amenity derived from the affected landscape will change. The LVA identifies the effects on amenity values as 'moderate' in the short to medium term, reducing to 'low' as the planting around the reservoir matures.

6.4.4 LVA conclusion

The LVA concludes that the main landscape and visual effects of this proposal result from the proposed reservoir. The effects are mainly on the viewing catchment primarily located in the Rural Residential Zone to the south and east of the site. In terms of the overall conclusion the LVA states:

"Any overall adverse landscape and visual effects of the tank on the existing environment in the short term is conservatively expected to be 'Moderate'. These effects reduce in the medium to long term to 'Low' and 'Very Low' respectively. The other aspects of the proposal are considered to be similar to existing or typical and expected rural development patterns and therefore will have 'Low' to 'Very Low' adverse landscape and visual effects in the short through to long term respectively."

As noted in the LVA 'low' effects are generally accepted as equal to 'minor' effects. Therefore, in the medium to long term the effects are considered minor to less than minor. In the short to medium term, the effects can be considered to be more than minor. The proposed mitigation results in an initial reduction in the level of effect that could be felt with an unmitigated proposal.

Importantly, this mitigation, in particular the planting, results in a reduction to a minor and less than minor level of effect over the longer term.

6.5 Operational Noise, Lighting and Traffic Effects

The effects of construction noise are discussed above. This section focusses on operational noise and any lighting and operational traffic from the proposal.

The reservoir itself is a static feature and does not produce any noise. There may, on rare occasions, be maintenance required on the reservoir. This is not expected to produce any levels of noise at any adjacent dwellings above that allowable within the zone. A designation condition is volunteered to limit any operational noise within the site to that permitted by the permitted activity standards of the zone.

No lighting is proposed on the site. The only lights would be from vehicles on infrequent night-time visits. This is not expected to be a regular occurrence and would be substantially less than that which is likely to have occurred from the private dwelling.

The proposal also includes the potential future installation of a pumpstation to provide a water feed to any higher-level reservoir that may be installed on the hills in the future. If constructed this pumpstation will be built to modern acoustic standards including modern equipment. With these measures in mind the pumpstation will not breach existing noise limits. The limits specified in rule 17.5.2.1 c) and volunteered as an ongoing designation condition, are detailed below. Noise generated by the activity, when measured at or within the notional boundary of any dwelling in a Rural Zone or Rural Residential Zone will not exceed:

	Day	Night
Leq	55 dBA	40dBA
Lmax	70dBA	

The potential future pumpstation will also be positioned and screened so that noise levels are minimised below the permitted limits and are unlikely to be noticeable within the boundary of sites on the eastern side of Hill St South, or at the notional boundary of dwellings on properties adjacent to the site. The closest neighbouring dwellings are located 55 m (519 Hill Street South) and 45 m (515 Hill Street South) southeast of, and across the road from, the application site.

Operational traffic movements to and from the site will predominantly be for maintenance and monitoring purposes. These will generally be by light vehicles and occur once or twice per day. This is less than traffic movements associated with a residential development. Therefore, the proposed designation is not anticipated to generate large volumes of operational traffic and will not have any noticeable impact on surrounding properties and the traffic network overall.

Overall, the effects of operational noise, lighting and traffic are considered to be very limited (less than minor).

6.6 Cultural Effects & Archaeological Values

It is recognised that tangata whenua have a role of kaitiakitanga and an important relationship with Aotearoa's waterways. As detailed under Section 4.2 of this report, iwi do not have statutory acknowledgements within the area of works and there are no known cultural or archaeological sites within the vicinity of the proposed NOR. Discharges to the creek will be managed to control levels of chlorine, and velocity managed to reduce potential for damage to the creek bed or banks from elevated flow. Iwi will also be given the opportunity to have an iwi monitor on site at relevant times.

While only iwi can provide an assessment of cultural effects, it is noted that no concerns have been raised since the ecological report has been shared with iwi. Given the above, it is considered that any effects on cultural or archaeological values are likely to be less than minor and limited to the impact of discharges and any disturbance on upper Borck creek, which is assessed in the following section.

