



Figure 35. Photo of site selected for location of the Nursery and associated facilities. View looking north to location of main buildings showing surrounding Hillocks. Series of three large steel construction supports shown on the right (see Item 11).



Figure 36. Photo looking north-east of site selected for location of the Nursery and associated facilities.



Figure 37. Photo looking south-east of site selected for location of the Nursery and associated facilities.



Figure 38. Photo looking south-west of site selected for location of the Nursery and associated facilities.

Maintaining open character and visual amenity values of the Hillocks

44. The proposal uses a range of native plants to maintain the legibility of the form of the Hillocks. This is achieved by planting larger native shrubs and forest species on the Hillocks with wetland species that are shorter in stature in the low-lying wetter areas around the base of the Hillocks. The flat areas on either side of the Glenorchy Routeburn Road are also planted in wetland species and native shrubs so the distinctive forms of the Hillocks will continue to remain legible, and also long views up the valley are maintained.
45. The activities also support the 'maintenance of open character' and 'visual amenity values' through the removal of the unsightly and clearly visible trampling and rutting of the Hillocks.¹⁷ It also supports objectives to 'promote indigenous biodiversity protection and regeneration where the landscape values and nature conservation values would be maintained or enhanced'¹⁸

Development of a prosperous, resilient and equitable economy in the District

46. The proposal repurposes pastoral land, that is prone to being waterlogged, to be a plant nursery that grows native plants to be used in the ecological restoration of the property, and in time other restoration planting projects in the district.
47. Revenues for this activity comes from the sale of plants and visitors coming to the nursery, who are given a guided experience of the nursery activity and the planting projects that will ecologically restore the Hillocks.
48. Development of a native plant nursery that engages visitors with the ecological restoration of the station, and also other supported sites in the district, and is an appropriate low-intensity farming activity that better fits the scale and size of Dart Valley Station. The proposal provides a

¹⁷ 3.2.1.1 b. maintenance of the landscape character and maintenance or enhancement of the visual amenity values of Rural Character Landscapes.

¹⁸ 6.3.2.6 Encourage subdivision and development proposals to promote indigenous biodiversity protection and regeneration where the landscape values and nature conservation values would be maintained or enhanced, particularly where the subdivision or development constitutes a change in the intensity in the land use or the retirement of productive farm land.

commercial activity that is founded on rural land, farming and horticulture¹⁹ in ways that enhances rural character and landscape values.²⁰

49. It enables a shift from sheep and cattle pastoral activities, to one in which the principle revenue generating activity is growing plants that support non-plantation reforestation activities, ecological restoration, sequestering of carbon, and inspiring visitors about the positive value of such activities.
50. Key innovations come from the use of Virtual Reality and Augmented Reality technologies in a series of viewing hides that allow visitors to see the landscape as it had been in the past, and how it can again be in the future. These innovations can be expected to support new forms of employment in the region that develop skills in communicating regenerative visitor experiences.²¹ It will also provide local employment for businesses skilled in supporting IT and VR/AR projects.²²
51. The proposal results in the landscape values of the property being strengthened and protected, meeting to a high level the provisions of 3.2.1.8a. Also, the landscape character is strengthened and enhanced, meeting to a moderate-high level the provisions of 3.2.1.8b.²³
52. The ecological restoration of the Hillocks landscape strengthens to a high level the nature-based conservation values of the Hillocks. It positively supports values of kaitiakitanga, strengthening the integrity of te taiao, including restoring habitat for native birds and invertebrates. By removing livestock from lands adjoining watercourses it improves in moderate ways the integrity of the Te Awa Whakatipu/Dart.
53. The shift in the type of farming activity to be undertaken at the site – from grazing of cattle and sheep to establishing a native plant nursery and supporting visitor experiences – supports provisions for a ‘diversification of farming and other rural activities that protect landscape and natural resource values and maintains the character of rural landscapes.’²⁴ The proposal’s combined use of regenerative farming and regenerative tourism principles supports in an exemplary way objectives to enable revenue producing activities that directly enhance and protect natural resources, strengthen and protect landscape values, and significantly enhance nature conservation values in a sustainable way.²⁵

¹⁹ 21.2.1.10 Provide for commercial activities in the Rural Zone that have a direct link with, or dependence on the rural land or water resource, farming, horticulture or viticulture activities, or recreation activities associated with resources located within the Rural Zone.

²⁰ 21.2.1.11 Provide for the establishment of commercial, retail and industrial activities where these would protect, maintain or enhance rural character, amenity values and landscape values.

²¹ 3.2.1.1 The significant socioeconomic benefits of well designed and appropriately located visitor industry places, facilities and services are realised across the District.

²² 3.2.1.6 Diversification of the District’s economic base and creation of employment opportunities through the development of innovative and sustainable enterprises.

²³ 3.2.1.8 Diversification of land use in rural areas beyond traditional activities, including farming, provided that:
a. the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are protected;
b. the landscape character of Rural Character Landscapes is maintained and their visual amenity values are maintained or enhanced;

²⁴ 21.2.9 Objective - Provision for diversification of farming and other rural activities that protect landscape and natural resource values and maintains the character of rural landscapes.

²⁵ 21.2.9.1 Enable revenue producing activities that can support the long term sustainability of the rural areas of the District, provided that such activities:
a. utilise natural and physical resources efficiently (including existing buildings and infrastructure);
b. protect landscape values of Outstanding Natural Features and Outstanding Natural Landscapes;
c. maintain the landscape character of Rural Character Landscapes and maintain or enhance their visual amenity values;
d. maintain or enhance amenity values within the rural environment; and
e. maintain or enhance nature conservation values.

54. The proposal broadens the types of recreation activities available for the wider Glenorchy community including growing locally, eco-sourced plants that can support community restoration efforts in the community and supports the provisions of 3.2.6.2 and 3.2.6.3.²⁶

Heritage

55. The Hillocks are a category 3 listed Heritage Feature, and are a distinctive and unique landscape form in the Queenstown Lakes region.
56. The primary objective of the PDP in terms of Historic Heritage is that 'The District's historic heritage is recognised, protected, maintained and enhanced'.²⁷
57. To date there has been no management of the Hillock's heritage values, with no actions to recognise, protect, maintain and enhance its heritage qualities.
58. Most of the Hillocks were cleared of their native vegetation, and have been grazed by cattle and sheep. As discussed earlier this has led to the Hillocks being heavily rutted by multiple livestock tracks, and the steady degradation of the remaining vestiges of native species, with clear evidence of the mature matagouri dying as a result of livestock.
59. The core objective of the proposal is to enhance the heritage qualities of the Hillocks. This is to be undertaken through shift the core farming activity of Dart Valley Station from cattle and sheep grazing to developing a nursery to raise local eco-sourced native plants for planting out across the proposal site, and also for these to be made available for sale, and also to support other community ecological restoration projects. This shift in farming activity allows the ongoing economic use of heritage features, whose goal is following best practice in terms of environmental stewardship and regenerative principles for farming and allied visitor services.²⁸
60. The purpose of 26.3.1.2 b is 'to enhance historic heritage through providing for the enhancement of heritage values through works which increase the resilience of heritage features by way of repairs and upgrades to meet building and safety standards, subject to these works being undertaken in a manner which respects heritage values and where possible retains original heritage fabric or utilises the same or similar materials'. The focus of this clause is on supporting respectful care of the original form and cladding of built elements, and this principle can also apply to restoring the Hillocks to their original form and manner of vegetation cover.
61. Prior to the advent of farming the Hillocks would have been vegetated in the same forms of forest found within Mount Aspiring National Park. The Growing Native Plants in the Wakatipu Guide (published by the Wakatipu Reforestation Trust) identifies that key native species would have included a mix of beech and broadleaf-podocarp forest (p7) with kowhai also a prominent species. Such forests, which would also have been present at the Hillocks, with only a few mature kowhai still standing on one of the Hillocks would have provided important habitat for birds and invertebrates. The landscape planting strategy focuses on re-establishing key native species and aligns with the recommendations of the Wakatipu Reforestation Trust guide.
62. As identified earlier, the landscape planting strategy works to maintain the visual legibility of the forms of the Hillocks, with this achieved by ensuring low lying areas are planted with grasses and

21.2.9.2 Recognise that the diversification of farming and other traditional rural activities, including for tourism, commercial recreation and visitor accommodation, may provide for landscape values, indigenous biodiversity, and water quality to be sustained or enhanced in the longer term.

²⁶ 3.2.6.2 A diverse, resilient and well-functioning community where opportunities for arts, culture, recreation and events are integrated into the built and natural environment.

3.2.6.3 The contribution that community social, recreational and cultural facilities and activities make to identity and sense of place for residents of the District is recognised and provided for through appropriate location and sound design.

²⁷ 26.3.1 Objective - The District's historic heritage is recognised, protected, maintained and enhanced

²⁸ 26.3.2.1 Encourage the ongoing economic use of heritage features, sites and areas by allowing adaptations and uses that are in accordance with best practice, and:
a. enhance heritage values in accordance with Policy 26.3.1.2

shrubs whose short height does not impede existing views of the Hillocks and ensures existing views from the Glenorchy Routeburn Road are maintained²⁹, and in this case restored to the manner of landcover is returned to the native species that originally grew on this Heritage Feature.

63. All buildings, in terms of visual presence, have used a design approach, and colour and materials palette designed to assist the effective blending of the buildings into the landscape. This includes the use of planted living/green rooves and timber trellis components on all buildings. In particular the purpose for the three viewing hides requires their finished form is disguised as much as can be practicably achieved.
64. The nursery, welcome facility, interactive plant display area, and community conservation hub building have been amalgamated into a single site. The nursery building is visible from public in the immediate vicinity of the site but is well screened from more distant views by landform and the native vegetation being re-established, that includes targeted mitigation planting for roadside screening purposes and for immediate planting so that once the plants reach 2.5m in height in 4-6 years the structures in the proposal will be unable to be seen from the Glenorchy Routeburn Road. Overall, the extent and duration of the proposal are considered appropriate within the vast surrounding ONL landscape. In my opinion the form, scale and proportion of the development do not detract from the heritage values and setting of the Hillocks³⁰, and are the necessary means by which this heritage feature is protected from livestock trampling and is restored and enhance in terms of its nature-based qualities.
65. There is a low gradient, fully accessible boardwalk constructed up the side of one of the Hillocks. This has been marked out on site and follows a route that ensures no excavation is required.
66. Most of the existing animal tracks on the hillocks will be used as mini-terraces along which the native seedlings will be planted.
67. The main waterway has been heavily channeled, with excavated material mounded in a long line on a terrace behind its northern bank. The landscape strategy directs for this material to be leveled out to restore it to the original form for this area.
68. The awa and its banks has strong significance for Ngai Tahu. However it is not known the level of tangible and intangible associations iwi has of the Hillocks. As identified earlier there is archaeological evidence of a Ti pit on the western bank of Te Awa Whakatipu/Dart River. The proposal takes a precautionary approach to the where people may walk, with the development founded on values of respecting the Hillocks.³¹ The main walking path takes a route that moves between the Hillocks rather than on them. One side path takes a route to a viewing area partway up the side of a Hillock. The boardwalk that takes people to a viewing platform uses timber post construction techniques so the need for any excavation is avoided. Ensuring all buildings are sited on flat land, with no buildings sited on a Hillock, also supports this precautionary principle.
69. In the proposal all walking around the Hillocks is guided. This will ensure walkers follow a single route, without the opportunity to wander. This will ensure respect for the Hillocks and protection of its landscape values is maintained, with walkers not able to access the top of any of them.

²⁹ 26.3.1.4 c: existing views of the listed heritage feature from adjoining public places, or publicly accessible places within the setting or extent of place, are maintained as far as is practicable

³⁰ 26.3.1.4 a. the form, scale and proportion of the development, and the proposed materials, do not detract from the listed heritage feature located within the setting or extent of place;

26.3.1.4 b. the location of development does not detract from the relationship that exists between the listed heritage feature and the setting or extent of place, in terms of the values identified for that feature;

³¹ 26.3.3.1 Identify the heritage values of heritage precincts, listed heritage features, sites of significance to Maori, areas of heritage significance and archaeological sites.

26.3.3.2 Ensure that in making decisions on development proposals, the effects on tangible and non-tangible values of sites of significance to Maori, are informed by those mandated to do so.

26.3.3.3 Recognise and protect the different layers of history within heritage (overlay) areas and the relationship between these layers, to retain their cultural meaning and values.

Neither the walking route, viewing platform, or walkers on walking it, will be visible from the Glenorchy Routeburn Road.

70. The proposal positively supports values of kaitiakitanga, strengthening the integrity of te taiao, including restoring habitat for native birds and invertebrates with these values being important for iwi.
71. The proposal strongly supports requirements to increase 'the knowledge and understanding of heritage values' and to 'enhance the understanding of historic heritage features, including through the need for interpretation'.³² Ecologically the heritage values of the Hillocks are in a highly dilapidated state, with the project founded on a need to inspire the community and visitors to the region about the vision for ecological restoration of both the Hillocks site, and also community projects elsewhere. The nursery takes a proactive approach to community engagement and has a number of its facilities dedicated to supporting these requirements. These include the interactive plant display area, native species and landscape viewing hides, and the community conservation hub. The proposal strongly supports these engagement goals which include the use of storytelling panels, interactive displays, and the use of VR headsets to allow people to see both the heritage of the forest and icy landscapes that used to be here, and the future native forest being planted here and across the region that the nursery is enabling to be planted.

Design and density of development

72. The nursery, welcome facility, plant display area, and community conservation hub are of a small scale that have been aggregated to a single site with all buildings and related facilities in close proximity to each other. Foot and vehicle access is located adjacent to each so a common accessway route is used.³³
73. The specific siting of the viewing hides has ensured each hide cannot be seen when at the other hides, or from the nursery and welcome facility site. The function of the hides requires their presence is disguised, with their scale, form, cladding, and the use of a planted 'green' roof creating an increased sense of concealment in the landscape, with the extensive planting of native species taking place around each hide and across the wider landscape strengthening this.

Earthworks

74. The building that includes the Welcome Facility, Community Workshop Space, and Interactive Display Area has a fall from north to south of approximately 600mm across a 40 meter length. Some earthworks are required to provide a level site for the building with approximately 40m³ of excavation required to be then used as fill at the lower end.
75. All of the other buildings are located on level sites with no excavation required other than that required to scrape the grass and to ensure an adequate fall of water away from the building site.
76. The vehicle access route to the nursery requires no excavation, other than that required to ensure adequate drainage.

³² 26.3.1.2 To enhance historic heritage through:

a. increasing the knowledge and understanding of heritage values;

26.3.4.1 Encourage opportunities to enhance the understanding of historic heritage features, including through the need for interpretation.

³³ 21.21.1.3 the proposal, including access, is designed and located in response to the identified landscape values;

a. opportunities have been taken to aggregate built development in order to utilise common access ways, including roads, pedestrian linkages, services and open space (i.e. open space held in one title whether jointly or otherwise);

b. there is merit in clustering any proposed building(s), building platform(s) and associated physical activity including roading, access, lighting, landscaping and earthworks within areas that are least sensitive to change;

77. The buildings have been sized to fit within the road transport requirements for relocatable buildings. All buildings in the proposal are single story, prefabricated and located on flat sites. The buildings are sited using pile foundations with this chosen to keep to a minimum the level of ground disturbance required. The green rooves are separate structures that span across the buildings and are designed to allow their disassembly. This form of construction also allows for the buildings to be subsequently removed off site should this subsequently be required.
78. The main walking path follows an existing gently graded route, that requires only the scraping of the top layer of grass, with no excavation needed.
79. The boardwalk that takes people to a viewing platform uses timber post construction techniques so the need for any excavation is avoided.
80. The carpark is located on a slightly elevated flat site that requires the scraping of the top layer of grass, and then minor grading for levelling and drainage purposes. It is estimated a maximum of 120m³ of earth will be scraped and redistributed across the carpark area, with gravel added to bring any minor variations up to level. The gravelled nature of the carpark and paths increase water permeability and environmental sensitivity

Visual Effects

81. The assessment needs to consider the effects on visual character across a range of criteria including as set out in 21.21.1.2; 6.3.3.1 and 21.2.1.3.³⁴
82. The Nursery Facility and Welcome Centre are sited 160 meters from the road behind one of the Hillocks. The site has been selected because of the natural shelter and beneficial microclimate the Hillocks provide from the prevailing north-west and south-west winds.
83. The highest parts of the northern end of the Nursery facility buildings are briefly visible from the road.

³⁴ 21.21.1.2 For the implementation of relevant policies in considering a subdivision or development proposal, the Council will have regards to the extent to which:

- a. the proposal will detract from public or private views of and within Outstanding Natural Features and Outstanding Natural Landscapes;
- b. mitigation is provided by elements that are in keeping with the protection of landscape values;
- c. structures will break the line and form of any ridges, hills and slopes;
- d. any roads, access, lighting, earthworks and landscaping are visible from beyond the boundary of the site of the proposal;
- e. if the proposal would be located within a landscape that exhibits open space or has an open character, it:
 - i. will maintain open space or open character when viewed from public roads and other public places;
 - ii. is situated on a site that is within a broadly visible expanse of open landscape when viewed from any public road or public place;
 - iii. is likely to affect open space or open character values with respect to the site and the surrounding landscape;
 - iv. is situated on a site that is defined by natural elements such as topography and/or existing vegetation which may contain and mitigate any adverse effects associated with the proposal;
- f. the visibility of the proposal will contribute to adverse cumulative effects on the landscape values identified in Schedule 21.22, or identified in accordance with SP 3.3.45

6.3.3.1 b. in the case of any subdivision or development, all buildings and other structures and all changes to landform or other physical changes to the appearance of land will be reasonably difficult to see from beyond the boundary of the site in question.

21.2.1.3 Require buildings to be set back a minimum distance from internal boundaries and road boundaries in order to mitigate potential adverse effects on landscape character, visual amenity, outlook from neighbouring properties and to avoid adverse effects on established and anticipated activities.



Figure 39 shows the locations along the road where the Nursery Facility is visible from the road.

84. Driving from Glenorchy, at places marked 1, 2, 3 and 4 on figure 39, the Nursery Facility is visible from the road. However, the buildings are a considerable distance away (between 400 meters and 740 meters, and require the viewer to look a full 90 degrees away from an iconic view of the mountains to the north that have also come into view. On the drive from Glenorchy to the Te Awa Whakatipu/Dart River bridge where the sealed road finishes it is common to see farm buildings and farm dwellings. The existence of occasional farm buildings is in keeping with the character of this landscape, and the siting of the buildings a minimum distance of 160 meters from the road ensures that its location and presence is in keeping with the character of the landscape.
85. The landscape planting plan shows extensive native planting is to be undertaken and this will provide within 4-6 years full screening from the road of the structures associated with the proposal. The structured nature of the native planting, which maintains existing views while changing the predominant ground cover of the site from pasture to native vegetation. will also increase the visual amenity values along this section of the Glenorchy Routeburn Road.

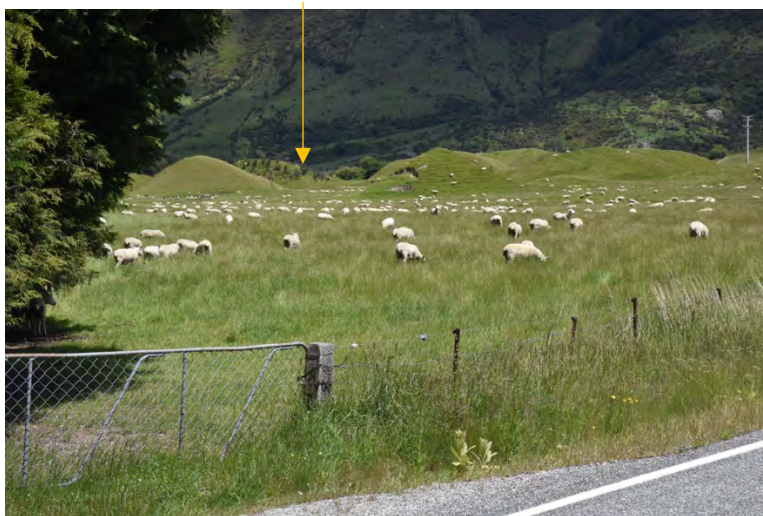


Figure 40: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 1, as shown on figure 39. This distance from the road to the marker poles is 740 meters. The photo is taken with a 50mm lens.



Figure 41: The same image as seen from Viewpoint 1 taken with a 25mm lens.



Figure 42: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 2, as shown on figure 39. This distance from the road to the marker poles is 560 meters. The photo is taken with a 50mm lens.



Figure 43: The same image as seen from Viewpoint 2 taken with a 25mm lens.



Figure 44: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 3, as shown on figure 39. This distance from the road to the marker poles is 410 meters. The photo is taken with a 50mm lens.



Figure 45: The same image as seen from Viewpoint 3 taken with a 25mm lens.

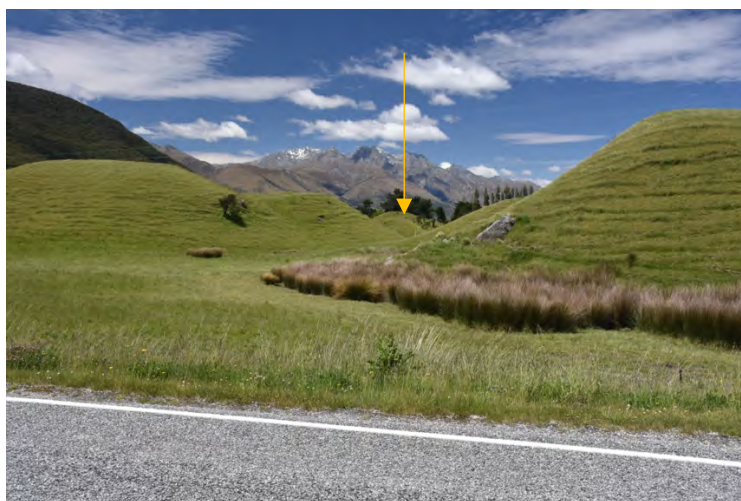


Figure 46: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 4, as shown on figure 39. This distance from the road to the marker poles is 1600 meters. The photo is taken with a 50mm lens.



Figure 47: The same image as seen from Viewpoint 4 taken with a 25mm lens.

