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WAITIRI PROJECT: FAST-TRACK APPLICATION – PRELIMINARY ECOLOGICAL ASSESSMENT

Introduction

Oaks Property is intending to lodge an application for a proposed development in Gibbston Valley, Queenstown, to be listed on the schedule of the Fast-track Approvals Act (FTAA). The development includes five separate properties across four different areas ('the site'; Attachment A). If included on the schedule, it would seek approvals for its proposal using the fast-track process. This memorandum provides a high-level ecological assessment of the proposal, including an evaluation of the regional significance of the project's potential ecological contributions.

The main effects of the project are anticipated to be minor disturbance to birds and lizards, potential impacts on areas of lizard habitat and minor, temporary impacts on habitat as a result of construction activities. All adverse effects are expected to be able to be appropriately managed through appropriate mitigation such as fauna management plans. The proposed development has been designed to avoid natural waterways and wetlands, in line with policies and objectives of the National Policy Statement for Freshwater Management 2020 (NPS-FM), and with the National Environmental Standards – Freshwater (NES-F). It will include significant revegetation and ecological restoration including along waterways and wetlands, and in areas of non-developed open space, in line with the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB). There will be an increase in native vegetation, and habitat for native fauna as a result of the proposed development.

Methodology

A conservative, high-level desktop assessment and site walkover (undertaken by an experienced ecologist over 4, 5 and 6 August 2025) informed an assessment of the existing ecological values of three of the four areas of development. Only the developable areas were assessed in person, with the remainder of the sites assessed via desktop or through observations from surrounding areas. Access to the Glenlee and Glenroy properties was not available and therefore the values of this site were conservatively assessed based on desktop information, views provided of the site from other properties, and by comparison of the site to other sites that were directly assessed. Terrestrial features were assessed based on their botanic and habitat values, the latter of which was qualitatively assessed, considering indigenous lizards, birds and bats. Freshwater features were classified based on the Otago Regional Plan: Water for Otago definitions. Indicative wetland areas were identified based on Ministry for the Environment (MfE) wetland delineation protocols (MfE 2022; MfE 2021; Clarkson 2013; Fraser et al. 2018) and classified as per the NPS-FM definition of a 'natural inland wetland'.

The key ecological features identified by the assessment are presented in Attachment A. It is noted that these features are indicative and that at future stages of the application, these features will be further defined.

Background

The Glenlee, Glenroy, Riverside, and Drystone sites are located in the Remarkables Ecological District (ED). The Eastburn site is located on the boundary of the Remarkables and Shotover ED, and the Waitiri site is located at the point where the Remarkables, Old Man and Pisa EDs meet.

The Remarkables ED is characterised by rugged, steep, glaciated mountains up to approximately 2300 m above sea level. Winters are cold, and summers are hot, with a generally dry climate. Forest in the district is limited, and mainly consists of small patches in valleys. Elsewhere, scrub is present with abundant tussock. The Shotover ED is characterised by steep topography with deeply incised canyons. Winters are cold, and summers are hot, with a generally dry climate. Vegetation includes remnant beech forest, extensive bracken fernland, some scrubland and tussockland, including above the treeline. Exotic forests have established over time. The Old Man ED is characterised by mountain ranges and plateau, with deep gorges as a result of the main rivers in the area. Winters are cold, and summers are hot, with a generally dry climate. Prior to European settlement the district would have contained beech and totara forest below 1000 m, however now tussock and scrub are the dominant vegetation. The Pisa ED is the highest ED in the Central Otago Region and therefore no sites are considered to be characteristic of the Pisa ED.

Historical aerial images show the sites were well established as farmland by the earliest available aerial image, dated 1958 (Attachment B). However, the wider area has been subject to farming and gold mining and development from the 1860s and therefore it is likely the site has been devoid of any significant native vegetation for more than 150 years.

Currently, the sites are used for various activities including cattle and sheep farming, vineyards, and scrub. Site specific descriptions are provided in the sections below.

Eastburn

Terrestrial ecology

The Eastburn block is approximately 101 ha in area. It is currently occupied by agricultural development, a small number of dwellings, various outbuildings and two equestrian arenas. The land is a combination of flats and low gradient hills. A small number of horses were present during the site visit. One paddock had contained a crop which had been harvested. Otherwise, the area contained pasture of varying quality.

Vegetation was dominated by exotic species and botanical diversity was low. Trees were mostly limited to the riparian edges of the stream on the north western boundary, the areas around the dwellings and yards, and to shelterbelts around the central paddocks (Figure 1). Exotic scrub was abundant in some areas. The stream gullies contained dense growth and the paddocks between Crown Range Road and Eastburn Road contained scrub growth with growth becoming more abundant closer to Crown Range Road. Species present within the site included pines (*Pinus sp*.), crack willow (*Salix × fragilis*), sweet briar (*Rosa rubiginosa*), wild thyme (*Thymus vulgaris*), and various pasture species.