6.7 Effects of the Discharge and Outfall Structure

6.7.1 Overview

Discharges from the reservoir will occur during the initial commissioning of the reservoir, and in the future may occur during maintenance or in the unlikely event of emergency overflow situations. These discharges, and the potential for them to occur, are set out in the description of the proposal. The discharges can have an impact on the water quality (as residual chlorine in waters used to clean the reservoir discharged to the receiving environment) and water quantity (i.e., physical disturbance through scouring and/or erosion).

The outfall structure itself only requires consent due to its size, which is governed by the requirements of TRMP rule 28.1.2.1 to include any necessary scour protection work, including associated geotextiles, to avoid scour or erosion of the creek bed, including the banks.

It is interesting to note that the discharges from the Pomona Road reservoir site, which are similar to this proposal, were considered a Deemed Permitted Marginal or Temporary Activity (refer to CE200014: Intermittent and emergency discharge of scourflow and overflow water from the Pomona road reservoir site, issued 18 June 2020) and did not require a resource consent. The principal justification for this is that the activity is a *“temporary activity that will only be undertaken intermittently for short durations.”* This equally applies to this proposal. Notice CE200014 also states the following reason: *“The noncompliance with the permitted chlorine levels will have a lesser effect than what is permitted because the discharge is not sustained over long periods of time as is allowed by the rule [32.2.2.8(b)].”* Again, this statement is applicable to the current proposal.

6.7.2 Effects on Water Quality and Aquatic Ecology

As noted earlier, the applicant engaged Robertson Environmental Limited to undertake an assessment of the potential discharge effects associated with the proposal. This is attached in Appendix E. The assessment concludes that the existing ecological values of upper Borck Creek (in terms of instream and riparian habitat, fish and macroinvertebrates) are low (and low to moderate for fish). The magnitude of effects on habitat and fauna potentially impacted is ‘negligible’ with a ‘very low’ overall level of effect.

Recommendations from the ecological impact assessment have been included in the volunteered conditions of consent. With regards to water quality, this includes controlling the residual chlorine concentration in the discharge to protect freshwater species. Sodium thiosulphate (or a similar product) will be used to neutralise/ reduce the chlorine content to an approved level ($3 \mu\text{g/l}$) prior to discharge. In addition, the installation and maintenance of sediment and erosion controls in line with the Nelson Tasman Erosion and Sediment Control Guidelines (2019) will effectively minimise sediment discharges to the creek.

The ecological impact assessment concludes: *“overall, taking into account the control and mitigation measures, the proposed short-term discharge activity is not expected to result in adverse effects (cumulative or otherwise) on identified freshwater values upstream or downstream of the proposed discharge location.”*

Equally, the outfall structure will not adversely affect fish passage, water quality or aquatic habitats.

6.7.3 Effects of Water Quantity

Potential effects of water quantity relate to scouring/ erosion and increased water levels/ flooding. The rate of discharge will be managed by an engineered energy dissipation structure and erosion and scour protections aprons. The ecological impact assessment notes that *“the area where an apron would be placed has low ecological value and provided sedimentation is minimised and fish passage is maintained, there should be no adverse effects on the watercourse.”*

The maximum rate of discharge flow will be 40l/s. The above measures will prevent stream channel scour, potential risk of flooding and maintain fish passage. The proposed outfall structure will not affect the safe passage of flood waters within Borck Creek. Overall, the effects on water quantity are considered to be less than minor.

7 Alternatives

When considering a NOR, a territorial authority must consider the effects on the environment, having particular regard to s171(a)(b) *whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if–*

(i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or

(ii) it is likely that the work will have a significant adverse effect on the environment.

As detailed under Section 6 above, the adverse effects on the environment are considered to be more than minor, but not significant, in terms of short-term landscape visual effects. In addition, the requiring authority does have sufficient interest in the land, having acquired the site (refer to Record of Title and Gazette Notice, Appendix A). It is therefore submitted that it is not necessary to assess alternatives. However, given that alternatives have been considered, these is included here for completeness.