86. The property's boundary to the south is bounded by a continuous shelterbelt, which precludes the Nursery Facility and Welcome Centre from being seen from within the neighbouring property.
87. The walking route, viewing hides and viewing platform are not visible from the Glenorchy Routeburn Road.
88. The fenced carpark, which is accessed by an existing gate, is located 35 meters distant from the Glenorchy Routeburn Road and while set well back from the road is visible to passing traffic. Carparks are a common and necessary facility in this region due to local and visitor's use of them to access walks and other recreation activities, and the requirement to ensure people's safety when around roads. The siting of the carpark away from the road does not impede on people's of the Humboldt Mountains, Ari/Mount Alfred and also north toward the headwaters of Ari/Mount Alfred. The landscape plans shows extensive planting of native wetland species are to be undertaken around it. The presence of people and cars in the carpark could be a negative effect for some people that is countered with the benefit it provides for people visiting the nursery and walking through the Hillocks. The presence of people and vehicles is a temporary effect that, given its transient quality and the level of setback from the road, is in this assessment considered minor.



Figure 48. Carpark location (orange arrow) as seen looking east along the Glenorchy Routeburn Road with existing access point from road is to be used (white arrow).

89. The three viewing hides by their very nature are designed to be small highly disguised structures. The third (southern-most) viewing hide is visible when viewed directly from beyond the southern side of the neighbour's boundary fence. The presence of a hillock on the other side of the

boundary fence means the viewing hide can only be seen when one is standing on or close to the fence line, making it difficult to be seen from beyond the boundary of the site.

90. The second and third viewing hides and viewing platform are briefly visible from Te Awa Whakatipu/Dart River at sites accessible by 4WD vehicles, and occasional members of the public walking along the riverbank. The landscape plan shows native plants will be established around these hides and along the property's boundaries. It also includes targeted mitigation planting for screening purposes and for immediate planting so that once the plants reach 2.5m in height in 4-6 years the viewing platform (including balustrade) will be fully screened.
91. These can be expected to grow rapidly and replace the broom and exotic grasses currently present. This means any potential negative visual effects for people accessing the river bed will be temporary in nature, with the native planting, once established, establishing the visual amenity value of the river bed.



Figure 49: View of pole that marks the leading visible corners of Hide 3 as seen from one of two places the site is visible from the Te Awa Whakatipu/Dart Riverbed. The distance from this viewpoint is 80m. The photo is taken with a 50mm lens.

92. The second and third viewing hides are briefly visible 580m away from the Greenstone Road on the other side of Te Awa Whakatipu/Dart River. Viewing hides are by their very nature designed to be concealed. Given the range of views available from this section of the Kinloch Road, and the discrete colour palette used for cladding the viewing hide and viewing platform, the level of visibility and any negative effect on the open space character of the site and surrounding landscape, including for people travelling the road, will be reasonably difficult to be seen.
93. The landscape plans shows extensive planting of native species to be undertaken around both the viewing hide, and viewing platform which will further reduce any visibility of the viewing hide from both the riverbed and from Kinloch Road.



Figure 50. Photos of marker poles showing location of Hide 2 as seen from Te Awa Whakatipu/Dart River riverbed 580m distant using 50mm lens.



Figure 51. Photos of marker poles showing location of Hide 2 as seen from Te Awa Whakatipu/Dart River riverbed 580m distant using 25 mm lens.

94. All buildings are located on low lying sites, with none located on any of the Hillocks. Consequently no buildings break the line and form of any ridges, hills and slopes.
95. The path to the viewing platform follows a gentle gradient to ensure wheelchair accessibility. The viewing platform is located along the side of Hillock. This structure and also the boardwalk path do not break the line and form of any ridges, hills and slopes.

Setbacks

96. All buildings in the proposal is comply with the road boundary setback requirements.³⁵
97. All buildings comply with a requirement to be a minimum of 20 meters from any wetland or watercourse.

³⁵ 21.5.2 The setback of any building from a road boundary shall be 20m.

21.7.1 Any structure which is greater than 5 meters in length, and between 1 meter and 2 meters in height must be located a minimum distance of 10 meters from a road boundary.



Figure 52. Plan showing each of the five wetlands (dark blue) identified in the Beale ecology report, and also marks a 20 meter buffer zone (light blue) from the edge of each wetland. A 20 meter buffer is also shown for the modified watercourse. This confirms that all buildings in the proposal comply with the setback requirement.³⁶

Lighting and Glare

98. The proposal supports the development of a Dark Sky Reserve in the Glenorchy area with lighting of all buildings and paths are designed to support protection of Dark Sky values. This includes external lights point down to target ground surfaces.³⁷
99. Lighting of viewing hides is designed to be discrete, with no light sources visible from Te Awa Whakatipu/Dart River, or the Kinloch Road. No light sources from the Nursery Facility and Welcome Centre are visible from the Glenorchy Routeburn Road or any other public places.³⁸

Building cladding colours and light reflectance

100. The exterior surfaces for all buildings in the proposal use a common set of materials designed to lessen the visual impact of the buildings. Exterior walls are clad in Shadowclad painted dark charcoal, windows and doors are powdercoated aluminium (ironsand), posts are milled from macrocarpa and painted dark charcoal, the external slats are designed to further soften and disguise the building and are made from unstained macrocarpa that is left to become a weathered

³⁶ 21.5.4 The minimum setback of any building from the bed of a wetland, river or lake shall be 20m.

³⁷ 21.2.1.5 Have regard to the location and direction of lights so they do not cause glare to other properties, waterbodies, roads, public places or views of the night sky

³⁸ 21.5.7.1 All fixed exterior lighting must be directed away from adjoining sites and roads; and

21.5.7.2 No activity on any site will result in greater than a 3.0 lux spill (horizontal and vertical) of light onto any other site measured at any point inside the boundary of the other site, provided that this rule shall not apply where it can be demonstrated that the design of adjacent buildings adequately mitigates such effects.

21.5.7.3 There must be no upward light spill

grey), and the timber decking stained dark brown. All these surfaces comply with the requirement for external surfaces to be coloured in the range of browns, greens or greys, and in tones that meet the required light reflectance values.³⁹

101. The rooves on all buildings are living 'green' rooves. The form of the largest roof is curved in both plan view and profile supporting the sense of curved form present in the Hillocks themselves. The planted quality of the roof aligns with the native planting focus of the nursery, and also further conceals each of the buildings when seen by people when walking on the paths around the Hillocks.

Accessibility

102. Walking paths are contoured, surfaced, graded and of a width to meet accessibility standards for people requiring wheelchair or similar levels of access and supports meeting the accessibility needs of people with different abilities.⁴⁰ The route taken by the boardwalked path to the viewing platform meets grade (1:12 minimum, 1:14 preferred), width (minimum 1200mm) and landing requirements for accessibility.⁴¹

103. All signage and wayfinding is designed to meet Blind Low Vision NZ's Accessibility Guidelines to ensure accessibility requirements for blind and low vision people.

Location of paths

104. No paths, tracks or roads in the proposal disturb, or are located on the margin of any waterways or wetlands.

105. The footbridge shown is a single span wooden structure whose wooden piles on each side are set back in the adjacent bank so as not to disturb the waterway and its margin.

Cumulative Effects

106. The development of the nursery and the ecological restoration of the property reduces in a minor way a sense of increasing cumulative effects arising from increasing pastoral production in the region.

107. The proposal, by reducing the gap between the forests of Ari/Mount Alfred and the forest mountains on the west of the Whakatipu/Dart River increases ecological connectivity for avifauna, with this adding positively to landscape values and landscape capacity, and in particular those relating to improving habitat for native species.

108. The proposal carefully manages access and behaviours in regards to the Hillocks. Rather than allowing open access for visitors to walk across the property, and up any number of Hillocks, the project seeks to tightly manage this by requiring walkers are guided along a fixed route that follows a defined path. This ensures respect for the Hillocks and also the Hillocks' open space qualities are maintained for those walking the route. It also ensure these open space qualities are maintained for those driving the Dart/Routeburn Rd with no guided walkers visible from the road.

³⁹ 21.7.2 Any building, including any structure larger than 5m², that is new, relocated, altered, reclad or repainted, including containers intended to, or that remain on site for more than six months, and the alteration to any lawfully established building, are subject to the following: All exterior surfaces* must be coloured in the range of browns, greens or greys, including;

21.7.2.1 Pre-painted steel and all roofs must have a light reflectance value not greater than 20%; and

21.7.2.2 All other surface finishes except for schist, must have a light reflectance value of not greater than 30%.

⁴⁰ 3.2.6.1 The accessibility needs of the District's residents and communities to places, services and facilities are met.

⁴¹

CONCLUSION

109. The proposal seeks to change the primary farming activities of Dart Valley Station from bare land pasture for beef cattle and sheep to a native plant nursery whose purpose is to raise native seedlings for extensive restoration planting to be undertaken at Dart Valley Station and for supply for community restoration projects in the region, and for public sale.
110. The proposal seeks to invite the community and the public to view the nursery and restoration planting activities, and include options for people to be guided through the Hillocks environment and to provide viewing hides and interactive displays to better engage people with the nursery's nature-based values.
111. The form and presence of the Hillocks are treated respectfully with no buildings or earthworks undertaken on them. The viewing platform is on the side (rather than the top) of a Hillock and the timber construction method used to build it and the boardwalk that leads to it leaves the ground is undisturbed other than that needed for fixing posts.
112. The location and design of the nursery facility buildings and walking route has been very sensitively handled. Extensive native planting will effectively screen buildings, with the establishment of the 2.5m height needed to fully ensure all new structures are not visible from the Glenorchy Routeburn Road expected to take 4-6 years. Specific locations from which some sections of the structures are visible, have been designated for roadside screening purposes and for immediate mitigation planting. The increased presence of native species will significantly improve and strengthen visual amenity values.
113. Currently the Heritage qualities of the Hillocks are in a dilapidated state brought about trampling and rutting by livestock of the Hillocks and also its wetland areas. The level of native planting to be provided to this site is will significantly improve native biodiversity and ecological connectivity values.
114. Overall, the proposal is considered appropriate within the surrounding ONL landscape. Also, it is considered the proposal will improve the landscape character of the Hillocks while improving biodiversity values, strengthening visual amenity values, and increase public knowledge and awareness of the natural heritage values of the Hillocks and the wider region.

Mick Abbott



Landscape Architect, MLA, PhD.

Member of NZILA

APPENDIXES

Appendix 7

QLDC Proposed District Plan: Relevant Objectives & Policies

STRATEGIC OBJECTIVES

The development of a prosperous, resilient and equitable economy in the District. (addresses Issue 1)

The significant socioeconomic benefits of well designed and appropriately located visitor industry places, facilities and services are realised across the District.

Diversification of the District's economic base and creation of employment opportunities through the development of innovative and sustainable enterprises.

Diversification of land use in rural areas beyond traditional activities, including farming, provided that: a. the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are protected; b. the landscape character of Rural Character Landscapes is maintained and their visual amenity values are maintained or enhanced; and c. significant nature conservation values and Ngāi Tahu values, interests and customary resources, are maintained.

Community needs are met by the efficient and effective operation, maintenance, upgrade and development of infrastructure in the District

The distinctive natural environments and ecosystems of the District are protected. (addresses Issue 4) (SO 3.2.1.7 and 3.2.1.8 also elaborate on SO 3.2.4).

Development and land uses that sustain or enhance the life-supporting capacity of air, water, soil and ecosystems, and maintain indigenous biodiversity.

The spread of wilding exotic vegetation is avoided.

The natural character of the beds and margins of the District's lakes, rivers and wetlands is preserved, or enhanced where possible, and protected from inappropriate subdivision, use and development.

The water quality and functions of the District's lakes, rivers and wetlands are maintained or enhanced.

Public access to the natural environment is maintained or enhanced.

The survival chances of rare, endangered, or vulnerable species of indigenous plant or animal communities are maintained or enhanced.

The retention of the District's distinctive landscapes. (addresses Issues 2 and 4)

The District's Outstanding Natural Features and Outstanding Natural Landscapes and their landscape values and related landscape capacity are identified.

Within the Rural Zone, new subdivision, use and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless: a. where the landscape values of Priority Areas of Outstanding Natural Features and Outstanding Natural Landscapes are specified in Schedule 21.22, those values are protected; or b. where the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are not specified in Schedule 21.22, the values identified according to SP 3.3.45 are protected.

The District's residents and communities are able to provide for their social, cultural and economic wellbeing and their health and safety. (addresses Issues 1 and 6) (SO 3.2.1.1 – 3.2.1.8, 3.2.2.1, 3.2.3.1, and 3.2.3.2 also elaborate on SO 3.2.6)

The accessibility needs of the District's residents and communities to places, services and facilities are met.

A diverse, resilient and well-functioning community where opportunities for arts, culture, recreation and events are integrated into the built and natural environment.

The contribution that community social, recreational and cultural facilities and activities make to identity and sense of place for residents of the District is recognised and provided for through appropriate location and sound design.

The partnership between Council and Ngāi Tahu is nurtured. (addresses Issue 6).

Ngāi Tahu values, interests and customary resources, including taonga species and habitats, and wāhi tūpuna, are protected.

The expression of kaitiakitanga is enabled by providing for meaningful collaboration with Ngāi Tahu in resource management decision making and implementation

STRATEGIC POLICIES

Visitor Industry

In rural areas, provide for commercial recreation and tourism related activities that enable people to access and appreciate the District's landscapes provided that those activities are located and designed and are of a nature that: a. protects the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes; and b. maintains the landscape character and maintains or enhances the visual amenity values of Rural Character Landscapes. (relevant to SO 3.2.1, 3.2.1.1, 3.2.1.8, 3.2.5, 3.2.5.2, 3.2.5.3, 3.2.5.4, 3.2.5.5, and 3.2.5.6)

Climate Change

Encourage economic activity to adapt to and recognise opportunities and risks associated with climate change. (relevant to SO 3.2.2, 3.2.2.1 and 3.2.6, 3.2.6.2)

Natural Environment

Protect SNAs and encourage enhanced indigenous biodiversity outcomes. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.4, 3.2.4.1, 3.2.4.2, 3.2.4.3, 3.2.4.4, 3.2.4.6 and 3.2.4.7)

Manage subdivision and / or development that may have adverse effects on the natural character and nature conservation values of the District's lakes, rivers, wetlands and their beds and margins so that their life-supporting capacity is safeguarded; and natural character is maintained or enhanced as far as practicable. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.4, 3.2.4.1, 3.2.4.3, 3.2.4.4)

Rural Activities

Enable continuation of existing farming activities and evolving forms of agricultural land use in rural areas except where those activities conflict with: a. protection of the landscape values of Outstanding Natural Features or Outstanding Natural Landscapes; or b. maintenance of the landscape character and maintenance or enhancement of the visual amenity values of Rural Character Landscapes. (relevant to SO 3.2.1, 3.2.1.7, and 3.2.5, 3.2.5.1 - 3.2.5.7)

Protection of Regionally Significant Infrastructure

Protect Regionally Significant Infrastructure by managing the adverse effects of incompatible activities.

Outstanding Natural Features and Landscapes and Rural Character Landscape

Identify the District's Outstanding Natural Features and Outstanding Natural Landscapes on the District Plan web mapping application. (relevant to SO 3.2.5, 3.2.5.1)

For Outstanding Natural Features and Outstanding Natural Landscapes, identify landscape values and landscape capacity: a. for Priority Areas identified in Schedule 21.22, in accordance with the values identification framework in SP 3.3.36 - 3.3.38 and otherwise through the landscape assessment methodology in SP 3.3.45 and through best practice landscape assessment methodology; and b. outside of identified Priority Areas, in accordance with the landscape assessment methodology in SP 3.3.45 and through best practice landscape assessment methodology. (relevant to SO 3.2.5, 3.2.5.1)

Protect the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.5, 3.2.5.2, 3.2.5.3, 3.2.5.4 and 3.2.5.6)

Avoid adverse effects on the landscape values of the District's Outstanding Natural Features and Outstanding Natural Landscapes from residential subdivision, use and development where there is little capacity to absorb change. (relevant to SO 3.2.2, 3.2.2.1, 3.2.5, 3.2.5.2 - 3.2.5.4)

Outstanding Natural Features, Outstanding Natural Landscapes and Rural Character Landscapes

In applying the Strategic Objectives and Strategic Policies for Outstanding Natural Features, Outstanding Natural Landscapes and Rural Character Landscapes, including the values identification frameworks in SP 3.3.37, 3.3.38, 3.3.40 and 3.3.41 and the landscape assessment methodology in SP 3.3.45, have regard to the following attributes: a. Physical attributes: i. geology, geomorphology and topography; ii. ecology; iii. vegetation cover (exotic and indigenous); iv. the presence of waterbodies including lakes, rivers, streams, wetlands, and their hydrology; v. land use (including settlements, buildings and structures; and b. Sensory (or experiential) attributes: i. legibility or expressiveness – how obviously the feature or landscape demonstrates its formative processes; ii. aesthetic values including memorability and naturalness; iii. wild or scenic values; iv. transient values including values at certain times of the day or year; v. experiential attributes, including the sounds and smells associated with the landscape; and c. Associative attributes: i. whether the attributes identified in (a) and (b) are shared and recognised; ii. cultural and spiritual values for Tangata Whenua; iii. historical and heritage associations; and iv. recreational values. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.2, 3.2.2.1, 3.2.5, 3.2.5.1 - 3.2.5.7)

Where any or any part of an Outstanding Natural Feature, Outstanding Natural Landscape or a Rural Character Landscape is not identified as a Priority Area in Schedule 21.22 or 21.23, this does not imply that the relevant area: a. is more or less important than the identified Priority Areas in terms of: i. the landscape attributes and values, in the case of an Outstanding Natural Feature or Outstanding Natural Landscape; ii. landscape character and visual amenity values, in the case of a Rural Character Landscape; or b. is more or less vulnerable to subdivision, use and development. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.2, 3.2.2.1, 3.2.5, 3.2.5.1 - 3.2.5.7)

Landscape Assessment Methodology

Landscape assessments shall: a. for Outstanding Natural Features and Outstanding Natural Landscapes: i. identify landscape attributes and values; and ii. assess effects on those values and on related landscape capacity; b. for Rural Character Landscapes: i. define a relevant landscape character area and its wider landscape context; ii. identify the landscape character and visual amenity values of that landscape character area and within its wider landscape context; and iii. assess effects on that character and those values and on related landscape capacity; c. in each case apply a consistent rating scale for attributes, values and effects. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.2, 3.2.2.1, 3.2.5, 3.2.5.1 – 3.2.5.7)

The Landscape Assessment Methodology required by SP 3.3.45 is to be implemented when assessing: a. a proposed plan change affecting the rural environment; b. a resource consent application for the subdivision, use or development of land where: i. the application is for a restricted discretionary, discretionary or non-complying activity; and ii. the proposal is in relation to land within an Outstanding Natural Feature or Outstanding Natural Landscape or gives rise to landscape effects and is on land with Rural zoning; or c. a notice of requirement where the proposal is in relation to land within an Outstanding Natural Feature or Outstanding Natural Landscape or gives rise to landscape effects and is on land with Rural zoning; or d. a resource consent where the proposal (or part thereof) is in an Exception Zone in 3.1B.5 and gives rise to landscape effects on the receiving environment that includes an Outstanding Natural Feature or Outstanding Natural Landscape on land with Rural zoning outside that Exception Zone. (relevant to SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.2, 3.2.2.1, 3.2.5, 3.2.5.1 – 3.2.5.7)

Cultural Environment

Avoid significant adverse effects on wāhi tūpuna within the District. (relevant to SO 3.2.7, 3.2.7.1)

Avoid remedy or mitigate other adverse effects on wāhi tūpuna within the District. (relevant to SO 3.2.7, 3.2.7.1)

Manage wāhi tūpuna within the District, including taonga species and habitats, in a culturally appropriate manner through early consultation and involvement of relevant iwi or hapū. (relevant to SO 3.2.7, 3.2.7.1 and 3.2.7.2)

Ngāi Tahu Rights and Interests (Chapter 5)

5.3.1 Objective - Consultation with tangata whenua occurs through the implementation of the Queenstown Lakes District Plan Policies

Policies

5.3.1.1 Ensure that Ngāi Tahu Papatipu Rūnanga are engaged in resource management decisionmaking and implementation on matters that affect Ngāi Tahu values, rights and interests, in accordance with the principles of the Treaty of Waitangi.

5.3.1.2 Actively foster effective partnerships and relationships between the Queenstown Lakes District Council and Ngāi Tahu Papatipu Rūnanga.

5.3.1.3 When making resource management decisions, ensure that functions and powers are exercised in a manner that takes into account iwi management plans.

5.3.1.4 Recognise that only tangata whenua can identify their relationship and that of their culture and traditions with their ancestral lands, water sites, wāhi tapu, tōpuni and other taonga.

5.3.2 Objective - Ngāi Tahu have a presence in the built environment

Policies

5.3.2.1 Collaborate with Ngāi Tahu in the design of the built environment including planting, public spaces, use of Ngāi Tahu place names and interpretive material. Enable the sustainable use of Māori land.

5.3.3 Objective - Ngāi Tahu taonga species and related habitats are protected.

Policies

5.3.3.1 Where adverse effects on taonga species and habitats of significance to Ngāi Tahu cannot be avoided, remedied or mitigated, consider environmental compensation as an alternative

5.3.5 Objective - Wāhi tūpuna and all their components are appropriately managed and protected

Policies

5.3.5.1 Identify wāhi tūpuna and all their components on the District Plan web mapping application in order to facilitate their protection from adverse effects of subdivision, use and development.

5.3.5.2 Pending their identification on the District Plan web mapping application, encourage direct consultation with tangata whenua when iwi management plans indicate that proposals may adversely affect sites of cultural significance.

5.3.5.3 Identify threats to wāhi tūpuna and their components in this District Plan.

5.3.5.4 Enable Ngāi Tahu to provide for its contemporary uses and associations with wāhi tūpuna.

5.3.5.5 Avoid where practicable, adverse effects on the relationship between Ngāi Tahu and the wāhi tūpuna Chapter

Landscapes – Rural Character (Chapter 6): Managing Activities on Outstanding Natural Features and in Outstanding Natural Landscapes (all Strategic Policies)

Recognise that subdivision and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless: a. landscape values are protected; and b. in the case of any subdivision or development, all buildings and other structures and all changes to landform or other physical changes to the appearance of land will be reasonably difficult to see from beyond the boundary of the site in question. (SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.5, 3.2.5.2, 3.2.5.3, 3.2.5.4 and SP 3.3.2, 3.3.23, 3.3.30, 3.3.31)

Ensure that the protection of Outstanding Natural Features and Outstanding Natural Landscapes includes recognition of any values relating to cultural and historic elements, geological features and matters of cultural and spiritual value to Tangata Whenua, including tōpuni and wāhi tūpuna. (SO 3.2.3, 3.2.3.1, 3.2.5.2, 3.2.5.3, 3.2.5.4, 3.2.7.1, and SP 3.3.17, 3.3.23, 3.3.30, 3.3.31, 3.3.43, 3.3.49, 3.3.50, Chapter 5).