Native species present included a very small number of young, planted kowhai (*Sophora* sp.), matagouri (*Discaria toumatou*) amongst the exotic scrub, occasional porcupine shrub (*Melicytus alpinus*) (mostly on steeper areas with exposed rock), and occasional coprosmas (*Coprosma propinqua*).

a) b)



Figure 1. a) Pasture and exotic shelterbelts in the north block and b) exotic dominant scrub within the site.

Fauna habitat was present within the Eastburn area. Bird habitat was generally limited to the exotic trees and scrub. Common native and exotic bird species are expected to be present within the site. New Zealand pipit (*Anthus novaeseelandiae*; At Risk – Declining) and New Zealand falcon (*Falco novaeseelandiae*; Threatened – Nationally Vulnerable), have been recorded in the immediate vicinity of the blocks and it is assumed they are at least periodically present. Few birds were observed on site, though this was likely a result of the time of year the survey was completed in. Australasian harrier (*Circus approximans*), paradise shelduck (*Tadorna variegata*), fantail (*Rhipidura fuliginosa*), blackbird (*Turdus merula*), and Californian quail (*Callipepla californica*) were observed.

Lizard habitat was present in areas dotted around the site and mostly included areas exposed bedrock with closely associated native scrub (porcupine shrub and coprosma). The bulk the site did not provide good quality habitat. Over the last several decades, the site has been highly managed/grazed pasture and as a result lizard habitat has not traditionally been abundant. Though habitat may currently be present, this does not mean lizards are present in a high diversity or abundance due to the managed nature of the site and lack of connected habitat. While suitable habitat is present in some discrete areas, the overall availability and connectivity of habitat is limited. Records from the wider area show various species of lizard are known to be present, including the At Risk – Declining korero gecko (*Woodworthia* "Otago/Southland large"), Roys Peak gecko (*Mokopirirakau* "Roys Peak"), and Kawarau gecko (*Woodworthia* "Cromwell"), and the Threatened – Nationally Vulnerable Lakes skink (*Oligosoma* aff. *chloronoton* "West Otago"). The common McCann's skink (*Oligosoma maccanni*; Not Threatened) is likely present in areas where pasture grass is consistently long. McCann's skink are very common in the area.

It is unlikely bats are present within the site. A population of long tailed bats (*Chalinolobus tuberculatus*) is present in the Glenorchy area, approximately 40 km to the north west of the site, however, bats are not known from the Queenstown area. The site is potentially within flying distance of this population, however the lack of records, despite survey effort, from the area around urban and semiurban Queenstown, suggests they are not present. There are limited roosting trees within the blocks and surrounding area and it is considered unlikely bats would travel their maximum range from their known habitat, to the low quality habitat present within and around the Eastburn blocks.

Rabbits were very abundant within the site. Grass was very short, despite the lack of grazing stock, and rabbit holes and scat were present in a high density throughout the area. Numerous rabbits were startled during the site visit.

No Significant Natural Areas (SNA) are present on the blocks. The closest SNA is located over 1.5 km to the south east of the site, on the other side of the Kawarau River. No Significant Wetlands, as per the Otago Water Plan, are present within the site.

The botanical value of the site is considered to be low. The ecological value of the site for bats is considered negligible. The value for birds and lizards is conservatively considered to be moderate-high due to the potential presence of At Risk and Threatened birds and lizards. However, lizard values only apply to areas where lizard habitat is present. The values of the remainder of the site for lizards is considered to be low.

Freshwater ecology

Various freshwater features were present within and adjacent to the site.

Intermittent waterways form the north western and south eastern edges of the site. The south eastern waterway was not within the development boundaries, therefore it was observed from a distance only. The north western waterway had been modified to include a number of constructed, online ponds (Figure 2). Pond water levels were controlled by culverts which were mostly perched, presenting a barrier to most fish passage. Upstream of the ponds, the channel was dry. Downstream of the downstream most pond, the stream was considered to be permanent. A second stream and constructed pond system was present in the southern part of the site.

An artificial channel was present in the paddock between Eastburn Road and Crown Range Road (Figure 3a). It appeared to be fed by a well or similar. The channel flowed across the natural contour and showed evidence of maintenance in the form of excavated spoil on the banks. A pond was present in this area which was also considered to be constructed.

There are no records in the New Zealand Freshwater Fish Database (NZFFD) for the site or surrounding catchments. It is possible fish may be present within the permanent reach of stream or ponds, however due to the perched culverts, only eels are expected.