Figure 7-1 below shows alternative reservoir configurations that were considered as part of the optioneering on this site. Options A, C and D were discounted for various reasons including construction cost, extent of earthworks and impact on landscape values. The twin reservoir design shown as Option B was considered further as it would allow one reservoir to remain operational if at any time one of the reservoirs requires maintenance. The differing reservoir sizes would have allowed for improved positioning on the site to minimise the earthworks required.

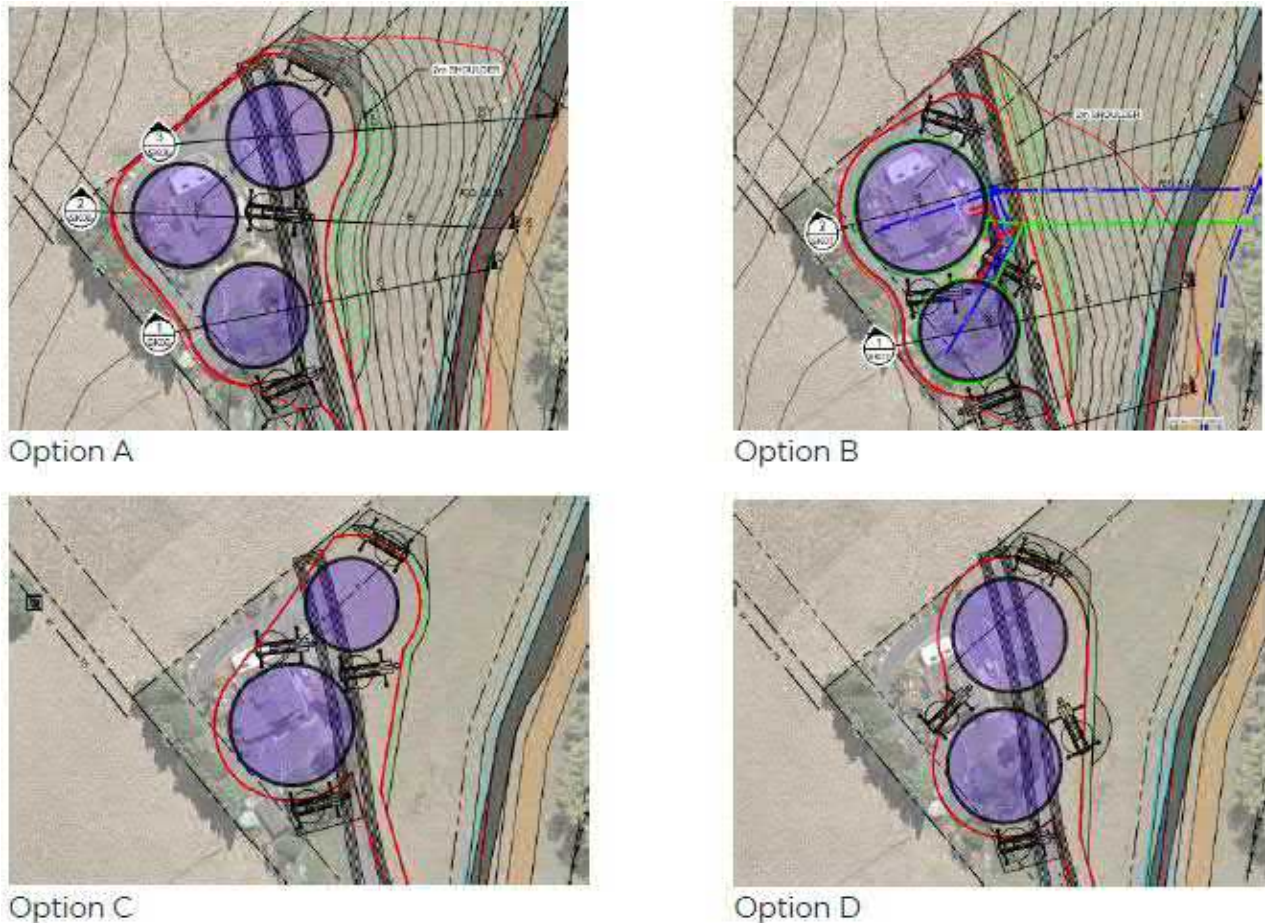


Figure 7-1: Reservoir configuration options considered

Ultimately a single reservoir option was chosen for this NOR because it minimises the reservoir construction costs and meets the current and expected demand, while achieving optimum landscape value, including retention of part of the existing mature tree line on the southwest boundary, and the minimised visual extent of the infrastructure.