For farming activities within Outstanding Natural Features and Outstanding Natural Landscapes: a. Recognise that farming activities may modify the landscape; b. Enable those activities in a way that is consistent with protecting the values of Outstanding Natural Features and Outstanding Natural Landscapes. (3.2.1.7, 3.2.1.8, 3.2.4.1, 3.2.5.1, 3.3.20, 3.3.30).

The landscape values of Outstanding Natural Landscapes are a significant intrinsic, economic and recreational resource, such that new large scale renewable electricity generation or new large scale mineral extraction development proposals are not likely to be compatible with them. (SO 3.2.1, 3.2.1.8, 3.2.5, 3.2.5.2, 3.2.5.3, 3.2.5.4, and SP3.3.24, 3.3.30).

Maintain the open landscape character of Outstanding Natural Features and Outstanding Natural Landscapes where it is open at present. (SO 3.2.1, 3.2.1.7, 3.2.1.8, 3.2.5, 3.2.5.2, 3.2.5.3, 3.2.5.4, and SP 3.3.2, 3.3.21, 3.3.23, 3.3.30, 3.3.31).

Rural Zone (Chapter 21)

Objective - A range of land uses, including farming are enabled while: a. Protecting the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes; b. Maintaining the landscape character of Rural Character Landscapes and maintaining or enhancing their visual amenity values; c. Maintaining or enhancing amenity values within the rural environment; and d. Maintaining or enhancing nature conservation values.

Policies

Enable farming activities while protecting, maintaining or enhancing the values of indigenous biodiversity, ecosystem services, recreational values, and the natural character and nature conservation values of the District's lakes and rivers and their margins.

Require buildings to be set back a minimum distance from internal boundaries and road boundaries in order to mitigate potential adverse effects on landscape character, visual amenity, outlook from neighbouring properties and to avoid adverse effects on established and anticipated activities.

Minimise the dust, visual, noise and odour effects of activities by requiring them to locate a greater distance from formed roads, neighbouring properties, waterbodies and zones that are likely to contain residential and commercial activity.

Have regard to the location and direction of lights so they do not cause glare to other properties, waterbodies, roads, public places or views of the night sky.

Avoid adverse cumulative impacts on ecosystem services and nature conservation values.

Have regard to the spiritual beliefs, cultural traditions and practices of Tangata whenua.

Have regard to fire risk from vegetation and the potential risk to people and buildings, when assessing subdivision and development in the Rural Zone.

Provide adequate firefighting water and fire service vehicle access to ensure an efficient and effective emergency response.

Provide for commercial activities in the Rural Zone that have a direct link with, or dependence on the rural land or water resource, farming, horticulture or viticulture activities, or recreation activities associated with resources located within the Rural Zone.

Provide for the establishment of commercial, retail and industrial activities where these would protect, maintain or enhance rural character, amenity values and landscape values.

Ensure traffic from new commercial activities maintains: a. the safe and efficient operation of the roading and trail network; and b. access to public places.

Objective - The life supporting capacity of soils is sustained.

Policies

Allow for the establishment of a range of activities that utilise the soil resource in a sustainable manner.

Maintain the productive potential and soil resource of Rural Zoned land and encourage land management practices and activities that benefit soil and vegetation cover.

Protect the soil resource by controlling activities including earthworks, indigenous vegetation clearance and prohibit the planting and establishment of identified wilding exotic trees with the potential to spread and naturalise.

Objective - The life supporting capacity of water is safeguarded through the integrated management of the effects of activities.

Policies

In conjunction with the Otago Regional Council, regional plans and strategies: a. encourage activities that use water efficiently, thereby conserving water quality and quantity;

b. discourage activities that adversely affect the potable quality and life supporting capacity of water and associated ecosystems.

Objective - Situations where sensitive activities conflict with existing and anticipated activities are managed to minimise conflict between incompatible land uses.

Policies

New activities must recognise that permitted and established activities in the Rural Zone may result in effects such as odour, noise, dust and traffic generation that are reasonably expected to occur and will be noticeable to residents and visitors in rural areas.

Control the nature, scale and location of activities seeking to establish in the Rural Zone, so as to minimise conflict with permitted and established activities, that may be incompatible with those activities.

Objective - Provision for diversification of farming and other rural activities that protect landscape and natural resource values and maintains the character of rural landscapes.

Policies

Enable revenue producing activities that can support the long term sustainability of the rural areas of the District, provided that such activities: a. utilise natural and physical resources efficiently (including existing buildings and infrastructure); b. protect landscape values of Outstanding Natural Features and Outstanding Natural Landscapes; c. maintain the landscape character of Rural Character Landscapes and maintain or enhance their visual amenity values; d. maintain or enhance amenity values within the rural environment; and e. maintain or enhance nature conservation values.

Recognise that the diversification of farming and other traditional rural activities, including for tourism, commercial recreation and visitor accommodation, may provide for landscape values, indigenous biodiversity, and water quality to be sustained or enhanced in the longer term.

Objective – Commercial Recreation in the Rural Zone is of a nature and scale that is compatible with the amenity values of the location.

Policies

The group size of commercial recreation activities will be managed so as to be consistent with the level of amenity in the surrounding environment.

Manage the adverse effects of commercial recreation activities so as not to degrade rural quality or character or visual amenities and landscape values.

Avoid, remedy or mitigate any adverse effects commercial activities may have on the range of recreational activities available in the District and the quality of the experience of the people partaking of these opportunities.

Ensure the scale and location of buildings, noise and lighting associated with commercial recreation activities are consistent with the level of amenity in the surrounding environment.

Objective - The natural character of lakes and rivers and their margins is protected, or enhanced, while also providing for appropriate activities, including recreation, commercial recreation and public transport.

Policies

Have regard to statutory obligations, Wāhi Tūpuna and the spiritual beliefs, and cultural traditions of tangata whenua where activities are undertaken on the surface of lakes and rivers and their margins.

Enable people to have access to a wide range of recreational experiences on the lakes and rivers, and their margins, while having regard to environmental and safety constraints of the various parts of each lake and river.

Avoid or mitigate the adverse effects of frequent, large-scale or intrusive commercial activities such as those with high levels of noise, vibration, speed and wash, in particular motorised craft, in areas of high passive recreational use, significant nature conservation values and wildlife habitat.

Have regard to the whitewater values of the District's rivers and, in particular, the values of parts of the Kawarau, Nevis and Shotover Rivers as three of the few remaining major unmodified whitewater rivers in New Zealand, and to support measures to protect this characteristic of rivers.

Protect, maintain or enhance the natural character and nature conservation values of lakes, rivers and their margins from inappropriate activities with particular regard to nesting and spawning areas, the intrinsic value of ecosystem services and areas of indigenous fauna habitat and recreational values.

Recognise and provide for the maintenance and enhancement of public access to and enjoyment of the margins of the lakes and rivers.

Ensure that the location, design and use of structures and facilities are such that any adverse effects on visual qualities, safety and conflicts with recreational and other activities on the lakes and rivers are avoided, remedied or mitigated.

Earthworks (Chapter 25)

Objective – Earthworks are undertaken in a manner that minimises adverse effects on the environment, including through mitigation or remediation, and protects people and communities.

Policies

Ensure earthworks minimise erosion, land instability, and sediment generation and off-site discharge during construction activities associated with subdivision and development.

Manage the adverse effects of earthworks to avoid inappropriate adverse effects and minimise other adverse effects, in a way that:

- a. Protects the values of Outstanding Natural Features and Landscapes;
- b. Maintains the amenity values of Rural Character Landscapes;
- c. Protects the values of Significant Natural Areas and the margins of lakes, rivers and wetlands;
- d. Minimises the exposure of aquifers, in particular the Wakatipu Basin, Hāwea Basin, Wānaka Basin and Cardrona alluvial ribbon aquifers;
- e. Protects Māori cultural values, including wāhi tapu and wāhi tūpuna and other sites of significance to Māori;
- f. Protects the values of heritage sites, precincts and landscape overlays from inappropriate subdivision, use and development; and
- g. Maintains public access to and along lakes and rivers.

Avoid, where practicable, or remedy or mitigate adverse visual effects of earthworks on visually prominent slopes, natural landforms and ridgelines.

Manage the scale and extent of earthworks to maintain the amenity values and quality of rural and urban areas.

Design earthworks to recognise the constraints and opportunities of the site and environment.

Ensure that earthworks are designed and undertaken in a manner that does not adversely affect infrastructure, buildings and the stability of adjoining sites.

Encourage limiting the area and volume of earthworks being undertaken on a site at any one time to minimise adverse effects on water bodies and nuisance effects of adverse construction noise, vibration, odour, dust and traffic effects.

Undertake processes to avoid adverse effects on cultural heritage, including wāhi tapu, wāhi tūpuna and other taonga, and archaeological sites, or where these cannot be avoided, effects are remedied or mitigated.

Manage the potential adverse effects arising from exposing or disturbing accidentally discovered material by following the Accidental Discovery Protocol in Schedule 25.10.

Ensure that earthworks that generate traffic movements maintain the safety of roads and accesses, and do not degrade the amenity and quality of surrounding land.

Ensure that earthworks minimise natural hazard risk to people, communities and property, in particular earthworks undertaken to facilitate land development or natural hazard mitigation.

25.2.2 Objective – The social, cultural and economic wellbeing of people and communities benefits from earthworks

Policies

Enable earthworks that are necessary to provide for people and communities wellbeing, having particular regard to the importance of:

- a. Nationally and Regionally Significant Infrastructure;
- b. tourism infrastructure and activities, including the continued operation, and provision for future sensitive development of recreation and tourism activities within the Ski Area Sub Zones and the vehicle testing facility within the Waiorau Ski Area Sub Zone;
- c. minimising the risk of natural hazards; enhancing the operational efficiency of farming including maintenance and improvement of track access and fencing; and
- e. the use and enjoyment of land for recreation, including public walkways and trails; and
- f. maintaining or enhancing the operational efficiency of existing infrastructure.

Historic Heritage (Chapter 26)

Objective - The District's historic heritage is recognised, protected, maintained and enhanced.

Policies

Ensure historic heritage features within the District that warrant protection are recognised in the Inventory of Listed Features (26.8).

To enhance historic heritage through: increasing the knowledge and understanding of heritage values; providing for the enhancement of heritage values through works which increase the resilience of heritage features by way of repairs and upgrades to meet building and safety standards, subject to these works being undertaken in a manner which respects heritage values and where possible retains original heritage fabric or utilises the same or similar materials.

Protect historic heritage values while managing the adverse effects of land use, subdivision and development, including cumulative effects, taking into account the significance of the heritage feature, area or precinct.

Where activities are proposed within the setting or extent of place of a listed heritage feature, to protect the heritage significance of that feature by ensuring that: the form, scale and proportion of the development, and the proposed materials, do not detract from the listed heritage feature located within the setting or extent of place; the location of development does not detract from the relationship that exists between the listed heritage feature and the setting or extent of place, in terms of the values identified for that feature; existing views of the listed heritage feature from adjoining public places, or publicly accessible places within the setting or extent of place, are maintained as far as is practicable;

Avoid the total demolition, or relocation beyond the site, of Category 1 heritage features.

Discourage the total demolition of Category 2 heritage features, or the partial demolition of Category 1 and Category 2 heritage features, unless evidence is provided which demonstrates that: other reasonable alternatives have been shown to be impractical; there is a significant risk to public safety or property if the feature or part of it is retained; the heritage feature is unable to serve a productive use or its retention would impose an unreasonable financial burden on the building owner.

Protect archaeological and historic heritage values of listed archaeological sites while managing the adverse effects of land use and development, including cumulative effects.

Promote the retention of Category 3 heritage features, or where the partial demolition of a Category 3 heritage feature is proposed, reduce adverse effects on its overall heritage values.

Where the relocation of Category 3 heritage features either beyond or within the site is proposed, to have regard to: the ongoing use or protection of the heritage feature, or to ensure public safety; measures to minimise the risk of damage to the heritage feature; the heritage values of the heritage feature in its new location; within a Heritage Precinct, the effects on the heritage integrity of that precinct including adjoining structures and the precinct as a whole.

Objective - The sustainable use of historic heritage features.

Policies

Encourage the ongoing economic use of heritage features, sites and areas by allowing adaptations and uses that are in accordance with best practice, and: enhance heritage values in accordance with Policy 26.3.1.2; do not result in adverse cumulative effects through successive alterations over time; provide an economically viable use for the protected heritage feature, subject to any works being undertaken in a manner which respects its heritage values; recognise the need for modification through works which increase the resilience of heritage buildings by way of necessary repairs and upgrades, subject to these works being undertaken in a manner which respects heritage values.

Encourage the maintenance of historic heritage features by allowing minor repairs and maintenance.

Objective - The diversity of historic heritage features, heritage precincts, heritage overlay areas and values associated with them, are recognised.

Policies

Identify the heritage values of heritage precincts, listed heritage features, sites of significance to Maori, areas of heritage significance and archaeological sites.

Ensure that in making decisions on development proposals, the effects on tangible and non-tangible values of sites of significance to Maori, are informed by those mandated to do so.

Recognise and protect the different layers of history within heritage (overlay) areas and the relationship between these layers, to retain their cultural meaning and values.

Objective - The historic heritage value of heritage features is enhanced where possible.

Policies

Encourage opportunities to enhance the understanding of historic heritage features, including through the need for interpretation.

Provide incentives for improved outcomes for heritage values through the relaxation of rules elsewhere in the District Plan where appropriate, on a case-by-case basis.

Recognise the value of long term commitments to the preservation of heritage values in the form of covenants and consent notices.

Enable ongoing improvements to heritage features including earthquake strengthening and other safety measures, in recognition that this will provide for their ongoing use and longevity.

Transport (Chapter 29)

Objective - An integrated, safe, and efficient transport network that: a. provides for all transport modes and the transportation of freight; b. provides for future growth needs and facilitates continued economic development; c. reduces dependency on private motor vehicles and promotes the use of shared, public, and active transport; d. contributes towards addressing the effects on climate change; e. reduces the dominance and congestion of vehicles, particularly in the Town Centre zones; and f. Enables the significant benefits arising from public walking and cycling trails.

Objective - Parking, loading, access, and onsite manoeuvring that are consistent with the character, scale, intensity, and location of the zone and contributes toward: a. providing a safe and efficient transport network; b. compact urban growth; c. economic development; d. facilitating an increase in walking and cycling and the use of public transport; and e. achieving the level of residential amenity and quality of urban design anticipated in the zone.

Policies

29.2.2.1 Manage the number, pricing, location, type, and design of parking spaces, queuing space, access, and loading space in a manner that: a. is safe and efficient for all transport modes and users, including those with restricted mobility, and particularly in relation to facilities such as hospitals, educational facilities, and day care facilities; b. is compatible with the classification of the road by: (i) ensuring that accesses and new intersections are appropriately located and designed and do not discourage walking and cycling or result in unsafe conditions for pedestrians or cyclists; (ii) avoiding heavy vehicles reversing off or onto any roads; and (iii) ensuring that sufficient manoeuvring space, or an alternative solution such as a turntable or car stacker, is provided to avoid reversing on or off roads in situations where it will compromise the effective, efficient, and safe operation of roads. c. contributes to an increased uptake in public transport, cycling, and walking in locations where such alternative travel modes either exist; are identified on any Council active transport network plan or public transport network plan; or are proposed as part of the subdivision, use, or development; d. provides sufficient parking spaces to meet demand in areas that are not well connected by public or active transport networks and are not identified on any Council active or public transport network plans; e. provides sufficient onsite loading space to minimise congestion and adverse visual amenity effects that arise from unmanaged parking and loading on road reserves and other public land; f. is compatible with the character and amenity of the surrounding environment, noting that exceptions to the design standards may be acceptable in special character areas and historic management areas; g. avoids or mitigates adverse effects on the amenity of the streetscape and adjoining sites; and h. provides adequate vehicle access width and manoeuvring for all emergency vehicles.

Objective - An integrated approach to managing subdivision, land use, and the transport network in a manner that: a. supports improvements to active and public transport networks; b. promotes an increase in the use of active and public transport networks and shared transport; c. reduces traffic generation; and d. manages the effects of the transport network on adjoining land uses and the effects of adjoining land-uses on the transport network.

Policies

29.2.4.7 Ensure that the nature and scale of activities alongside roads is compatible with the road's District Plan classification, while acknowledging that where this classification is no longer valid due to growth and land-use changes, it may be appropriate to consider the proposed activity and its access against more current traffic volume data.

29.2.4.8 Control the number, location, and design of additional accesses onto the State Highway and arterial roads.

29.2.4.10 Ensure the location, design, and layout of access, manoeuvring, car parking spaces and loading spaces of Industrial activities, Service activities and vehicle-orientated commercial activities, such as service stations and rural selling places, avoids or mitigates adverse effects on the safety and efficiency of the adjoining road(s) and provides for the safe movement of pedestrians within and beyond the site, taking into account: a. The relative proximity of other accesses or road intersections and the potential for cumulative adverse effects; and b. The ability to mitigate any potential adverse effect of the access on the safe and efficient functioning of the transport network.

Utilities

Objective - The growth and development of the District is supported by utilities that are able to operate effectively and efficiently.

Policies

Utilities are provided to service new development prior to buildings being occupied, and activities commencing.

Ensure the efficient management of solid waste by: a. encouraging methods of waste minimisation and reduction such as re-use and recycling; b. providing landfill sites with the capacity to cater for the present and future disposal of solid waste; c. assessing trends in solid waste; d. identifying solid waste sites for future needs; e. consideration of technologies or methods to improve operational efficiency and sustainability (including the potential use of landfill gas as an energy source); f. providing for the appropriate re-use of decommissioned landfill sites. Recognise the future needs of utilities and ensure their provision in conjunction with the provider.

Encourage low impact design techniques which may reduce demands on local utilities.

Signs

Objective - Signage which is of a scale and extent that maintains the character and amenity values of the District and enhances access.

Policies

31.2.1.1 Ensure the number, size, location, design and appearance of signs maintain the character and amenity values anticipated for the site, street scene and surrounding environment.

31.2.1.2 When considering the character and amenity values that apply to the site and surrounding environment, consider the character and amenity values anticipated by any relevant District Plan Zone, or in the case of signs proposed within the road, consider the character and amenity values anticipated by the nearest adjoining Zone.

31.2.1.3 Encourage signs to be located on the site of the related activity.

31.2.1.8 Support the establishment of information, interpretation and direction signs that: a. assist with improving the legibility of, and knowledge of access to, open spaces; and b. assist with achieving Crime Prevention Through Environmental Design (CPTED) principles.

31.2.1.11 Avoid, remedy or mitigate the adverse effects of signs located on an Outstanding Natural Feature or within an Outstanding Natural Landscape through applying the relevant assessment matters in part 21.21 of the District Plan.

31.2.1.12 Encourage efficient management of signs through the establishment of signage platforms to reduce the need for a new resource consent each time the sign content is altered and ensure that any resource consent conditions that apply to the signage platform also apply to any subsequent changes to the sign content.

31.2.1.13 Avoid adverse effects from the following signs and sign types: a. flashing, moving or animated signs and signs that create an optical illusion; b. roof signs; c. signs displaying sexually explicit, lewd or otherwise offensive content; d. stationary sign-written trailers, vehicles or permanently moored vessels or signs attached to stationary trailers, vehicles or permanently moored vessels which are visible from any road or public place for the purpose of advertising; and e. signs imitating any traffic direction and safety sign as required by the New Zealand Transport Agency.

31.2.1.14 Manage the effects of signs on heritage values having particular regard to: a. the design, location and size of signs and the method of attachment; b. any Council design guideline, being either the Queenstown Town Centre Special Character Area Design Guidelines 2015, Wānaka Town Centre Character Guideline 2011, or the Arrowtown Design Guidelines 2016; c. the benefits of the sign; and d. the function of the sign. Note: any relevant objectives and provisions of Chapter 26 – Historic Heritage will also apply.

Objective – Signs have limited adverse effects on public safety, including the safety of pedestrians and users of the transport network.

Policies

31.2.2.1 Avoid adverse effects of signs that obstruct access to or through a pedestrian thoroughfare or the transport network.

31.2.2.2 Ensure the design and location of signs does not adversely affect traffic safety by causing confusion or distraction, or obstructing the sight lines of road users.

31.2.2.3 Support the establishment of information signs and lay-bys at the entrance to the District's settlements and at sites of natural, historical or tangata whenua interest.

31.2.2.4 Support the use of traditional Ngāi Tahu (tangata whenua) place names on signs within the District.

31.2.2.5 Ensure that any lighting in conjunction with signs does not adversely affect pedestrian, traffic and navigational safety.

Wahi Tupuna (Chapter 39)

Objective 39.2.1 - Manawhenua values, within identified wāhi tūpuna areas, are recognised and provided for.

Policies

39.2.1.1 Recognise that the following activities may have effects that are incompatible with Manawhenua values where they occur within identified wāhi tūpuna areas; a. Mining and mining activities, including gravel extraction; b. Landfills c. Cemeteries and crematoria; d. Forestry; e. Removal of indigenous vegetation from significant natural areas (SNA); and f. Wastewater treatment plants.

39.2.1.2 Recognise that the effects of activities may require assessment in relation to Manawhenua values when that activity is listed as a potential threat within an identified wāhi tūpuna area, as set out in Schedule 39.6.

39.2.1.3 Within identified wāhi tūpuna areas: a. avoid significant adverse effects on Manawhenua values and avoid, remedy or mitigate other adverse effects on Manawhenua values from subdivision, use and development listed as a potential threat in Schedule 39.6; and b. avoid, remedy or mitigate adverse effects on Manawhenua values from subdivision, use and development within those identified wāhi tūpuna areas in the urban environment where potential threats have not been identified in Schedule 39.6.

39.2.1.4 Encourage early consultation with Manawhenua when appropriate to understand the effects of any activity on Manawhenua values in an identified wāhi tūpuna area.