The following key factors have determined the preferred reservoir configuration:

- Reduction in reservoir construction costs.
- Minimised platform extent and associated earthworks costs.
- Appropriate reservoir size and location that meets current and predicted demand and can be screened to mitigate visual effects.
- An accessible location that can be efficiently maintained, while maximising access for construction and refurbishment.

Other locations were also considered. These are limited as the reservoir needed to be at the 62 m contour and near to the existing water supply network. This site was selected as it was accessible, on the correct contour, near to the existing water supply network, of an appropriate size and location to enable construction, and able to be secured by Council.

The proposed earthworks design and reservoir configuration allows for the reservoir to be partially cut into the hillside and essentially surrounded by existing and proposed planting on the southwestern and rear (northwestern) boundaries and new screen planting on both sides of the driveway.

8 Outline Plan Approval Process

The Notice of Requirement process is primarily about establishing the suitability of a site for a particular infrastructural purpose (i.e., water supply in this case). Once a site is designated the detailed design of infrastructure enabled by the designation is subject to the outline plan process required under s 176A of the RMA. Section 176A(2) states that:

- 2) *An outline plan need not be submitted to the territorial authority if*
 - (a) *the proposed public work, project, or work has been otherwise approved under this Act; or*
 - (b) *the details of the proposed public work, project, or work, as referred to in subsection (3), are incorporated into the designation; or*
 - (c) *the territorial authority waives the requirement for an outline plan.*

The matters that must be shown on an Outline Plan, under s 176A(3) are:

- (a) *the height, shape, and bulk of the public work, project, or work; and*
- (b) *the location on the site of the public work, project, or work; and*
- (c) *the likely finished contour of the site; and*
- (d) *the vehicular access, circulation, and the provision for parking; and*
- (e) *the landscaping proposed; and*
- (f) *any other matters to avoid, remedy, or mitigate any adverse effects on the environment.*

In this case all of the details that would be required in an Outline Plan have been included in the information lodged with this Notice of Requirement such that an Outline Plan is not required under s 176A. If a pumpstation is constructed in the future, this would then be subject to an Outline Plan Approval Process.

9 Statutory Assessment

9.1 RMA – Section 168A(3)

Section 168A(3) of the RMA states that:

- (3) *When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to –*
 - (a) *any relevant provisions of –*
 - (i) *a national policy statement;*
 - (ii) *a New Zealand coastal policy statement;*
 - (iii) *a regional policy statement or proposed regional policy statement;*
 - (iv) *a plan or proposed plan; and*
 - (b) *whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the works if –*
 - (i) *the requiring authority does not have an interest in the land sufficient for undertaking the work; or*
 - (ii) *it is likely that the work will have a significant adverse effect on the environment; and*
 - (c) *whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and*
 - (d) *any other matter the territorial authority considers reasonably necessary in order to make a decision on the requirement.*
- (3A) *The effects to be considered under subsection (3) may include any positive effects on the environment to offset or compensate for any adverse effects on the environment*

that will or may result from the activity enabled by the requirement, as long as those effects result from measures proposed or agreed to by the requiring authority.

The following sections provide an analysis of these matters where relevant, in addition to the effects' assessment in Section 6 and alternatives assessment provided in Section 7 of this application.

9.2 National Environmental Standards

The National Environmental Standard for Sources of Human Drinking Water is relevant to the project as a whole as the reservoir is part of TDC's reticulated drinking water scheme. Having a secure modern facility provides and protects the drinking water supply for Richmond residents.

The National Environmental Standard for Freshwater 2020 (NES-F) regulates specified activities that pose risks to the health of freshwater and freshwater ecosystems. Most parts of this regulation came into force on 3 September 2020, and the Amendment Regulations (No. 2, 2022) came into 5 January 2023. The provisions of the NES-F do not relate to the discharge, or the discharge structure in upper Borck Creek.