Welcome facility on left



Viewing Hide 1



Viewing Hide 3



Viewing Hide 4



Nursery Area with nursery potting up area on right

SITE PLAN: EXISTING

Site boundary shown in white line
Existing wetlands outlined in light blue
Modified watercourses shown in dark blue
Existing powerlines shown in red



10m/100m
1:2000 printed at A3

PROPOSED LANDSCAPE PLAN



An extensive planting strategy has been developed to reintroduce native species on sites on both sides of the Glenorchy Routeburn Road including wetland species in lowlying areas, and native shrub and tree species on the Hillocks themselves.

An estimated 105,000 native plants will be raised and planted to re-establish 14.6 hectares of wetlands, forest and tussock lands.

- NORTH FACING HILL SLOPES:
2.5 ha, 9,700 plants, 1.6m spacing
- SOUTH FACING HILL SLOPES:
3.7 ha, 14,300 plants, 1.6m spacing
- WETLAND AND WATERWAY EDGE MIX:
4.2 ha, 29,500 plants, 1.2m spacing
- TUSSOCK, DRYLAND MIX:
4.2 ha, 51,000 plants, 0.9M spacing
- TUSSOCK GRASSLAND MIX
0.4 ha, 500 plants, specific areas
- GRASSLAND MIX
4.5 ha, existing

N
10m/100m
1:4000 printed at A3

SITE PLAN: PROPOSED

1. Carpark
2. Nursery facility
3. Viewing hide
4. Viewing hide
5. Footbridge
6. Viewing hide
7. Boardwalk
8. Viewing platform
9. Existing farm Shed/converted art gallery

Site boundary shown in white line
Existing wetlands outlined in light blue
Modified watercourses shown in dark blue
Existing powerlines shown in red



10m/100m
1:2000 printed at A3

SITE PLAN: EXCAVATION AND DRAINAGE FIELD SITES

1. Carpark
2. Nursery facility
3. Viewing hide
4. Viewing hide
5. Footbridge
6. Viewing hide
7. Boardwalk (note no excavation requirement)
8. Viewing platform (note no excavation requirement)
9. Existing farm Shed/converted art gallery

Site boundary shown in white line
Existing wetlands outlined in light blue



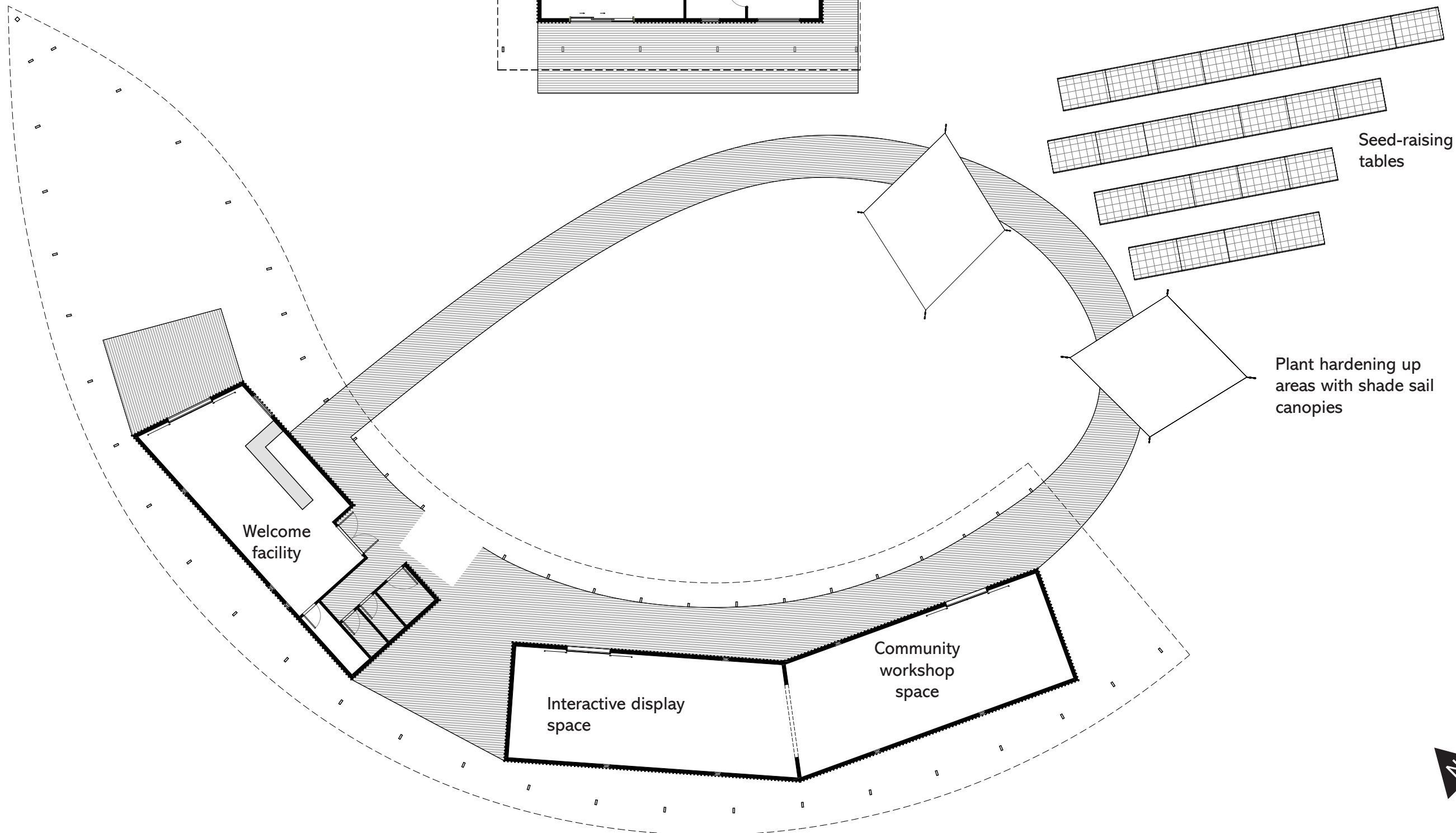
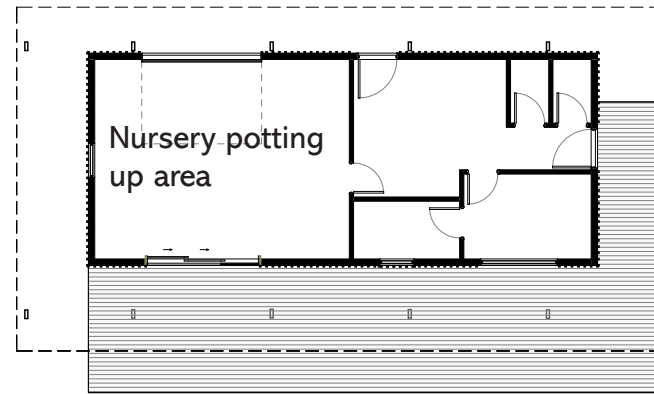
- All path routes are level. Excavation requirement: scrape turf, provide drainage slope and gravel.
- Sites are level. Excavation requirement: scrape turf, and provide adequate drainage slope.
- Excavation requirement 120m³: scrape turf, grade and level to allow drainage with fill redistributed across the carpark area.
- Route is level. Excavation requirement: scrape turf, provide drainage slope.
- Black and greywater waste drainage field.
- Excavation requirement 60m³: 600mm fall across a 40m length from North to South. Cut and fill to make site level and provide adequate drainage slope.
- Boardwalk (7) and viewing platform (8) have no excavation requirement

10m/100m
1:2000 printed at A3

NURSERY, WELCOME FACILITY, COMMUNITY WORKSHOP SPACE, AND INTERACTIVE PLANT DISPLAY SPACES

1:200 printed at A3

FLOOR PLAN



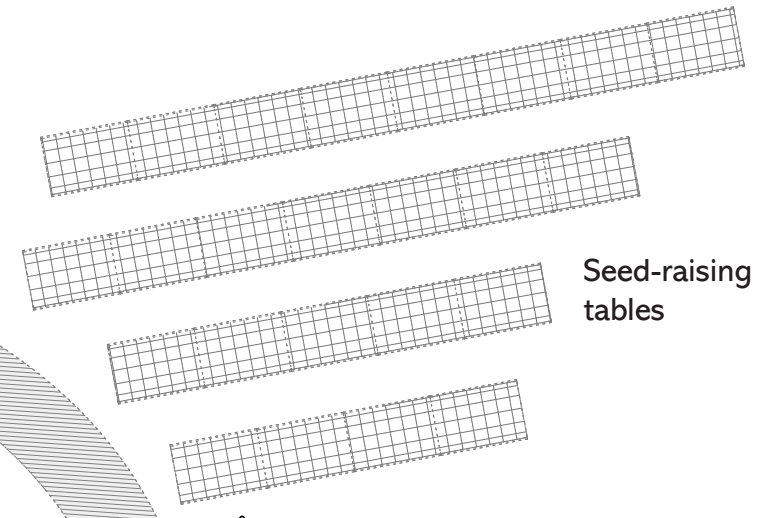
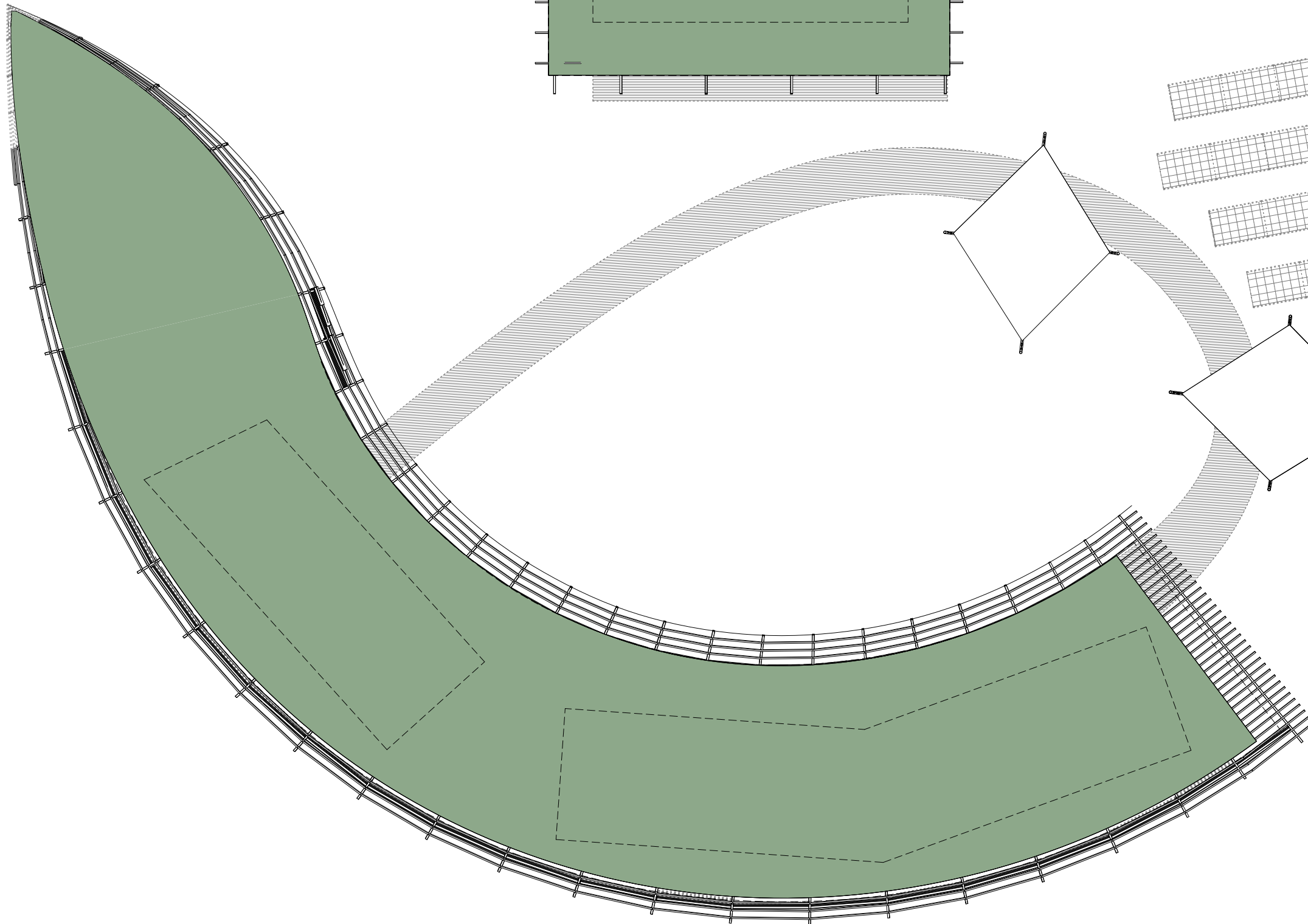
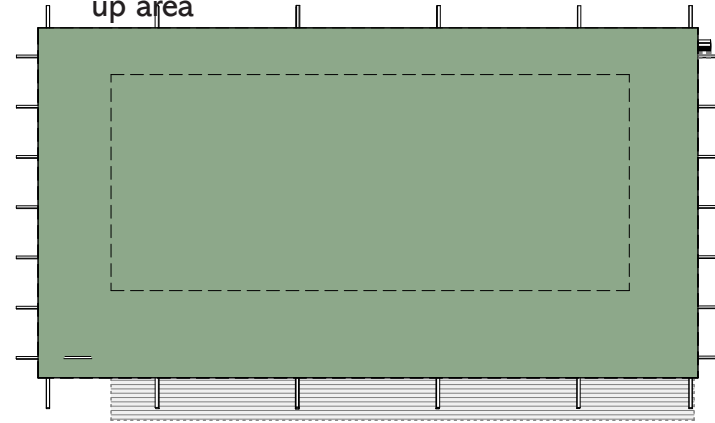
NURSERY, WELCOME FACILITY, COMMUNITY WORKSHOP SPACE, AND INTERACTIVE PLANT DISPLAY SPACES

1:200 printed at A3

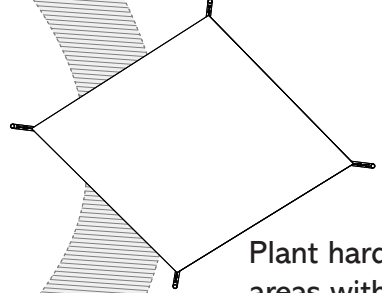
ROOF PLAN



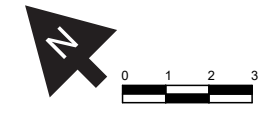
Nursery potting up area



Seed-raising tables

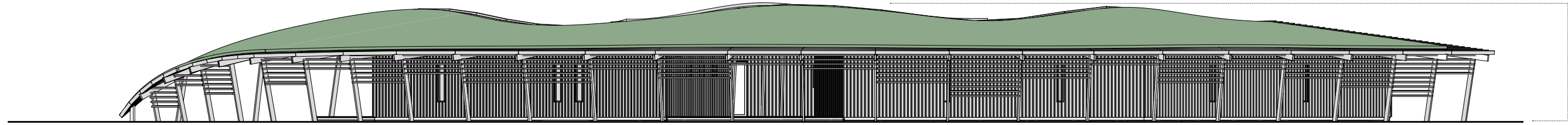


Plant hardening up areas with shade sail canopies



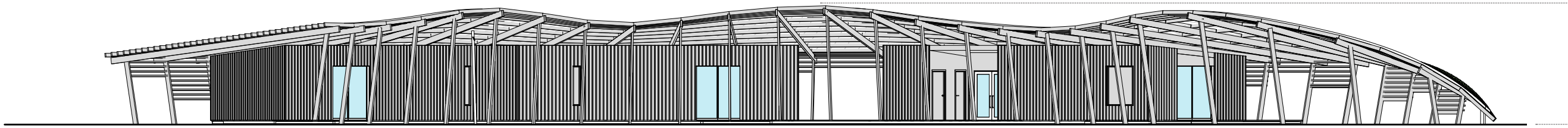
WELCOME FACILITY, COMMUNITY WORKSHOP SPACE, AND
INTERACTIVE PLANT DISPLAY SPACES

1:200 printed at A3



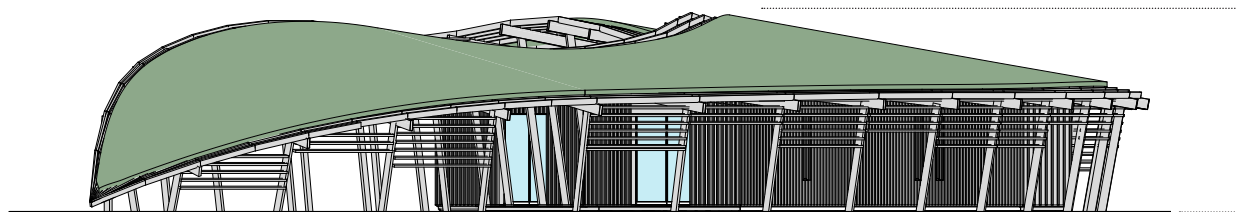
WEST ELEVATION

5.0m max
height above
existing and
proposed GL



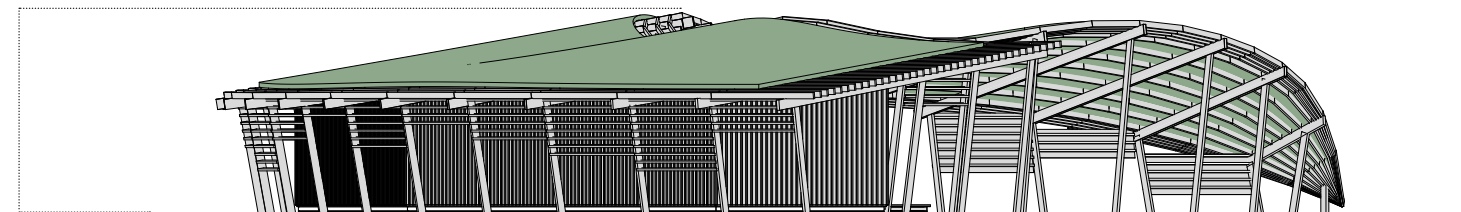
EAST ELEVATION

5.0m max
height above
existing and
proposed GL

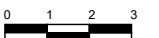


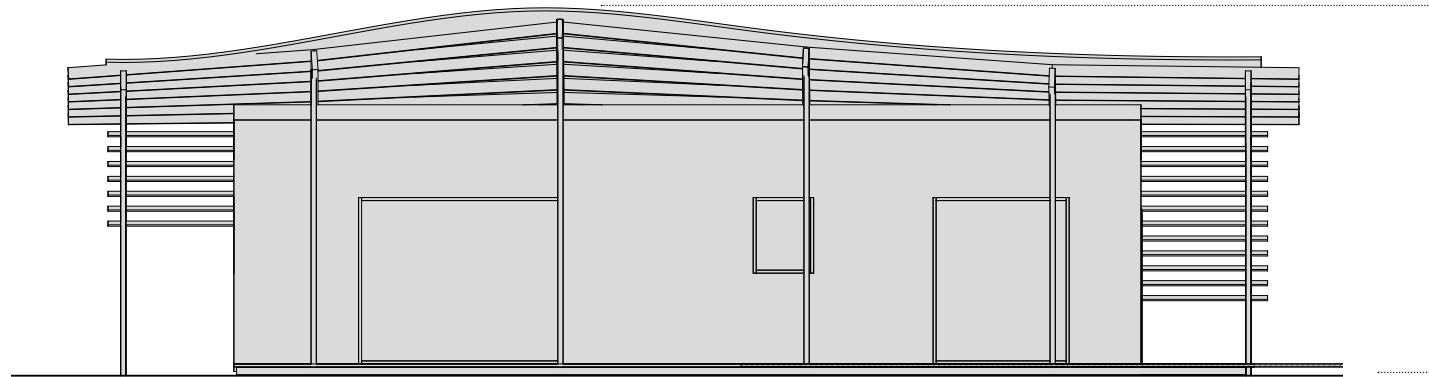
NORTH ELEVATION

5.0m max
height above
existing and
proposed GL



SOUTH ELEVATION





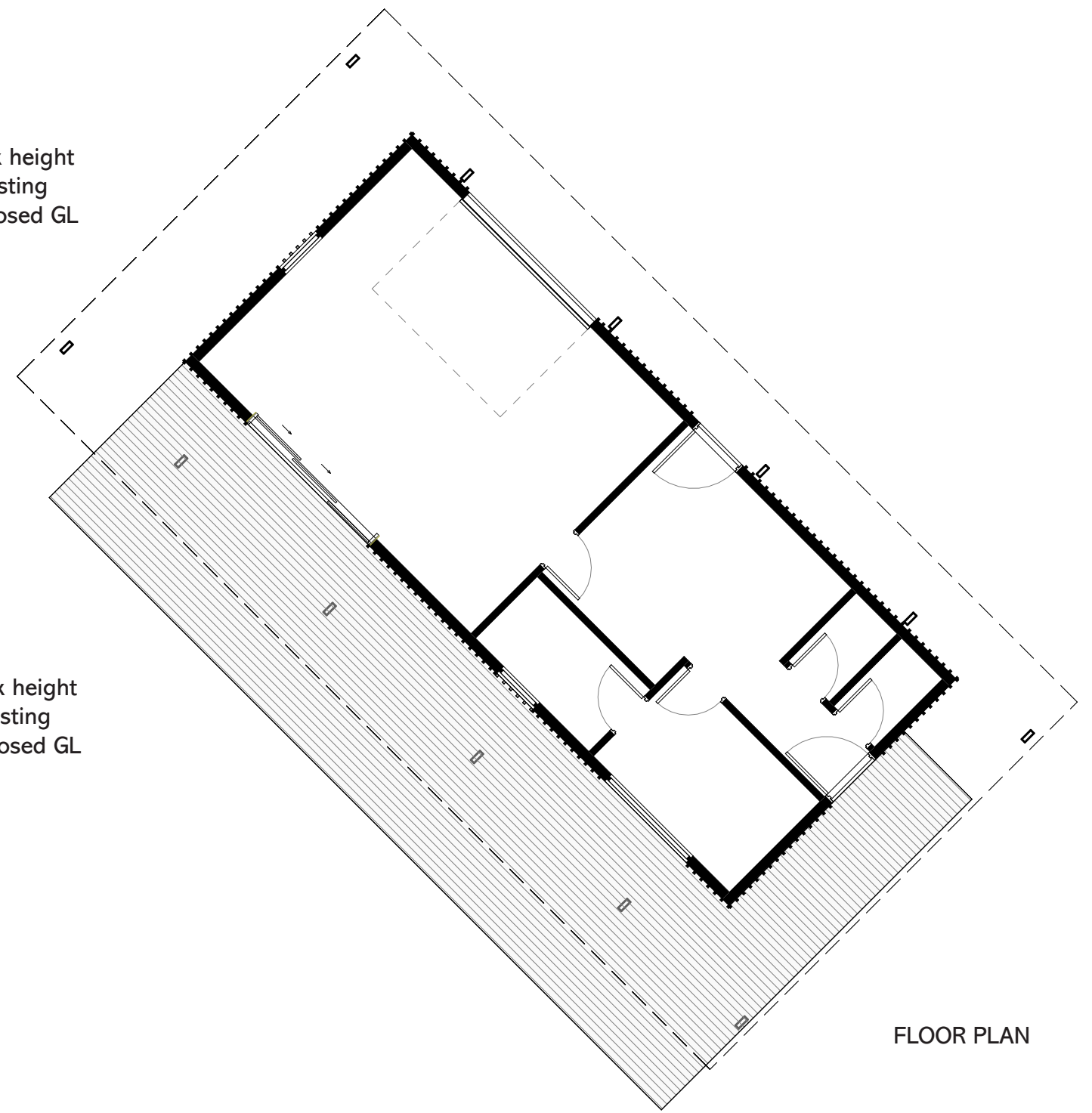
NORTH-EAST ELEVATION

4.8m max height
above existing
and proposed GL

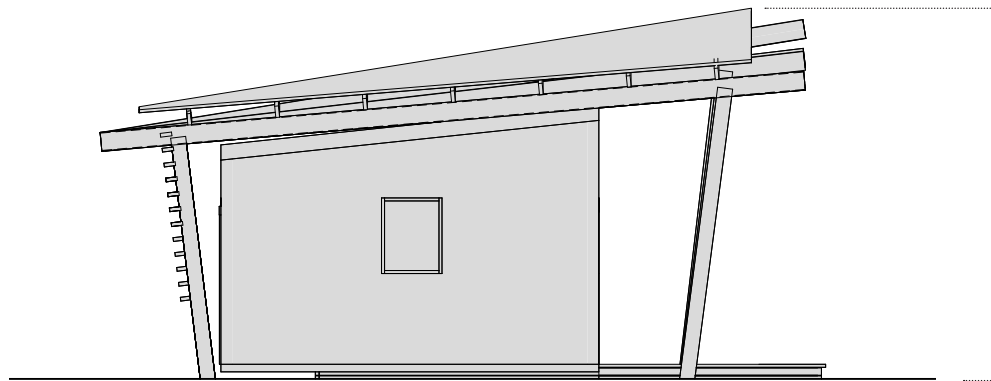


SOUTH-WEST ELEVATION

4.8m max height
above existing
and proposed GL

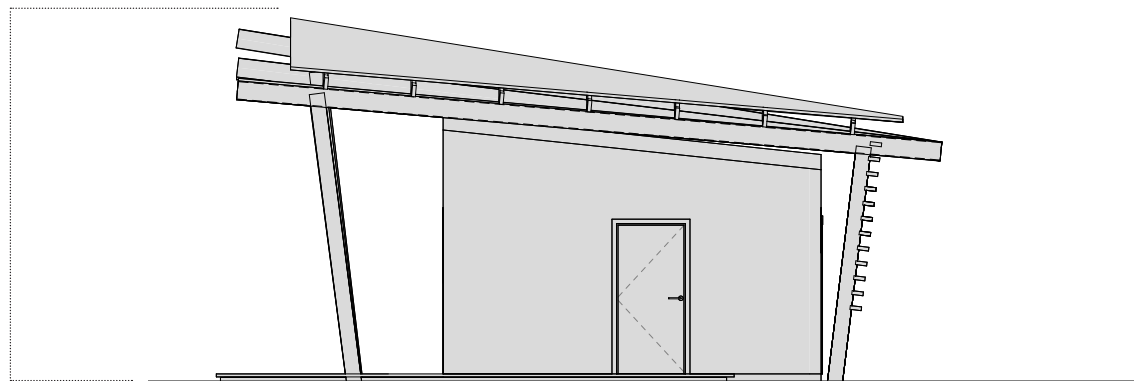


FLOOR PLAN



NORTH-WEST ELEVATION

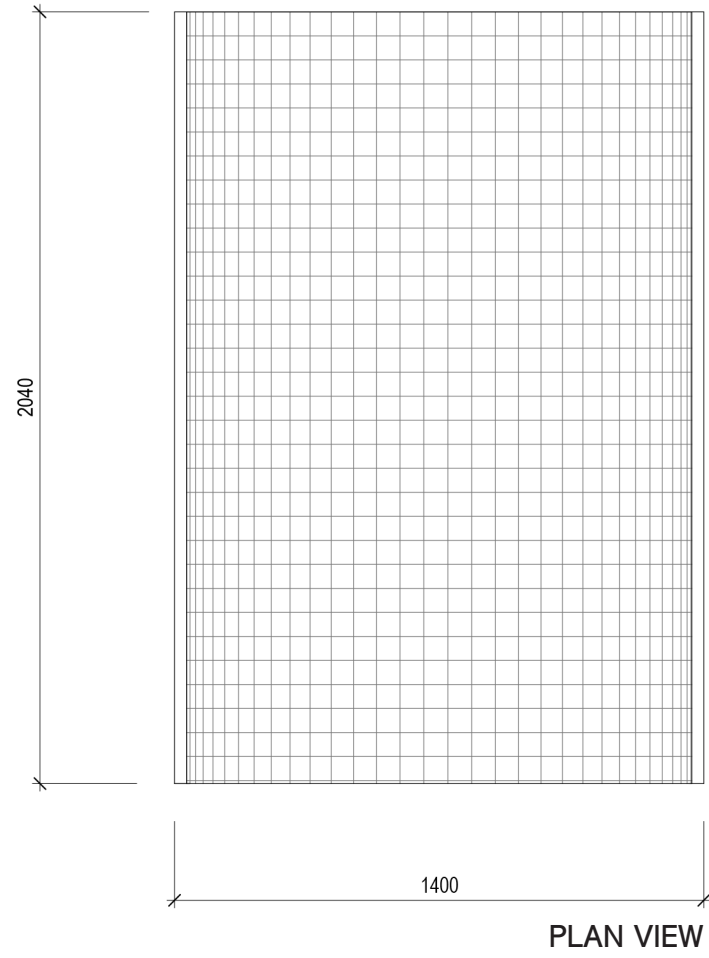
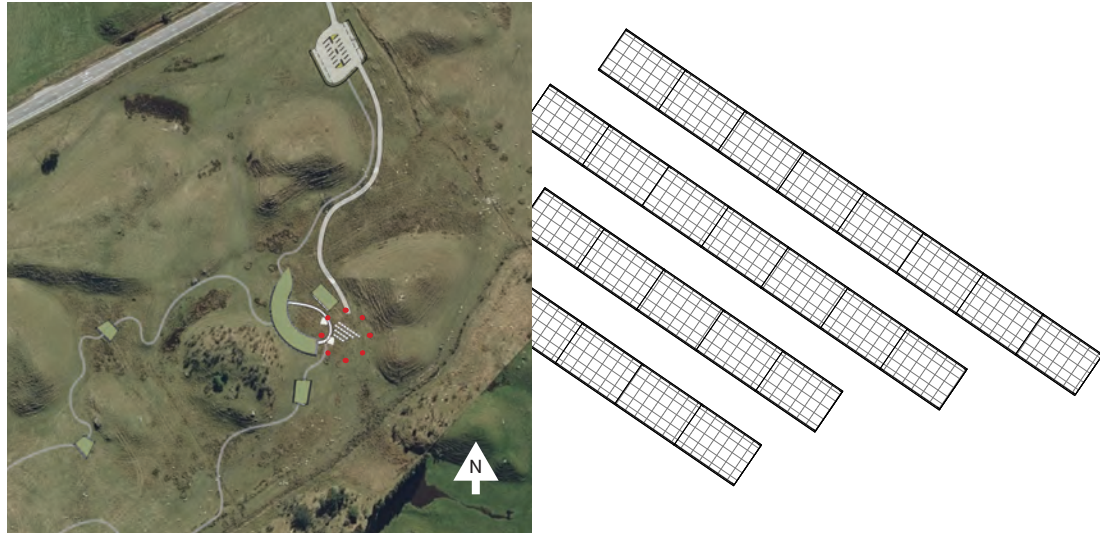
4.8m max
height above
existing and
proposed
GLVA



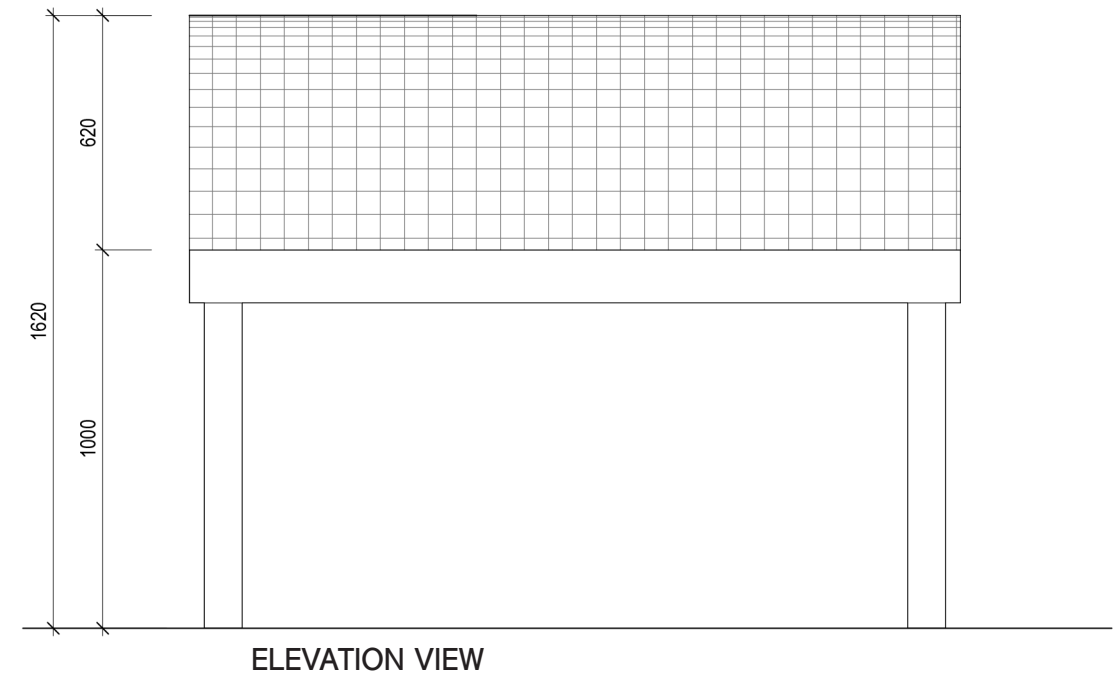
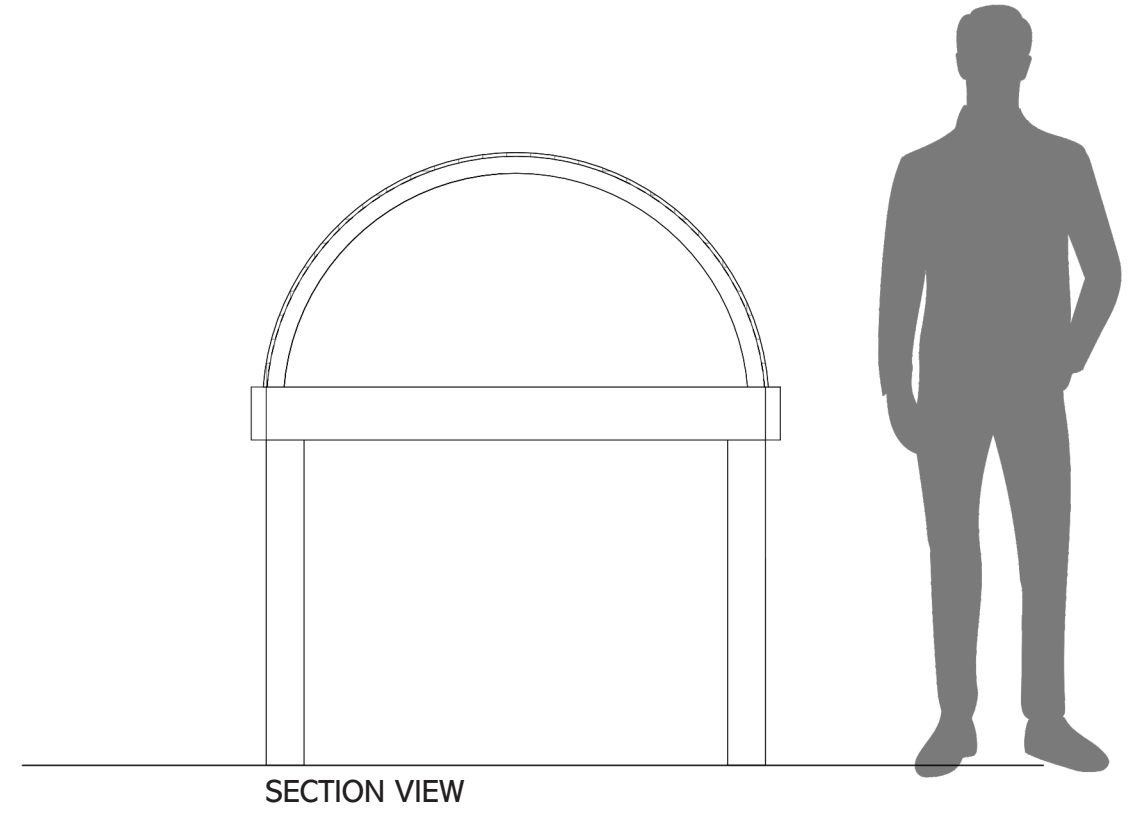
SOUTH-EAST ELEVATION

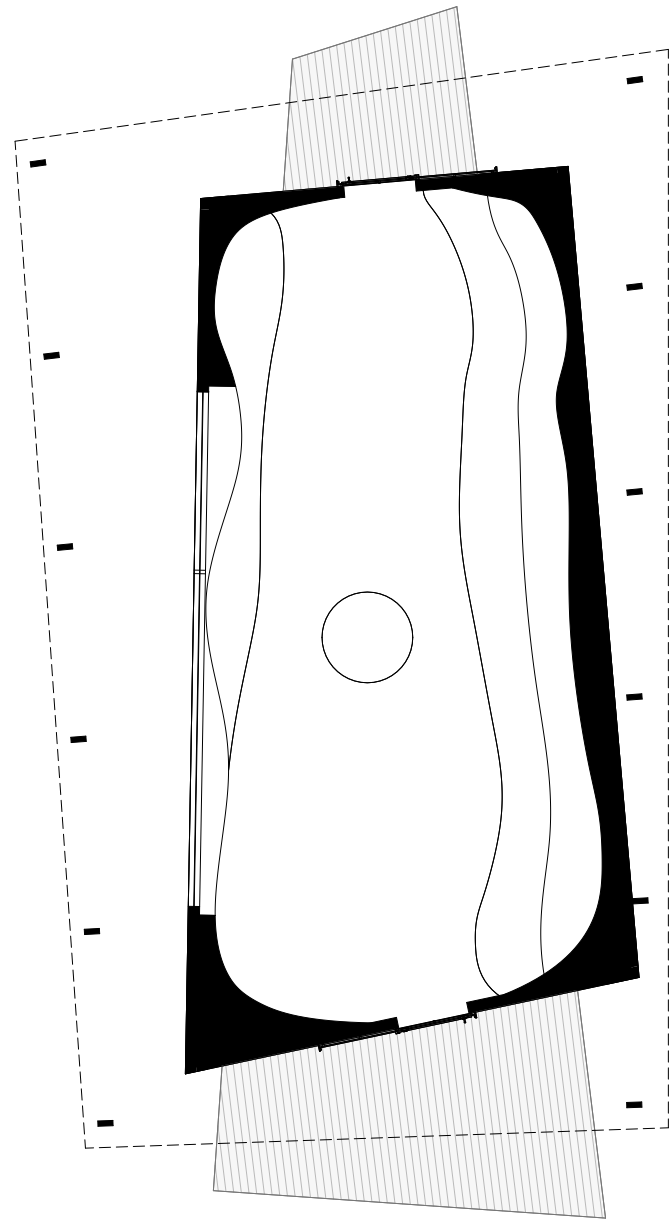


NURSERY POTTING UP AREA

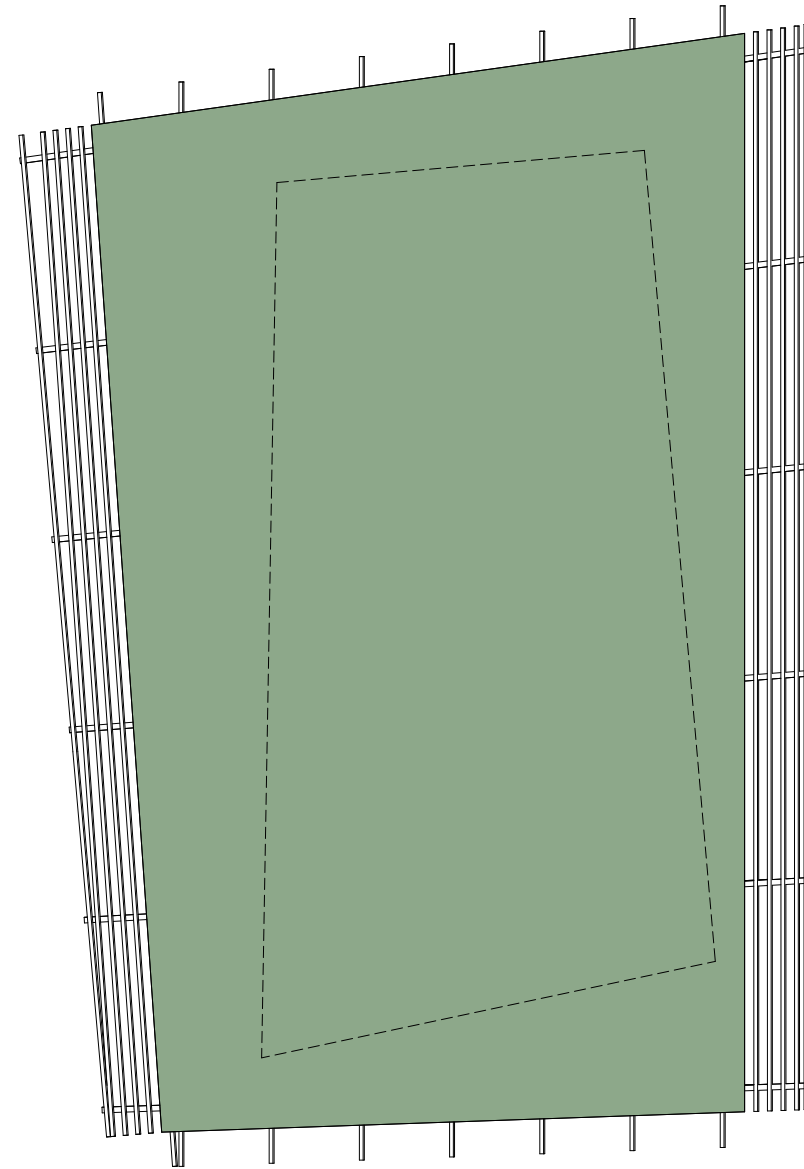


1:20 printed at A3





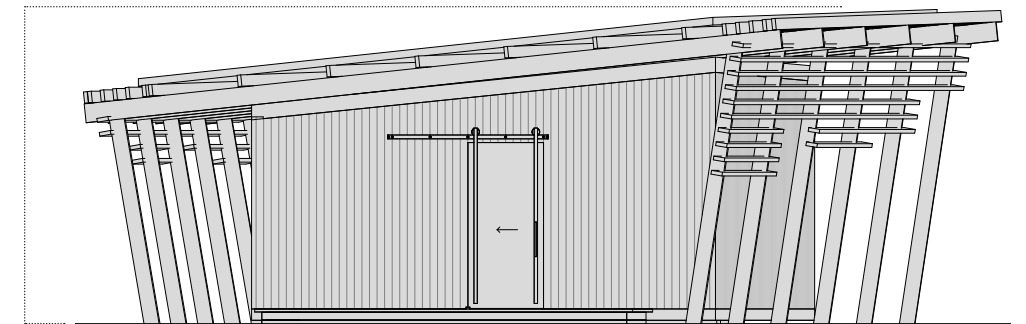
FLOOR PLAN



ROOF PLAN

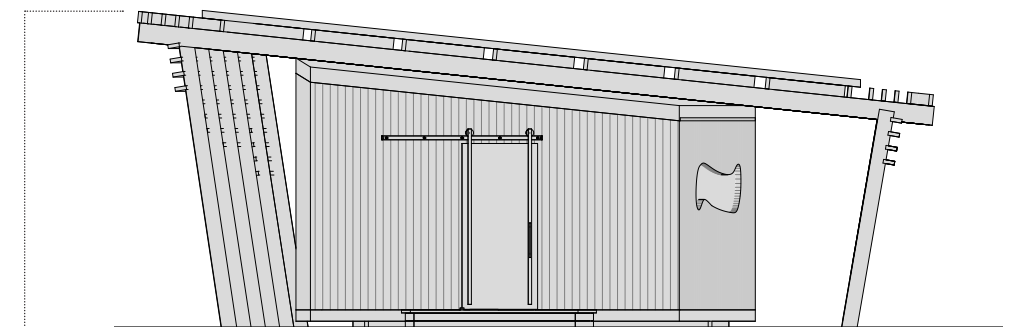


4.3m max
height above
existing and
proposed GL

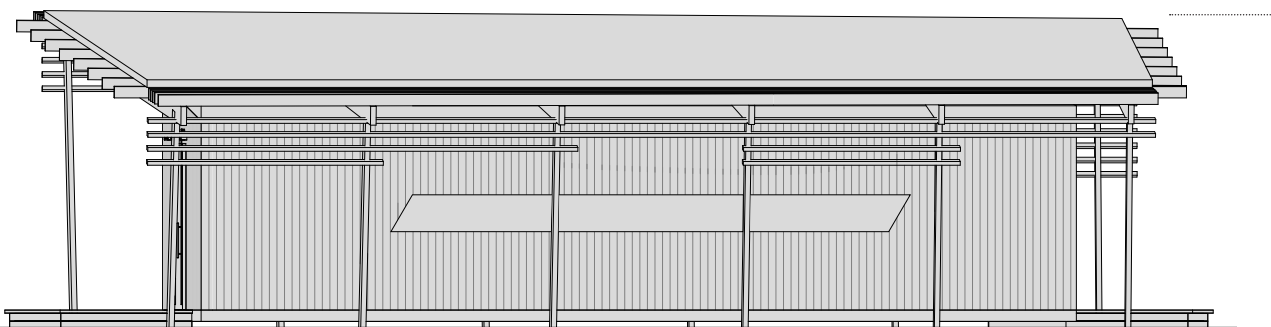


SOUTH ELEVATION

4.3m max
height above
existing and
proposed GL



NORTH ELEVATION



WEST ELEVATION

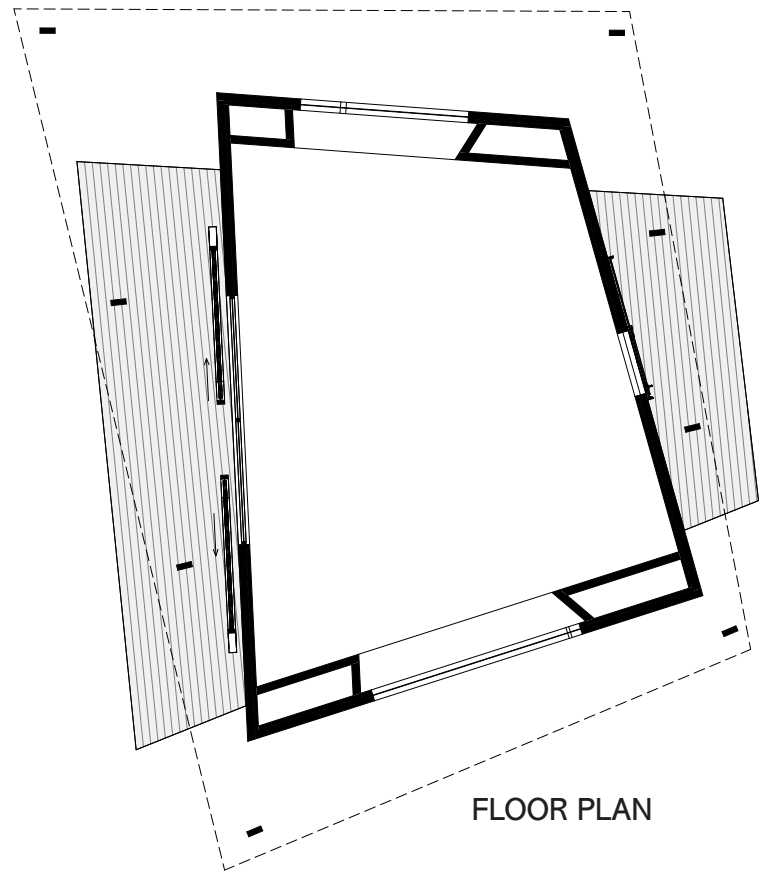
4.3m max
height above
existing and
proposed GL