9.3 National Policy Statements

9.3.1 National Policy Statement for Highly Productive Land 2022

The National Policy Statement for Highly Productive Land 2022 (NPS-HPL) came into effect on 17 October 2022 and has the sole objective of ensuring that highly productive land is protected for land-based primary production, both now and for future generations. Council is required to identify highly productive land within the TRMP (or subsequent Plan) in the next three years. In the interim, highly productive land is considered to be land that is within a rural zone and is classified as LUC 1, 2, or 3 under the Land Use Capability classification system, but is not already identified for urban development. If highly productive land is the subject of an approved plan change to rezone the land so that it is no longer general rural or rural production zone, then the land ceases to be considered as highly productive land under the NPS-HPL.

In this case, the site is included in the Nelson Tasman Future Development Strategy (2022-2052) as site T-39 Paton Road foothills, Richmond. This means that the site is not considered as highly productive land under the NPS-HPL and the NPS-HPL is therefore not applicable to the proposal.

9.3.2 NPS-FM

The National Policy Statement for Freshwater Management (NPS-FM) was updated in August 2020 and replaces the National Policy Statement for Freshwater Management 2014. The 2020 NPS-FM came into force on 3 September 2020. The 2020 NPS-FM was amended on 8 December 2022. The NPS-FW applies to all freshwater and, to the extent they are affected by freshwater, to receiving environments, which may include estuaries and the wider coastal marine area.

The **objective** of the NPS-FW is 'to ensure that natural and physical resources are managed in a way that prioritises:

- a) *first, the health and well-being of water bodies and freshwater ecosystems*
- b) *second, the health needs of people (such as drinking water)*
- c) *third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.'*

This objective is derived directly from the concept of Te Māna o te Wai which refers to the fundamental importance of water and the hierarchy of obligations that priorities the health of the

water and ecosystem first, then the health of the people, and then our cultural, social and economic wellbeing.

Policies of particular relevance to this project are:

- *Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai*
- *Policy 2: Tangata whenua are actively involved in freshwater management (including decision-making process), and Māori freshwater values are identified and provided for.*
- *Policy 9: The habitats of indigenous freshwater species are protected.*
- *Policy 15: Communities are enabled to provide for their social, economic, and cultural wellbeing in a way that is consistent with this National Policy Statement.*

As detailed in Section 6.7 of this report, the mitigation in place has minimised the adverse effects of the commissioning discharges on the creek. The discharges to upper Borck Creek are also short term and infrequent. These actions have been taken to prioritise the health and well-being of the creek.

The overall project relates to the provision of drinking water for people; however, this is not directly relevant to the creek near to this project. It is noted that related future upgrade works on this creek will result in a substantial improvement in peoples social and cultural wellbeing, and the potential for a substantial improvement to the health and well-being of the creek and its ecosystems.

Consultation with iwi has been undertaken. The applicant has commissioned an ecological impact assessment, which has been shared with iwi. It is considered that Māori freshwater values will be provided for through the proposed design and mitigation measures detailed in the ecological impact assessment and volunteered conditions of consent. In addition, the applicant intends to invite iwi monitors to oversee earthworks within original ground. This is consistent with Policy 2 and the overriding Objective of the NPS-FW.

The project has been designed in a way that helps to achieve the future upgrade improvements planned for the creek as part of a parallel/ related project (Richmond South greenway programme, refer to Section 3.2). This links with the other improvement works that have been undertaken downstream and reflects the whole of catchment thinking. The works under this specific project are designed to limit the extent of impact on the creek and to protect existing habitats as they currently exist.

Given the above, the proposal is considered to be consistent with the relevant policies and objective of the NPS-FM.

No other National Policy Statements are considered to be relevant to the application.

9.4 Tasman Regional Policy Statement

The Tasman Regional Policy Statement (TRPS) (2001) provides an overview of the resource management issues of the region. It sets out how natural and physical resources are to be managed in an integrated way to promote sustainable management.

The provisions contained in Sections 5-8 of the RMA provide the framework for the objectives and policies of the TRPS. The TRPS in turn provides the framework for the issues, objectives, policies and methods of the underlying TRMP. The TRMP must be consistent with the TRPS.