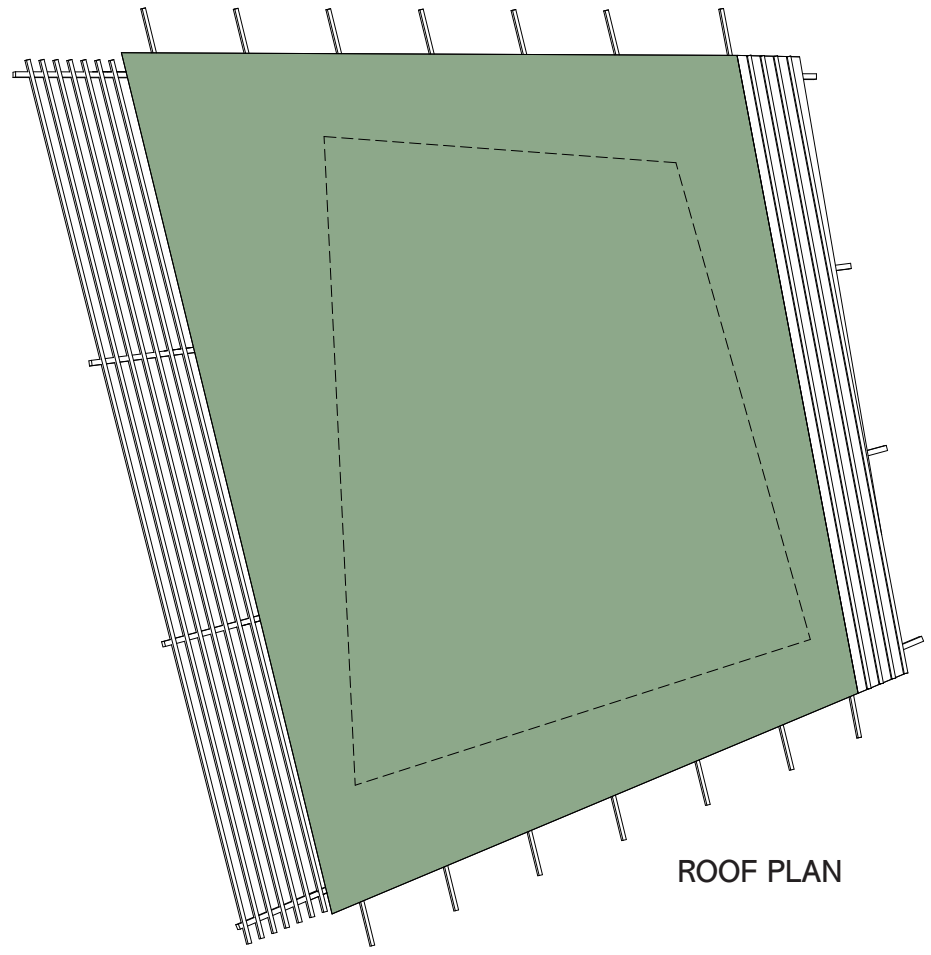
EAST ELEVATION



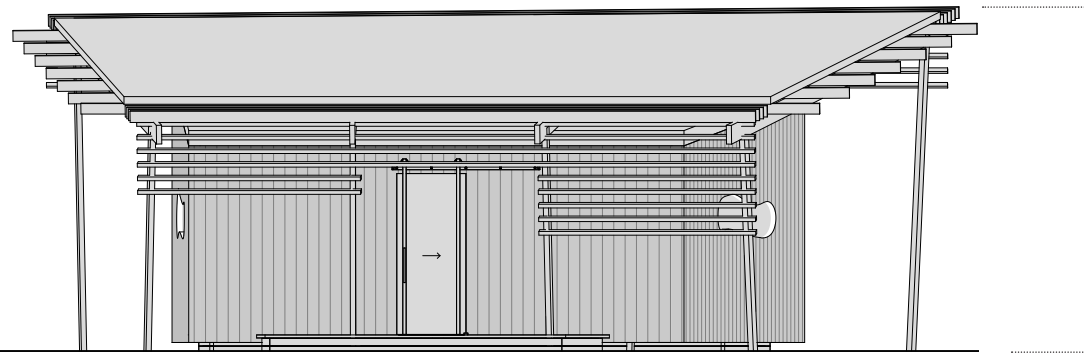
VIEWING HIDE 1
1:100 printed at A3



FLOOR PLAN

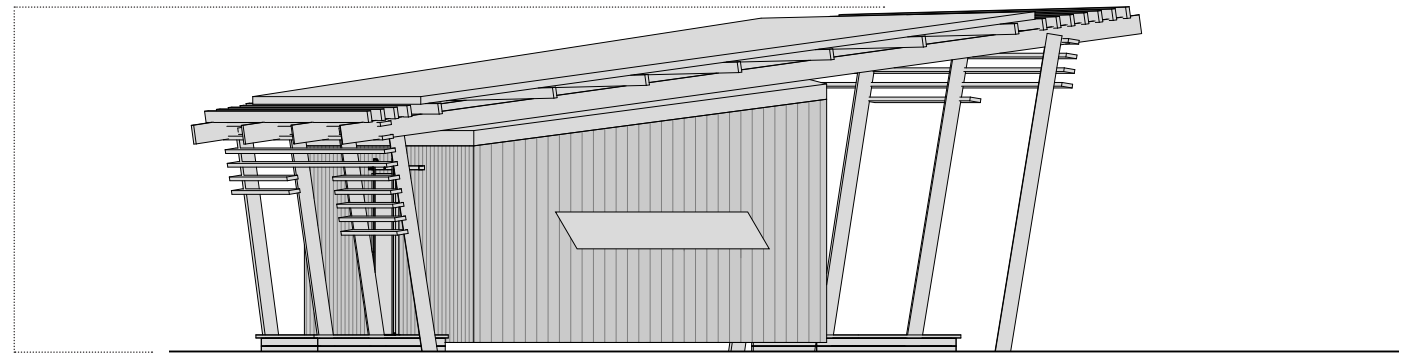


ROOF PLAN

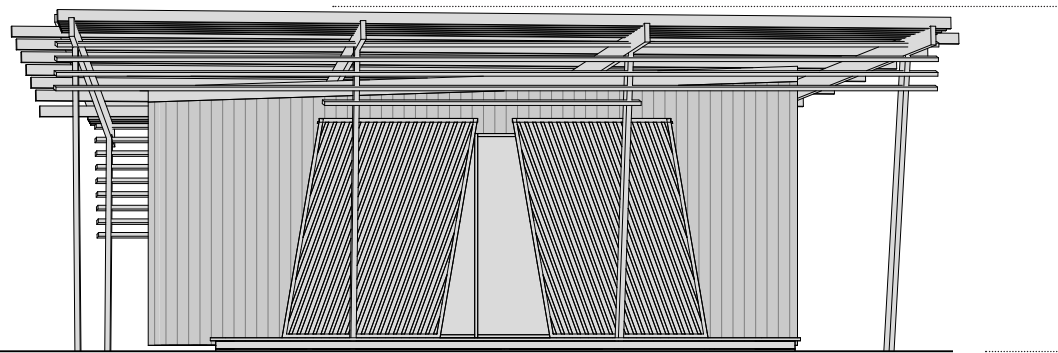


EAST ELEVATION

4.6m max
height above
existing and
proposed GL

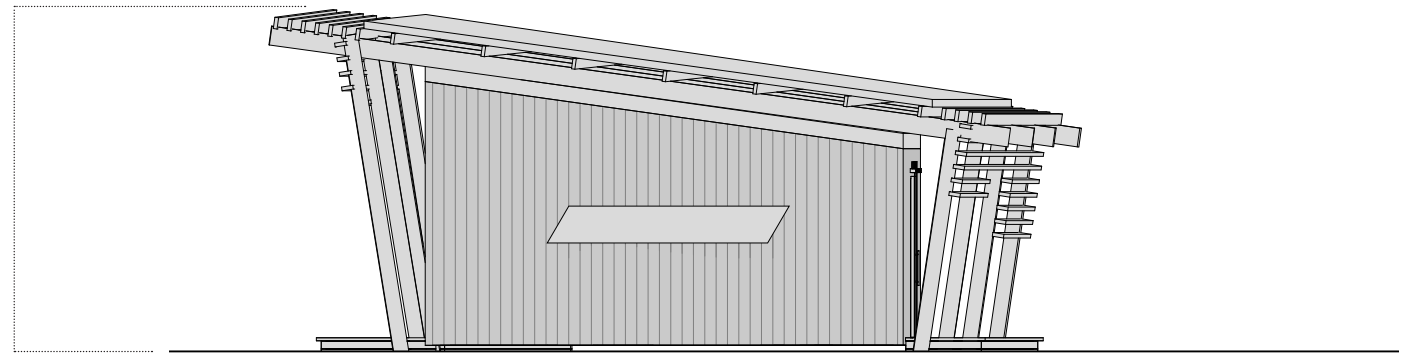


NORTH ELEVATION



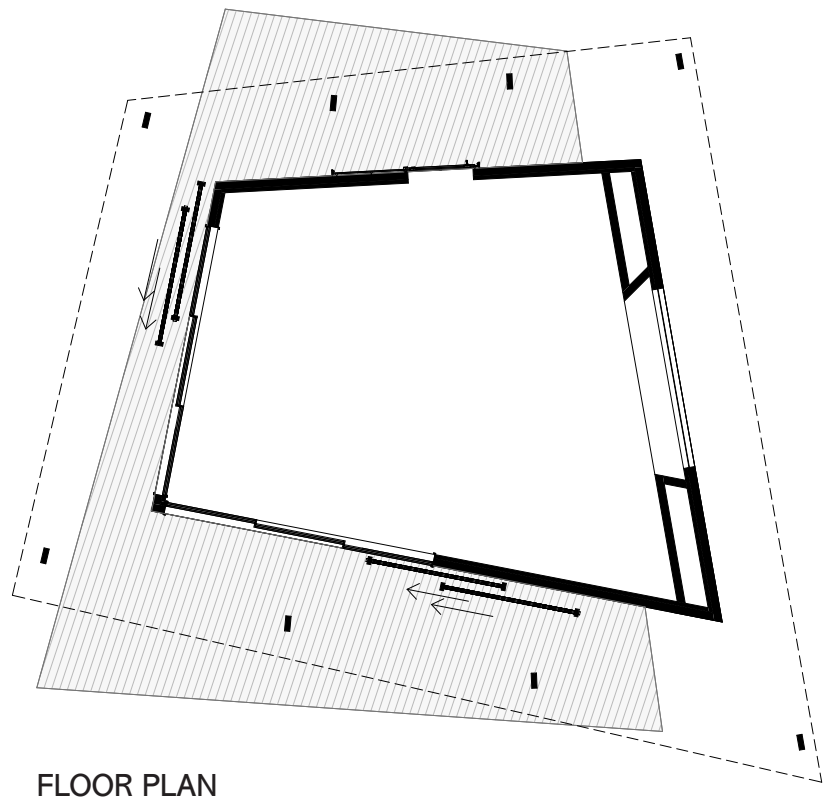
WEST ELEVATION

4.6m max
height above
existing and
proposed GL

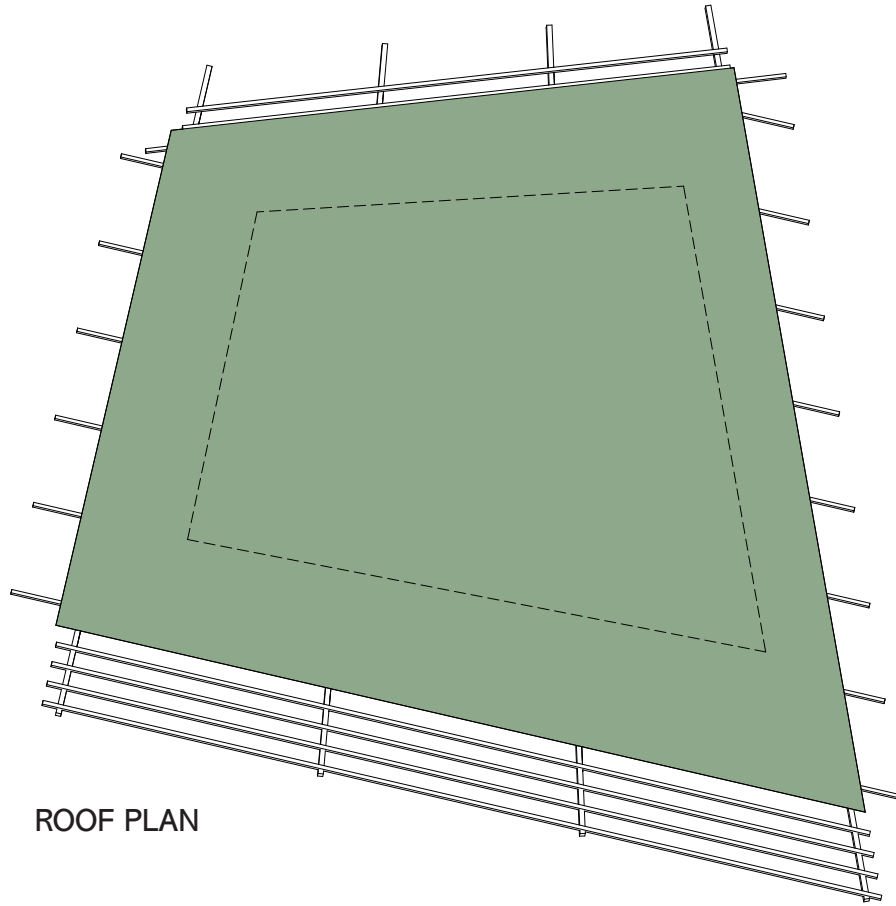


SOUTH ELEVATION

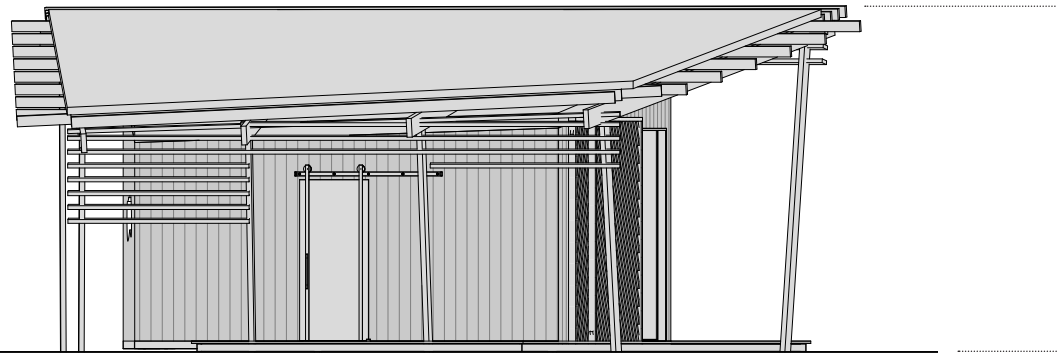




FLOOR PLAN

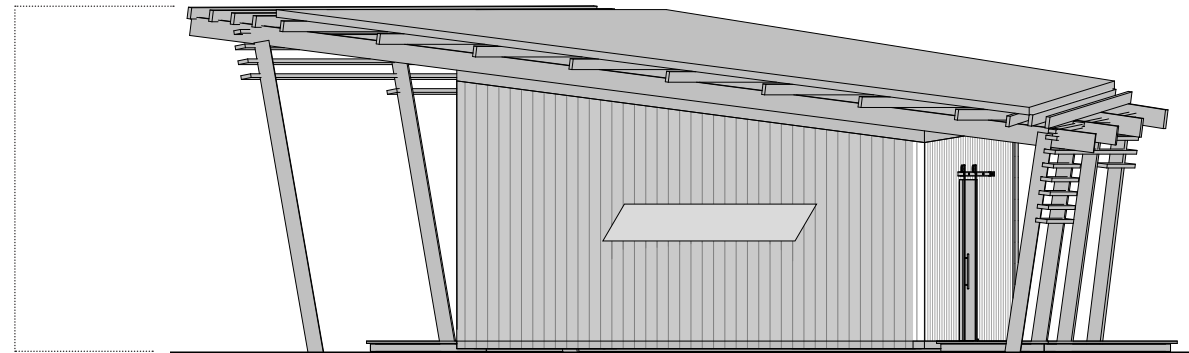


ROOF PLAN

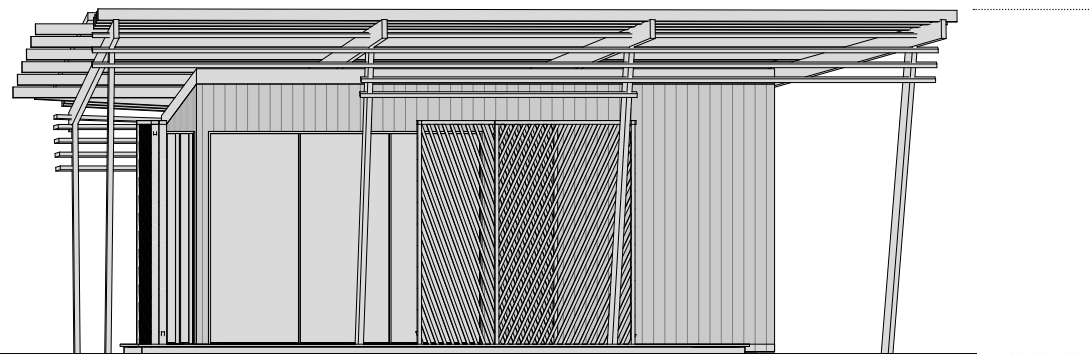


NORTH ELEVATION

4.6m max
height above
existing and
proposed GL

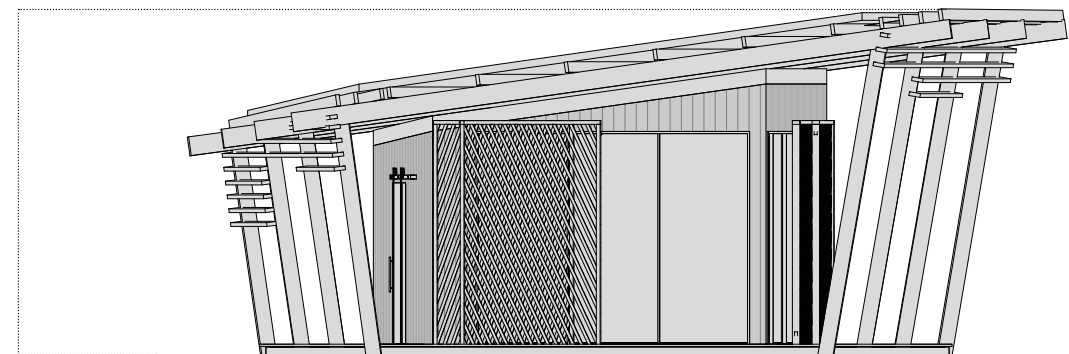


EAST ELEVATION



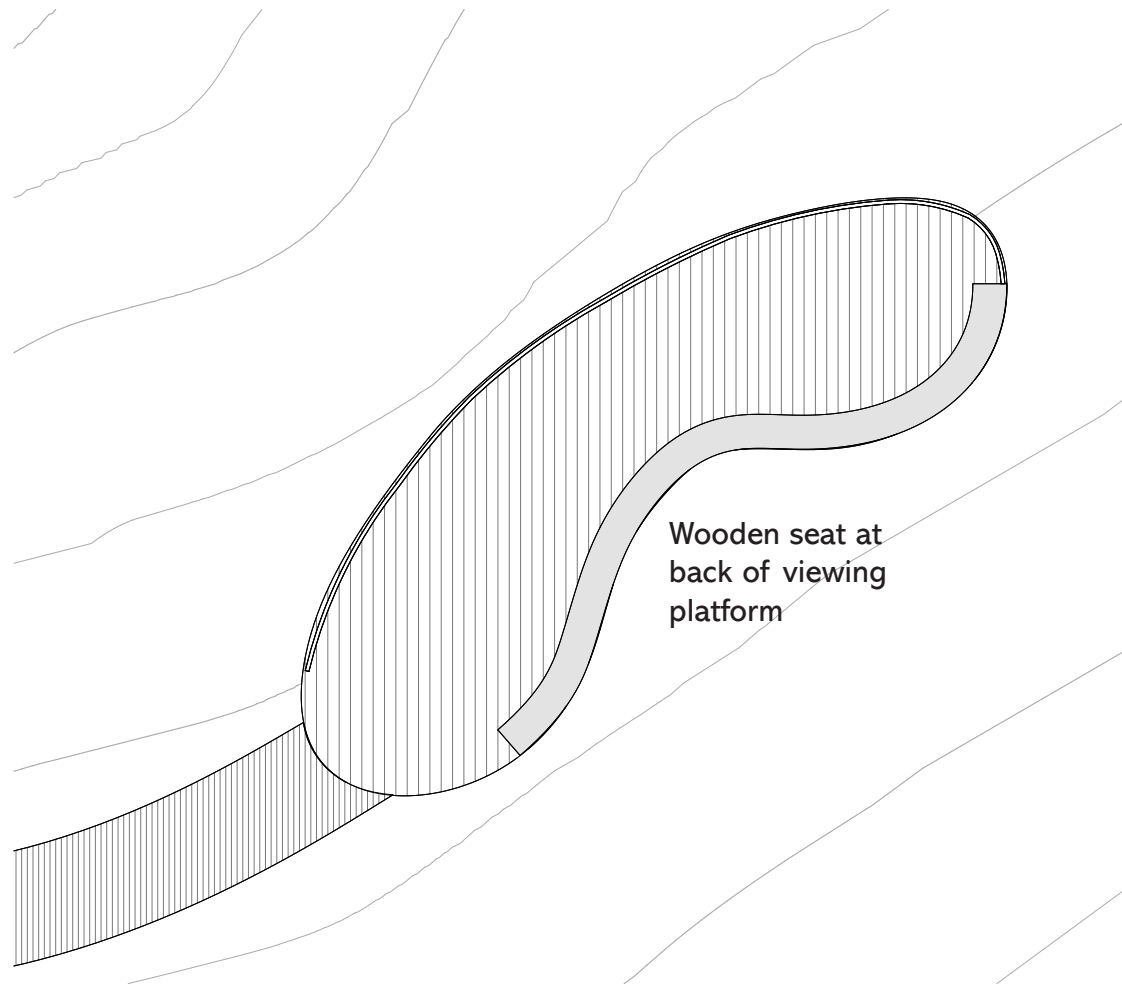
SOUTH ELEVATION

4.6m max
height above
existing and
proposed GL



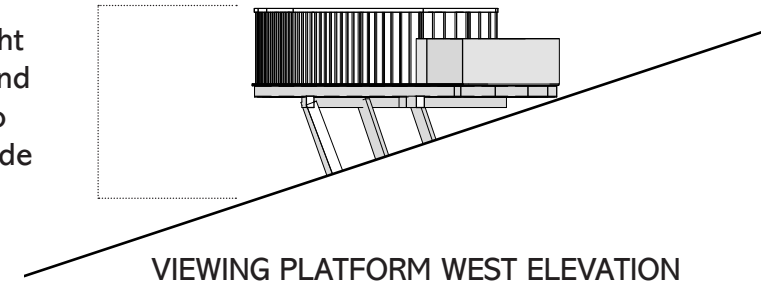
WEST ELEVATION





FLOOR PLAN

2.6m max height
from existing and
proposed GL to
top of balustrade



VIEWING PLATFORM WEST ELEVATION





Figure 29. Plan of camera location and direction for figures 30-34.



Figure 30. Driving from Glenorchy it is Hillocks located on a neighbour's property that are the first Hillocks to come into view (Viewpoint 1 in figure 29).



Figure 31. Views looking west to the Te Awa Whakatipu/Dart River Bridge when travelling west along Glenorchy Routeburn Road. The next view (figure 32) is taken at a point just past the large tree on the right, beside the road. (Viewpoint 2 in figure 29)



Figure 32. Views looking north to the headwaters of Te Awa Whakatipu/Dart River when travelling west along Glenorchy Routeburn Road. (Viewpoint 3 in figure 29)



Figure 33. View travelling west along Glenorchy Routeburn Road.

Figure 33. View travelling west along Glenorchy Routeburn Road.



Figure 34. View travelling east along Glenorchy Routeburn Road, with Ari/Mount Alfred in the distance. (Viewpoint 5 in figure 29)



Figure 39: Locations along the road where the Nursery Facility is visible from the road.



Figure 40: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 1, as shown on figure 39. This distance from the road to the marker poles is 740 meters. The photo is taken with a 50mm lens.



Figure 41: As seen from Viewpoint 1 taken with a 25mm lens.



Figure 42: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 2, as shown on figure 39. This distance from the road to the marker poles is 560 meters. The photo is taken with a 50mm lens.



Figure 43: The same image as seen from Viewpoint 2 taken with a 25mm lens.



Figure 44: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 3, as shown on figure 39. This distance from the road to the marker poles is 410 meters. The photo is taken with a 50mm lens.



Figure 45: The same image as seen from Viewpoint 3 taken with a 25mm lens.



Figure 46: View of 5.0 meter poles that mark the visible corners of the Nursery Facility buildings as seen from Viewpoint 4, as shown on figure 39. This distance from the road to the marker poles is 1600 meters. The photo is taken with a 50mm lens.



Figure 47: The same image as seen from Viewpoint 4 taken with a 25mm lens.



Figure 48. Carpark location (orange arrow) as seen looking east along the Glenorchy Routeburn Road with existing access point from road is to be used (white arrow).



Figure 49: View of pole that marks the leading visible corners of Hide 3 as seen from one of two places the site is visible from the Te Awa Whakatipu/Dart Riverbed. The distance from this view-point is 80m. The photo is taken with a 50mm lens.



Figure 50. Photos of marker poles showing location of Hide 2 as seen from Te Awa Whakatipu/Dart River riverbed 580m distant using 50mm lens.



Figure 51. Photos of marker poles showing location of Hide 2 as seen from Te Awa Whakatipu/Dart River riverbed 580m distant using 25 mm lens.

Attention: The Future is Wild Limited
jeremy@fiw.co.nz

Natural Hazard Assessment The Hillocks, Glenorchy-Routeburn Road, Glenorchy

Dear Jeremy,

1.0 Introduction

This letter details the results of a natural hazard assessment completed by GeoSolve Limited for the site known as The Hillocks on the Glenorchy-Routeburn Road.

The work described in this letter has been completed in accordance with the terms and conditions outlined in GeoSolve proposal reference number 240062 dated 30 January 2024. The opinions and conclusions presented in this report are based on the following sources of information:

- A walkover inspection and mapping of the site by an engineering geologist.
- A review of historic information currently held on the GeoSolve database for other sites in the local area;
- A review of the Council hazard maps;
- A review of the published geological map, 'Institute of Geological & Nuclear Sciences Ltd, Geology of the Wakatipu, 1:25,0000 Geological Map 18',
- A review of historic aerial photography, and;
- A review of the development proposal.

The aim of this assessment is to summarise the natural hazards present at the site and the impact on the proposed development.

2.0 Site Description

General

- The site is located on the true left bank of the Dart River, approximately 9km north of Glenorchy, see Figure 2.1 below.
- The site is generally bordered by farmland, to the south, north and east. The Glenorchy-Routeburn Road is present directly on northern boundary. The Dart River and associated wider active channel is present immediately to the west.
- A barn/artist's studio is present on the northern boundary.
- The site itself comprises farm pasture with a grass over, occasional low tree and area of low shrub.

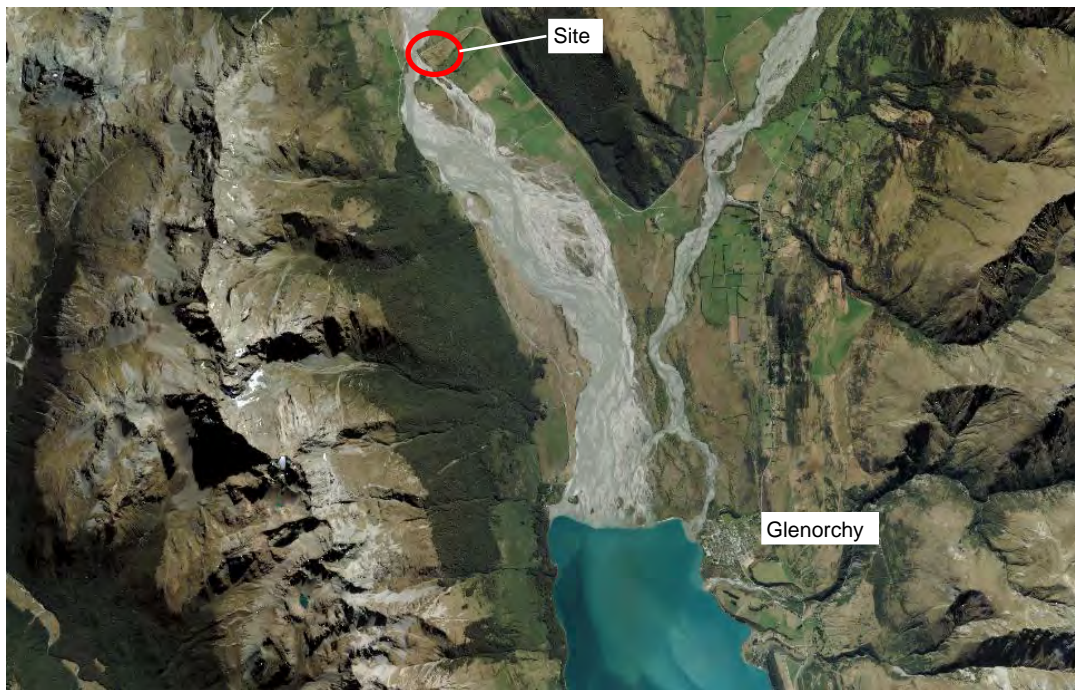


Figure 2.1. Excerpt from QLDC GIS mapping system showing the site location.

Topography and Overland Flow

- The site occupies a low-lying valley floor location, at approximate RL of 350 m. Locally, due to the hummocky nature of the site (the Hillocks), the ground is several metres higher in some areas.
- The Dart River channel is present immediately to the west and is topographically lower than the western site boundary by approximately 2-3 m.
- Internally, most of the site is gently sloping ($< 5^\circ$) to the south and west. Locally steeper slopes are present around the hillocks with slopes of $30^\circ+$ common.
- A shallow overland flow channel runs close to the southern site boundary. This flow path appears to have been modified into a more regular channel. Marshy areas were identified in several locations in the low-lying areas between the hillocks. Surface run-off from rainfall will generally flow south and west to the channel and ultimately into the Dart River.
- The toe of the Humboldt Mountain range is present approximately 800 m to the west of the site. The mountain slope rises up rapidly in a series of steep slopes and sub vertical rock bluffs to a ridgeline 4 km distant, and to an elevation of RL 2164 m.

Photographs 1 and 2 below provide general views of the site.



Photo 1. Looking along the true left of the Dart River channel and the western boundary of the site.



Photo 2. Central area of the site showing the hummocky ground (Hillocks) and low-lying areas in between with marshy vegetation. The Humboldt mountains can be seen in the distance.

3.0 Historical Aerial photography

A review of Historical Aerial photography has been undertaken using the images available on Retrolens¹ which extend back to 1966. No significant changes for the site or immediate areas were identified and today's features generally remain consistent with those of recent decades.

4.0 Subsurface Conditions

Geology

Published geological information (Institute of Geological and Nuclear Sciences (IGNS), 1:250,000 Geological Map 18, Geology of the Wakatipu) indicates the site is underlain by Glacial Till. Note, recent studies have contradicted this mapping description, which is discussed further below. The site is alternatively described as landslide debris and flood plain deposits (gravel, sand, mud and minor peat).

The geology observed at the site is briefly described as follows: The Hillocks are assessed to be a historic landslide modified by subsequent deposition and reworking. The geology generally comprises large rock boulders in a finer grained matrix with a topsoil and Loess mantling. Alluvial deposits associated with the Dart River, and of similar grade and composition to those present in the river channel, are also present around the hillocks.

Seismic

No active faults are shown in the immediate area of the site, however, the West Wakatipu Fault is present approximately 3 km to the west on the slopes of the Humboldt mountains. This fault is classified by GNS Science² as having 'likely and possible active fault strands.' A recurrence interval of 20,000 years has been calculated.

The Alpine Fault is located approximately 45 km north west of the site on the west coast of the South Island and presents a significant seismic risk to the area. There is a high probability that an earthquake of magnitude 8 or greater will occur on the Alpine Fault within the next 50 years. An earthquake of this magnitude is expected to result in strong and prolonged ground shaking in the Glenorchy area.

Groundwater

The regional groundwater table is expected to be relatively shallow below low-lying areas of the site. Investigations completed by Geosolve in topographically similar locations along the Dart River, and site observations, suggest ground water is likely to be at depths of 2-4 m below some low-lying areas. Some variation should be expected based on the internal site topography.

¹ <https://retrolens.co.nz/>

² General distribution and characteristics of active faults and folds in the Queenstown Lakes and Central Otago districts, Otago, GNS Science Consultancy Report 2018/207 March 2019.

4.0 Natural Hazards

Liquefaction

QLDC hazard mapping notes the site is '*Possibly Susceptible*' to liquefaction (2005 Regional Analysis by OPUS) and '*Future Earthquakes may cause land damage by liquefaction*' (2019 Regional Analysis, GNS Science). Liquefaction is considered to be a risk at the site for the following reasons:

- Areas of the site are assessed to be underlain by geologically recent, normally consolidated alluvial deposits of varying composition (cobbles, gravel, sand and silt).
- Groundwater is relatively shallow, assessed to be at depths of 2-4 m in some low-lying areas.
- Specific assessment completed by Geosolve in similar terrain on the margin of the Dart River channel indicates liquefaction can occur.

The magnitude of land damage is expected to be manageable by standard engineering assessment and implementation of standard solutions e.g. foundation types and/or ground improvement.

Seismic

A severe seismic risk is present in the region, as discussed above, and, as per building code requirements, appropriate allowance should be made for seismic loading during detailed design of the proposed development.

Flooding

QLDC hazard mapping shows 2021 Otago Regional Council (ORC) flooding and 2012 ORC rainfall flooding data extents are confined to the Dart River channel and immediate margin. This is outside the development area, see Figure 4.1 below.



Figure 4.1. Excerpt from QLDC GIS mapping system showing the site location and flooding extents.

There were no site observations indicating flooding of the site occurs, or has occurred, in recent times and the proposed infrastructure is set back from the immediate margin of the Dart channel in more elevated areas. Based on these observations the risk to the site from rainfall induced flooding associated the Dart River is considered to be low. In the event of a very high-volume long return interval flood, river levels will take several hours to achieve the maximum level. Given the nature of the activities proposed, ample time will be available to close the site if warranted.

Flooding associated with breach of a landslide dam which may occur upstream in the Dart catchment could theoretically also impact the site. The risk from this type of event will be recognised days to weeks in advance and therefore does not pose a risk to life for people on site, and any risk to property may be acceptable to the Stakeholders given the nature and scale of the proposed land use.

Landslide

Recent assessment³ has determined a rock-avalanche interpretation for the origin of the Hillocks. The assessment concludes a rock failure from the slopes of the Humboldt Mountain Range has resulted in the deposition of landslide debris across the site. The debris forms the prominent landforms (Hillocks) that define the local topography.

The study referenced below has been used to undertake a qualitative risk assessment using the methods outlined in APP6. The suggested timing for the event presented in the study is the late-Glacial to mid-Holocene. Taking the lower value (mid-Holocene), the timing of the event is assessed to be approximately 5000-7000 years ago. Further indications of age are presented in the report, notably:

- Soil has developed on the Hillocks;
- There is substantial mantling of the Hillocks by fluvial and aeolian deposits (Loess), and;
- Comparison of the source area volume with the visible volume on the valley floor indicates burial of most of the landslide by deposition associated with the Dart River has occurred.

From the APP6 methodology⁴ and the estimated landslide timing outlined above, the likelihood of occurrence, as described in Table 6, is assessed as Rare. This corresponds to an indicative frequency of 2,501 years plus (<0.04% Annual exceedance probability).

³ Evidence for a rock-avalanche origin for "The Hillocks' "moraine", Otago, New Zealand, S.T McColl, T.R. Davies, University of Canterbury, 2010.

⁴ APP6 – Methodology for natural hazard risk assessment.

Table 6: Likelihood scale from APP6

| Likelihood | Indicative frequency |
|----------------|--|
| Almost certain | Up to once every 50 years (2% AEP) |
| Likely | Once every 51 – 100 years (2 – 1% AEP) |
| Possible | Once every 101 – 1,000 years (1 – 0.11% AEP) |
| Unlikely | Once every 1,001 – 2,500 years (0.1 – 0.04% AEP) |
| Rare | 2,501 years plus (<0.04% AEP) |

Geosolve understands that when assessing consequences for a resource consent, the Consequence Table (Table 7), provided in the APP6 methodology is not to be used. Instead, consequences are to be assessed using general criteria as outlined in APP6 Step 2.

The consequences of the natural hazard in relation to the development proposal have been considered and are outlined as follows:

- The proposed activities are based on persons being aware of their surroundings, largely in an outdoor setting during daylight hours. Management of the site, and people, is therefore possible.
- No major or important local or regional infrastructure e.g. hospital, power generation/services, school, hazardous waste, community buildings, are proposed. The impact on the wider community is therefore assessed as low.
- No residential/accommodation buildings, or long stay requirements with associated high occupancy numbers and rates, are proposed. Exposure to the natural hazard is therefore reduced.
- Multiple points of access to the site are available and the lifelines to Glenorchy are unaffected. The main access route to Glenorchy is located directly adjacent to the site.

Based on the above the consequences are generally considered to be Insignificant to Minor for the region, which gives an Acceptable Risk using Table 8 from APP6. Higher consequences will be present for those on site. Geosolve note that when assessing a Rare event, an Acceptable Risk is given for range of consequences from Insignificant to Major. An Acceptable Risk is therefore considered appropriate for the site. Table 8 from APP6 is provided below.

Table 8: Risk Table from APP6.

| Likelihood | Consequences | | | | |
|---|---------------|--------|----------|--------|--------------|
| | Insignificant | Minor | Moderate | Major | Catastrophic |
| Almost certain | Green | Yellow | Yellow | Red | Red |
| Likely | Green | Green | Yellow | Yellow | Red |
| Possible | Green | Green | Yellow | Yellow | Red |
| Unlikely | Green | Green | Green | Green | Yellow |
| Rare | Green | Green | Green | Green | Yellow |
| Green, Acceptable Risk: Yellow, Tolerable Risk: Red, Significant Risk | | | | | |

7 Summary

Geosolve have reviewed the natural hazards for the proposed Hillocks development. The results of the assessment are summarised as follows:

- A risk of liquefaction has been identified, and is noted on the QLDC hazard mapping. Geotechnical assessment could be completed at the detailed design stage to assess the need for any specific requirements.
- Rainfall flooding associated with the Dart River is considered to be low risk at the site. Rainfall flood levels for the Dart River are shown to be outside the site on QLDC hazard mapping. An upstream landslide dam breach could theoretically effect the site however is expected to be a relatively high return interval event. This type of flood event will develop gradually over days-weeks, and therefore does not pose a risk to life to those on site.
- The site has been effected by historic landslide activity comprising a high-volume rock-avalanche failure from the Humboldt mountains to the west. A qualitative assessment using the methodology outlined in APP6 has been undertaken. Assessment by Canterbury University suggests a timing for the event of Late Glacial to mid Holocene Period, giving a Rare likelihood of occurrence. Given the nature of the proposed land use, and the rare likelihood of occurrence, the risk at the site from this hazard is assessed to be Acceptable.

Given the nature of the development proposal, the risk to the site from natural hazards is assessed by Geosolve to be acceptable based on the methods used. The final decision on risk must be taken by the relevant stakeholders and regulating body.

8 Report Closure

This report has been prepared for the benefit of our client The Future is Wild Limited with respect to the particular brief given to us and it may not be relied upon in any other context or for any other purpose without our prior review and written agreement. The opinions that are presented in this report are based upon the sources outlined in Section 1. Inferences concerning the nature, continuity and condition of the subsurface materials are inferred and cannot be guaranteed.

Yours faithfully,

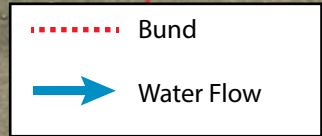


Paul Faulkner
Senior Engineering Geologist

SITE PLAN: PROPOSED

1. Carpark
2. Nursery facility
3. Viewing hide
4. Viewing hide
5. Footbridge
6. Viewing hide
7. Boardwalk
8. Viewing splatform
9. Existing farm Shed/converted art gallery

Site boundary shown in white line
 Existing wetlands outlined in light blue
 Modified watercourses shown in dark blue
 Existing powerlines shown in red



10m/100m
 1:2000 printed at A3

APPENDIX 2: ENVIRONMENTAL MANAGEMENT PLAN FOR LOW RISK SITES

| | |
|---|---|
| Project Address: | QLDC Consent Number (if applicable): RM123456 BC123456 |
| Brief Project Description: | |
| Nearest Sensitive Receptors: (e.g storm water network, waterway) | |

Purpose

This document is for use for sites that are deemed through resource consent to be of low environmental risk. These are also designed for the construction industry to provide guidance to construction environmental management on small scale jobs with low environmental risk.