The proposed works have been assessed in terms of the relevant objectives and policies of the TRMP (see section 7.6) and are found to be consistent with them. In turn, it is therefore considered the proposed works will also be consistent with the TRPS.

9.5 Tasman Resource Management Plan Objectives and policies

Section 168(3) of the RMA requires that the consent authority, when considering a requirement, must have particular regard to any relevant provisions of a plan or a proposed plan.

Similarly, Section 104 of the RMA requires that the consent authority, when considering an application for resource consent, has regard to any relevant provisions of a plan or a proposed plan. The following is an assessment of the proposal under the relevant objectives and policies of the TRMP.

The TRMP includes objectives and policies of relevance to the:

- Site Amenity, Rural Character and Landscape Effects
- Land disturbance
- Activities in the Beds and on the Surface of Rivers and Lakes
- Discharges to Freshwater

The relevant objectives and policies for each ‘topic’ identified above are discussed below.

9.5.1 Site Amenity, Rural Character and Landscape Effects

Objective 5.1.2 and Policy 5.1.3.1 seek that the adverse effects of site development on items such as landscape values, the enjoyment of other land, and the qualities of natural resources are avoided, remedied or mitigated.

Objective 5.3.2 seeks the maintenance and enhancement of special and aesthetic character of localities, and Policy 5.3.3.3, which supports this, seeks to avoid, remedy or mitigate the adverse effects of the location, design and appearance of “...*incompatible land uses in areas of significant natural or scenic, cultural, historic or other special amenity value*” (My emphasis added in bold).

Objective 7.4.2 seeks the avoidance, remedying or mitigation of the adverse effects of a wide range of existing and potential future activities, including effects on rural character and amenity values.

Of particular relevance to landscape and amenity effects is:

Objective 9.2.2: “Retention of the contribution rural landscapes make to the amenity values and rural character of the District, and protection of those values from inappropriate subdivision and development.”

The supporting policies are:

Policy 9.2.3.1: “To integrate consideration of rural landscape values into any evaluation of proposals for more intensive subdivision and development than the Plan permits.”

Policy 9.2.3.3: “To retain the rural characteristics of the landscape within rural areas.”

Policy 9.2.3.4: “To encourage landscape enhancement and mitigation of changes through landscape analysis, subdivision design, planting proposals, careful siting of structures and other methods, throughout rural areas.”

Policy 9.2.3.5: “To evaluate, and to avoid, remedy or mitigate cumulative adverse effects of development on landscape values within rural areas.”

Section 9.1.30.3 in Principal Reasons and Explanation for the rules explains the intent as:

“Structures, especially in the coastal environment, on identified ridgelines and skylines, and adjoining national parks, have the potential to impact adversely on landscape character

through inappropriate location, size, shape and colour. Many of these effects can be mitigated through careful design and use of colour and tree planting.”

I note that these TRMP Objectives and Policies are also discussed in the Landscape and Visual Assessment in Appendix D. I agree with that assessment and add the following.

The TRMP shows the location of the proposed reservoir as being on an Identified Ridgeline. The Objectives and Policies above recognise that landscape amenity and rural character are important, and seek that any development avoids, remedies or mitigates its effect on these. Of particular relevance are those provisions in Chapter 9 requiring consideration of landscape values, retaining rural characteristics and mitigation of landscape effects through landscape analysis, planting proposals, careful siting of structures and other methods.

Landscape matters have been a feature since the early stages of the proposal. The site selection included considering the existing structures on this site, the reservoir configuration was selected with landscape matters as one of the criteria, important existing planting is to be retained on the site and an extensive planting plan has been developed. It is intended to plant fast growing eucalyptus trees, which will rapidly screen the reservoir but not reach a height that would obscure views to the distance mountains for nearby housing. The external surface of the reservoir will also be treated to reduce its dominance and to blend with the colour of the trunks of the eucalyptus. The planting has been designed to reflect the vegetation type and patterns typically found in the Rural Zone and therefore forming part of the character of this zone. The combination of these mitigation actions will appropriately manage the adverse effects of the proposal over time.

The proposal has therefore recognised and responded to the identified rural character of the site and the surrounding area and has included mitigation actions as sought by the relevant objectives and policies. The proposal is therefore considered to be consistent with these objectives and policies of the TRMP.