This document is a guide for operators to help control environmental effects such as storm water, erosion and sediment run off into nearby waterways and storm water infrastructure, manage dust, noise, litter pollution and other construction related effects to neighbours and the environment.

Administrative requirements

Roles and responsibilities

| ROLE | NAME | PHONE NUMBER | EMAIL |
|------------------------------|------|--------------|-------|
| SITE SUPERVISOR | | | |
| ENVIRONMENTAL REPRESENTATIVE | | | |

Inductions

All workers on site shall be briefed on the control measures outlined in this Environmental Management Plan. This should include and outline of the rapid stabilisation and spill response procedures. A copy of this Environmental Management Plan shall be kept on site at all times.

Environmental incident notification and reporting

Any environmental incidents which may result in an adverse effect on the environment or community shall be notified to the Regulatory Team at Queenstown Lakes District Council within 12 hours of the incident occurring. Any spills or offsite release of a hazardous substance shall be notified immediately to the Pollution Hotline at Otago Regional Council.

QLDC Regulatory Team – [03 441 0499](tel:034410499)

ORC Pollution Hotline – [0800 800 033](tel:0800800033)

Environmental inspections

The Environmental Representative will inspect all control measures at the start of each working day, and ensure that all measures are in good condition and suitable for the works. Inspections will also be undertaken where adverse weather events are forecast. The site should always be suitably stabilised to limit erosion and sedimentation, any potential spills, discharges and deposition of waste from site.

Operational requirements

Site Set-up

The site will have the following measures installed. These need to be considered when planning the site set out:

- | | | |
|--|---|------------------------------------|
| <input type="checkbox"/> Stabilised access point | <input type="checkbox"/> Parking area | <input type="checkbox"/> Fencing |
| <input type="checkbox"/> Waste collection facility | <input type="checkbox"/> Hazardous substance storage facility | <input type="checkbox"/> Spill kit |
| <input type="checkbox"/> Concrete wash out bay | <input type="checkbox"/> Wash down facility (mud from tyres) | |

Further Comments/Other Measures:

Drainage, Erosion and Sediment Control

Under the Queenstown Lakes District Plan, no discharge of water holding sediment is allowed off-site, unless you have a resource consent permitting this activity. Consider your site and your works: what's the best tool for the job, to make sure your site is stabilised at all times.

The site will have the following measures installed. These need to be considered when planning the site set out:

- | | | |
|---|---|---|
| <input type="checkbox"/> Water diverted around site | <input type="checkbox"/> Minimise area of exposed soil | <input type="checkbox"/> Sediment fences |
| <input type="checkbox"/> Bunds and/or catch drains | <input type="checkbox"/> Sediment retention device | <input type="checkbox"/> Stockpile management |
| <input type="checkbox"/> Stabilisation following earthworks | <input type="checkbox"/> Storm water inlets protected (cl off or sediment sock) | |

Ongoing management of erosion and sediment controls:

- E&SCs to be inspected daily, prior to heavy rainfall and following heavy rainfall
- E&SCs are always correctly installed and suitable for the planned works
- Sediment deposits removed from E&SCs following storm events to ensure capacity for next storm

Rapid Stabilisation Procedure:

In the event of heavy rainfall or significant weather event forecast, the site can be quickly stabilised by:

Further Comments/Other Measures:

Erosion and Sediment Control Plan:

An example of this at the end of this appendix

This needs to demonstrate:

- > overland flow paths
- > locations of controls (sediments fences, catch drains, sumps, etc)
- > stormwater outlet point

Draw ESCP Here

Disclaimer: It is noted that these are for the operators own use and Council accepts no responsibility for failure of these plans in the case of any environmental incidents. This document is intended as a guide for operators and it is recommended that if the operator is unsure of how to manage a potential environmental effect they should seek the advice of an appropriately qualified environmental professional.

Dust Management

The site will have the following measures installed. These need to be considered when planning the site set out:

- Irrigators for soil dampening covered/stabilised
- Hand watering
- Longstanding stockpiles
- Stockpile heights minimised
- Geotextiles device
- Soil binders
- Progressive stabilisation

Ongoing management of dust:

- Dust generating activities avoiding during windy weather (where possible)
- Stabilise site when works untended for more than 5 calendar days.

Further Comments/Other Measures:

Noise and Vibration management

Ongoing management of noise and vibration:

- Noisy activities to be undertaken between 0800hrs – 1700hrs Monday to Saturday inclusive
- Letter drops to neighbours during any unusually loud or noisy activities outside of 0800 – 1700 Mon to Sat
- Noise dampening devices utilised and avoidance of loud slamming to be avoided where possible

Further Comments/Other Measures:

Cultural Heritage Management

Accidental Discovery Protocol

In the event that an archaeological site (defined as a place associated with pre-1900 human activity, regardless of cultural association) is discovered during construction, works onsite will cease immediately and the accidental discovery protocol attached to this document as Appendix 4 will be followed.

Further Comments/Other Measures:

Chemicals and Fuels management

The main environmental concern for fuel and chemical management is avoiding spills entering a watercourse or groundwater.

Ongoing management of chemicals and fuels:

- Containers closed and appropriately stored at all times when not in use
- Spill kit onsite at all times and restocked immediately following any spills

Spill Response procedure:

Further Comments/Other Measures:

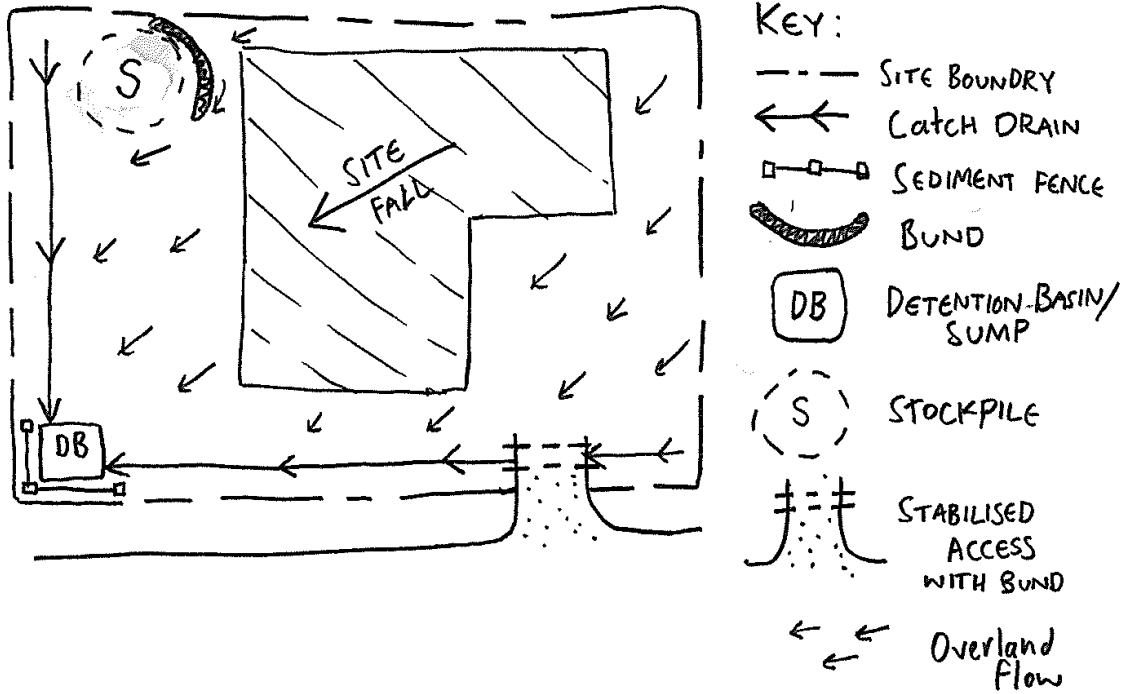
Waste management

Ongoing management of waste:

- Appropriately-sized bin located onsite with lid
- Site cleaned free of rubbish at the end of each day
- Waste regularly removed from site such that bins are not overflowing
- Adopt the Waste Hierarchy

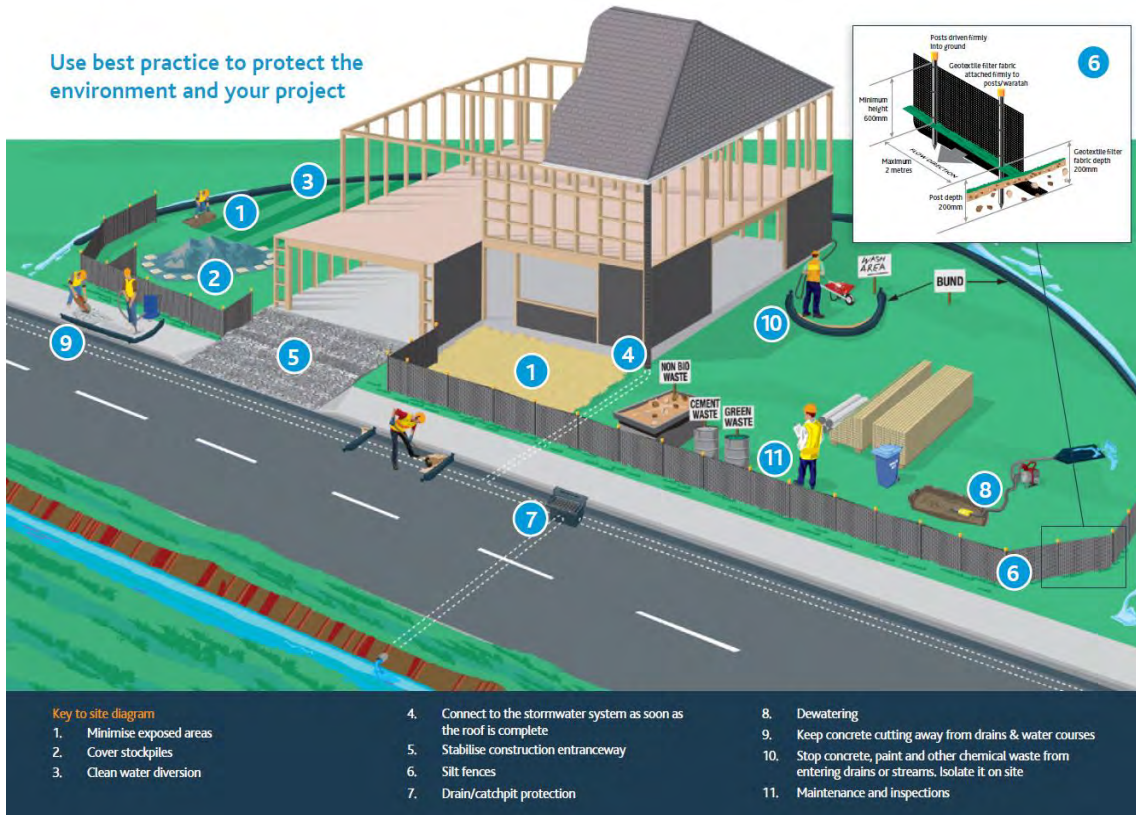
Further Comments/Other Measures:

Example of an Erosion and Sediment Control Plan:



Example of Best Practice Construction Environmental Management:

Use best practice to protect the environment and your project



APPENDIX 3: ENVIRONMENTAL INCIDENT REPORT FORM

| | |
|-----------------------------------|--|
| Project Address: | QLDC Consent Number (if applicable): RM123456 BC123456 |
| Brief Project Description: | |

Instructions

Complete this form for all environmental incident that cause contaminants (including sediment) or environmental nuisance to leave the site. Please be succinct, stick to known facts and do not make assumptions.

Once completed submit to the Regulatory team at Queenstown Lakes District Council at RCMonitoring@qldc.govt.nz Call the Regulatory team immediately on [03 441 0499](tel:034410499) for any serious or ongoing incidents that cannot be brought under control.

Incident details

| | |
|--|---|
| Date and Time | Date: XX/XX/XX Time: XX:XX am <input type="checkbox"/> pm <input type="checkbox"/> |
| Description Provide a brief and factual description of what happened during the incident, include relevant details such as: <ul style="list-style-type: none"> > The estimated distance to the nearest waterway (include storm water and dry courses) > The estimated distance to the nearest sensitive receiver > The activity being undertaken when the incident occurred Sketches/diagrams/photos may be reference and appended to this report to aid in the description of the incident. | |
| EXACT location of the incident Include address, landmarks, features, nearest cross street, etc. Maps and plans can be attached to the incident report if appropriate | |
| Quantity or volume of material escaped or causing incident (provide and estimate if quantity unknown) | |
| Who identified the incident? | <input type="checkbox"/> Contractor <input type="checkbox"/> Council <input type="checkbox"/> Community <input type="checkbox"/> Other |

What immediate actions/control measures were taken to rectify or contain the incident?

What initial corrective action will be taken to prevent similar incidents recurring in the near future?

Has the Otago Regional Council been notified? Yes No

Approvals:

Environmental Representative/Person making report

Name..... Signature.....

Organisation..... Date.....

Mobile phone number.....

Site Supervisor

Name..... Signature.....

Organisation..... Date.....

Mobile phone number.....



HERITAGE NEW ZEALAND
POUHERE TAONGA

Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol

Under the Heritage New Zealand Pouhere Taonga Act (2014) an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand. For pre-contact Maori sites this evidence may be in the form of bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts such as bottle glass, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures. Burials/koiwi tangata may be found from any historic period.

In the event that an unidentified archaeological site is located during works, the following applies;

1. Work shall cease immediately at that place and within 20m around the site.
2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.
3. The Site Manager shall secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.
4. If the site is of Maori origin, the Site Manager shall notify the Heritage New Zealand Regional Archaeologist and the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (*Heritage New Zealand Pouhere Taonga Act, Protected Objects Act*).
5. If human remains (koiwi tangata) are uncovered the Site Manager shall advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate iwi groups or kaitiaki representative and the above process under 4 shall apply. Remains are not to be moved until such time as iwi and Heritage New Zealand have responded.
6. Works affecting the archaeological site and any human remains (koiwi tangata) shall not resume until Heritage New Zealand gives written approval for work to continue. Further assessment by an archaeologist may be required.
7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.
8. Heritage New Zealand will determine if an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act 2014* is required for works to continue.

It is an offence under S87 of the *Heritage New Zealand Pouhere Taonga Act 2014* to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of

whether the works are permitted or a consent has been issued under the Resource Management Act.

Heritage New Zealand Regional archaeologist contact details:

Dr Matthew Schmidt
Regional Archaeologist Otago/Southland
Heritage New Zealand
PO Box 5467
Dunedin
Ph. +64 3 470 2364, mobile 027 240 8715
Fax. +64 3 4773893
mschmidt@heritage.org.nz

BEALE CONSULTANTS

Memorandum

To: Gerhard Sieber

Copy to: Scott Freeman, Jeremy Railton

From: Simon Beale, Senior Ecologist, Beale Consultants Limited.

Date: 14 February 2022.

Subject: Identification of Natural Wetlands at the Hillocks.

1 INTRODUCTION

- 1.1 Beale Consultants was engaged to The Hillocks Holdings Limited to determine whether any natural wetlands as defined by the National Environmental Standard (NES) for Freshwater Regulations 2020 occur within the property at the Hillocks.
- 1.2 The Hillocks property encompasses the geological formations known as the Hillocks which are located on an expansive river terrace bordering the Dart River near the Dart River Bridge as shown on the location plan (refer Attachment 1).

2. SCOPE OF WORK

- 2.1 The scope of this review entailed:
- Desktop review of aerial imagery of the Hillock property;
 - Desktop evaluation of the ecological context of the property;
 - A site inspection conducted on 9 February 2022; and
 - Preparation of a memorandum documenting the results of the site observations.

3. NATURAL WETLAND DEFINITION

The meaning of a natural wetland is defined in Clause 3.21 of the NPS Freshwater Management 2020:

natural wetland means a wetland (as defined in the Act) that is not:

- (a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or
- (b) a geothermal wetland; or
- (c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain- derived water pooling

natural inland wetland means a natural wetland that is not in the coastal marine area

4. ECOLOGICAL CONTEXT

- 4.1 The Hillocks property lies within the Aspiring Ecological Region and the Dart Ecological District. Attributes of the Dart Ecological District as described in McEwen (1987) that are features of the general area of property are: “...*flat alluvium filled valley floors, very high rainfall, mainly shallow, stony steepland soils with altitudinal sequence, bare rock, debris slopes, modified tussocklands on valley floors, beech forest; some flats grazed.*”

- 4.2 The site lies with LENZ Level IV Environment O1.4a which is described as gently undulating plains containing well drained soils of moderate fertility from greywacke and granite alluvium. The climate is characterised by mild temperatures, moderate solar radiation and no annual water deficits.
- 4.3 In terms of the Threatened Environment Classification¹ the percentage of indigenous vegetation remaining in Land Environment O1.4a at a national scale as of 2012, was 66.75% while 51.55% was formally protected.
- 4.4 The original (pre-human) vegetation cover across the lower terraces of the Dart River valley including the property was beech forest, as determined by predictive modelling.²

5 SITE OBSERVATIONS

- 5.1 The Hillocks property as observed during a walk over survey is dominated by improved exotic pasture.
- 5.2 The property contains natural depressions and areas of impeded drainage between and around the base of some of the hillocks that are subject to periodic inundation and ponding due to wet weather related runoff events.
- 5.3 Two watercourses extend through the property and have been channelised in the past to assist in the drainage of land on the northern side of the Glenorchy Routeburn Road.
- 5.4 These natural depressions and damp areas support scattered rushland and sedgeland communities of varying density and coverage within the prevailing exotic pasture grassland. The rushlands are dominated by the native rush *Juncus edgariae* and the sedgelands, the native sedges *Carex sinclairii* and *Carex coriacea* (rautahi).
- 5.5 During the walk over inspection five discrete areas of rushland were identified as natural wetlands in accordance with the NES Freshwater Regulations 2020. These wetlands all feature dense clumps of *Juncus edgariae* while some also feature small areas of sedgeland of *Carex sinclairii* amongst the rushlands. Pasture grasses and lower stature herbaceous plants exist around and between the rushes. These qualifying rushlands (wetlands) are mapped on an aerial of the property (refer Attachment 2) while photos of each of these wetlands are provided in Attachment 3.
- 5.6 These wetlands are low in diversity and have been affected by stock grazing.
- 5.7 The sedge rautahi exists across large area of damp pasture bordering the natural wetlands. However the growth of rautahi in these areas have been assessed as sub-dominant to the exotic grassland, i.e. <50% of the overall vegetation cover and therefore do not qualify as natural wetlands in accordance with the NES Freshwater Regulations 2020. In places these areas are heavily infested with Californian thistle.
- 5.8 The channelised streams support rushland communities that are contiguous with some of the natural wetlands.

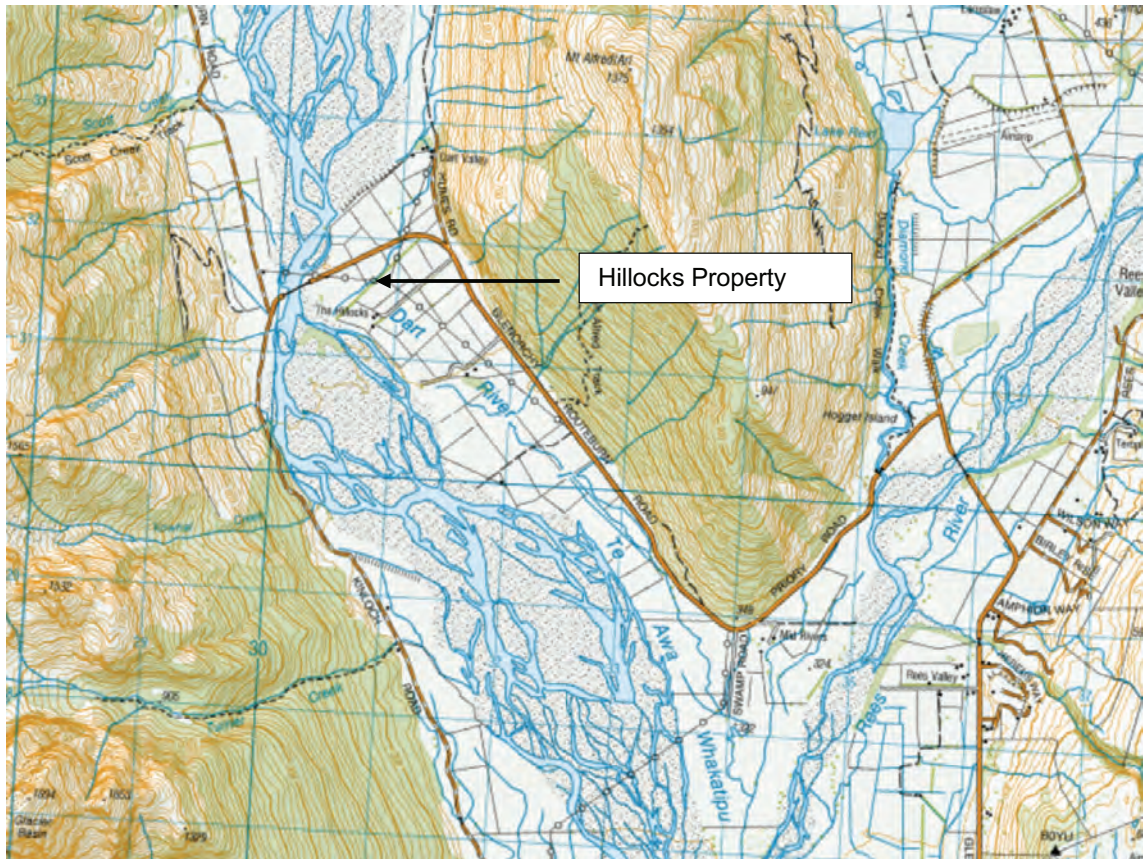
6 CONCLUSION

- 6.1 The property at the Hillocks contains five natural wetlands that are relatively confined in area. The growth form of the wetlands are rushlands dominated by the native rush *Juncus edgariae*. The wetlands are subject to periodic ponding during wet weather.

¹ The TEC combines data from three national databases; LENZ, the Land Cover Database (LCDBv4.0, based on 2012 satellite imagery), and a 2012 update of the national protected areas network.

² ourenvironment.scinfo.org.nz

ATTACHMENT 1 – LOCALITY PLAN



ATTACHMENT 2 – PLAN DEPICTING NATURAL WETLANDS



ATTACHMENT 3 – SITE PHOTOGRAPHS



Wetland 1.



Wetland 2.



Wetland 3.



Wetland 4.



Wetland 5.