9.5.2 Land Disturbance

The most relevant objective for land disturbance is Objective 12.1.2: *“The avoidance, remedying, or mitigation of adverse effects of land disturbance, including:*

- a) Damage to soil;*
- b) Acceleration of the loss of soil;*
- c) Sediment contaminations of water and deposition of debris into rivers, stream, lakes, wetlands, karst systems, and the coast;*
- d) Damage to river beds, karst features, land fisheries or wildlife habitats, or structures through deposition, erosion or inundation;*
- e) Adverse visual effects;*
- f) Damage or destruction of indigenous animal, plant, and trout and salmon habitats, including cave habitats, or of site or areas of cultural heritage significance;*
- g) Adverse effects on indigenous biodiversity or other intrinsic values of ecosystems.”*

The construction of the pad to support the reservoir will involve a substantial amount of earthworks. This is to ensure an appropriately sized pad of suitable strength is created. The works will use best practice construction methods, with erosion and sedimentation control techniques used to ensure sediment is appropriately controlled. This will avoid adverse effects of sediment run off on the adjacent creek. The adverse visual effects will be temporary and will also be remedied through planting of the slope in grass and vegetation. The activity will be consistent with the objectives and associated policies in relation to land disturbance.

9.5.3 Activities in the Beds and on the Surface of Rivers and Lakes

Objective 27.1.2.2 seeks that *“Activities in, on, under, or over the beds of rivers and lakes are carried out in way that avoids, remedies, or mitigates adverse effects on aquatic ecosystems, including in particular:*

- a) *aquatic habitats of: (i) indigenous freshwater fish; (ii) indigenous birds and other wildlife, including river bed nesting habitats; (iii) trout;*
- b) *braided and lowland river ecosystems;*
- c) *fish passage.*

The proposed works have been considered by an ecologist who has provided recommendations on how the work should be undertaken. This will allow works to progress without permanent adverse effects on the values and features of the bed of the stream, or on aquatic ecosystems. Any short-term effects will be avoided, remedied or mitigated. These actions will ensure the activity meets the direction set by this objective.

9.5.4 Discharges to Freshwater/ Contaminant Discharges

Objective 33.1.2.1 seeks to discharge “contaminants in such a way that avoids, remedies or mitigates adverse effects while:

- a) *maintaining existing water quality; and*
- b) *enhancing water quality where existing quality is degraded for natural and human uses or values.”*

The supporting policies are:

Policy 33.1.3.5: “To ensure that existing water quality is not degraded after reasonable mixing as a result of any discharge of contaminants into water and to take into account the following criteria when determining what constitutes reasonable mixing...”

Policy 33.1.3.6: “To take into account the following factors in determining the significance of actual or likely adverse effects on the receiving water of, or from contaminant discharges...”

Policy 33.1.3.7: “To ensure the loss of nutrients and sediment to water is minimised through:

- a) *working with industry and landowners to develop good industry practices that maximise nutrient use efficiency and minimise nutrient run-off and leaching;*
- b) *requiring through conditions on consent or plan rules that activities that discharge nutrient, or take and use water for irrigation, or are land disturbances, are carried out with good industry practices.*

As outlined in this application, the activity and works proposed will use industry best practice to control and manage sediment. As a result, discharges of sediment to water or to land are minimised and existing water quality will be retained. The small size of the existing creek means discharges from the reservoir will constitute a large percentage of the creek flow during the intermittent discharge periods. Limiting the discharge rate (to 40l/s) and neutralising/ reducing the chlorine content, plus the nature of the discharge predominantly being drinking water, will mitigate adverse effects on water quality. The ecological impact assessment confirms that “*the proposed short-term discharge activity is not expected to result in adverse effects (cumulative or otherwise) on identified freshwater values.*”

In relation to policy 33.1.3.6, the significance of any adverse effects is also reduced due to the limited duration and infrequent nature of the discharge (as recognised by TDC when issuing a Notice of Deemed Permitted Marginal or Temporary Activity (CE200014) for a similar activity, i.e., the discharge of overflow from the Pomona Road reservoir). In my view the activity is consistent with the objective and policies.

Overall, the proposal is considered to be consistent with the objectives and policies of the TRMP.

9.6 Section 105 RMA

Under Section 105, if an application is for a discharge permit or to do something that would contravene section 15, the consent authority must, in addition to the matters in section 104(1), have regard to –

- (a) *The nature of the discharge and the sensitivity of the receiving environment to adverse effects;*
- (b) *(b) the applicant's reasons for the proposed choice; and*
- (c) *any possible alternative methods of discharge, including discharge into any other receiving environment.*

The proposal contravenes section 15 of the RMA and therefore regard has been had in this AEE to the matters outlined in section 105.

Discharges associated with this proposal relate to those during construction (dewatering and stormwater) and on a more permanent basis from stormwater off the site. The stormwater and possible dewatering discharges will be controlled through measures in the dust, erosion and sediment control plan. This significantly removes the sediment load and limits the adverse effects to the waterway.

The discharges requiring consent relate to that from the reservoir itself, including commissioning, maintenance, and possible overflows. These discharges to upper Borck Creek will only be undertaken intermittently for short durations.

There are no viable alternatives to discharges to the creek as the Council's piped stormwater network does not run past this site. The creek itself receives the stormwater discharge from the piped network on Sunview Heights and the surrounding area.

Given the proposed mitigation measures and volunteered conditions of consent, the discharge will have less than a minor effects on water quality and quantity. It is considered that the proposal will not give rise to the effects outlined in section 107 of the RMA.

9.7 Section 168A(3)(c) – Objective of the Requiring Authority

TDC has a core responsibility to provide local infrastructure, including water supply and treatment utilities, within the district.²

The proposed designation is directly linked to TDC's objective of supplying the required infrastructure services and to provide a safe and reliable community water supply for growing areas of Richmond. The new reservoir will provide a reticulated water supply to developing residential zones, including the deferred residential zones. The designation is necessary to provide a safe and reliable community water supply that meets the foreseeable needs of the community.

On this basis, the designation is reasonably necessary to achieve TDC's obligations to provide for the current and future Richmond South community.

9.8 Part II RMA

The RMA governs the use and development of New Zealand's natural and physical resources. Part 2 of the RMA contains the purpose and principles to be met when undertaking an activity.

Part 2 of the RMA is the framework against which all the functions, powers and duties under the RMA are to be exercised for the purpose of giving effect to the RMA. Section 5 sets out the

² As provided in the purpose of the Local Government Act 2002.

purpose of the RMA. Sections 6, 7 and 8 are principles intended to give guidance as to the way in which the purpose is to be achieved.

The Court of Appeal's decision *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 confirmed that decision-makers can have recourse to Part 2 when determining resource consent applications, although the relevant plan considerations may leave little room for Part 2 to influence the outcome. Recent supreme court decisions³ do not change the previous guidance on when recourse to Part 2 may be appropriate.

In this case, the proposed activity is consistent with the objectives and policies of the TRMP and the NPS-FM and therefore, an assessment against Part 2 is not considered necessary.

10 Conclusion

The proposed designation will provide a reticulated water supply to developing residential zones, including the deferred residential zones of Richmond. This will have a positive effect and provides for the social and economic wellbeing and the health and safety of the Richmond community.

The effects assessment in Section 6 above indicates that while the majority of effects have been avoided, minimised and remedied so that they are no more than minor, the landscape and visual effects – in the short to medium term – can be considered to be more than minor. The applicant therefore **requests public notification** under RMA s95A.

However, it is important to note that while the NOR and resource consent application have been bundled for notification purposes and ease of processing, the sole reason for requesting notification is the short-term visual and landscape effect in terms of the NOR.

The proposed mitigation, in particular the planting, results in a reduction to a minor and less than minor level of effect over the longer term. Overall, the environmental effects of the proposal are considered acceptable. The proposal is consistent with the objectives and policies of the TRMP.

³ *Port Otago Limited v Environmental Defence Society Incorporated and Others* [2023] NZSC 112; *Royal Forest and Bird Protection Society of New Zealand Inc v New Zealand Transport Agency* [2024] NZSC 26.