Various wetlands were present within the site, all associated with a stream feature. Natural wetlands around the constructed ponds appeared to be fed by seeps from adjacent terraces (Figure 3b). Wetlands contained low diversity and included mostly *Carex secta* (OBL) and *Juncus effusus* (FACW), with pasture grass and occasional umbrella sedge (*Cyperus eragrostis*; FACW) that had died off for the winter. The wetlands all passed the rapid test and contained primary hydrological indicators (surface water, damp soil), and were therefore considered to be natural inland wetlands as per the definition in the NPS-FM. The boundaries were delineated based on clear changes in vegetation, i.e. where it moved from being OBL and FACW dominated to FACU and UPL dominated, as well as changes in topography and hydrological conditions.

a) b)



Figure 2. Intermittent stream on north western boundary of the south block showing a) dry upper reaches of and b) constructed ponds and wetland complexes.

a) b)



Figure 3. a) Constructed water race, and b) natural wetland upgradient of a constructed pond, which is to the right of the photograph.

Overall

The value of the permanent and intermittent streams on the site was considered to be low due to the lack of native riparian vegetation, agricultural nature of the site and likely lack of fish species. The value of the constructed ponds was considered to be low. The value of the wetlands was considered to be low due to the lack of diversity, however there is significant opportunity for ecological enhancement.

Drystone

Terrestrial

The Drystone block is located on the southern side of Gibbston Highway and measures approximately 75 ha in area. The area adjacent to the road is relatively flat, and increases in elevation to the south. The highest (southern) part of the site has been terraced with aerial images suggesting this occurred in the early 2000's.

Vegetation within the site was almost exclusively exotic. The bulk of the land contained vineyards. Where vineyards were not present, pasture was dominant (Figure 4). An area of exotic pines was present in roughly the centre of the site (Figure 5a) and areas of exotic trees were present around the

existing houses, as well as the main entrance to the block. Species observed included pine, silver birch (*Betula pendula*), macrocarpa (*Cupressus macrocarpa*), poplar (*Populus* sp.), willow, gorse (*Ulex europaeus*) and broom (*Cytisus scoparius*). Very little native vegetation was observed, and this was limited to a very small number of cabbage trees (*Cordyline australis*) observed along the accessway within the block.

Bird habitat was generally limited to the exotic trees and scrub. Common native and exotic bird species are expected to be present within the site. New Zealand pipit and New Zealand falcon, have been recorded in the immediate vicinity of the blocks and it is assumed they are at least periodically present, though the site is not expected to support falcon on a more permanent basis due to the vineyards and moderate levels of development in the adjacent areas.

Lizard habitat was present in the block though this was limited to an area of rocky cliff near the north east corner (Figure 5b). In this area, exposed bedrock was present which provided crevices and other refugia for lizards. Kawarau gecko are known to be present in the vicinity of the site and it is considered likely they are present amongst the rock. The remainder of the site did not present suitable habitat for lizards. The dominance of vineyards meant habitat for skinks, including the common McCann's skink, was essentially absent.

Bats were considered unlikely to be present for the same reasons as the Eastburn block.

No Significant Natural Areas (SNA) are present on the site. The closest SNA is located approximately 50 m to the west of the block's western boundary, within the gully associated with Camp Creek. No Significant Wetlands, as per the Otago Water Plan, are present within the site or in the surrounding area.

The botanical value of the site is considered to be low. The ecological value of the site for bats is considered negligible. The value for birds and lizards is conservatively considered to be moderate-high due to the potential presence of At Risk – Declining birds and lizards. However, lizard values only apply to areas where lizard habitat is present. The values of the remainder of the site for lizards is considered to be low.

a) **b)**



Figure 4. a) Vineyards were dominant and b) pasture in the upper elevations.

a)



b)



Figure 5. a) Small area of pines and b) potential lizard habitat.

Freshwater

One permanent stream was present within the Drystone block. Franks Creek flowed through the north western portion of the site. It was contained within clearly defined channels (Figure 6a). The substrate was predominantly cobbles and gravels and water was clear and swift at the time of the site visit. Riparian vegetation was present along much of its length. The vegetation was almost exclusively exotic and crack willow, poplar and broom were the dominant species. They did provide moderate levels of shade, which will be higher during months when the willow have their leaves. A culvert was present within the site. The culvert was perched approximately 0.5 m above the water level which would present a barrier to fish passage.

Franks Creek is fed by two main channels which appeared to converge at a constructed pond (Figure 6b). Upstream of the pond the channels were considered to be ephemeral. There was no clearly defined channel, and vegetation was present across the channel cross sections.

A second constructed pond was present immediately to the north of the pine block. It did not appear to be connected to any other surface water features. Riparian vegetation was limited and it is expected it would be very warm during summer months.

A single record for Franks Creek is present in the NZFFD, however, no fish were captured. It is unlikely the stream supports a significant fish community due to the existing fish barrier, as well as the downstream nature of the creek which is discussed in the Riverside section below.

No wetlands were present within the block.

The value of the Franks Creek was considered to be low due to the lack of native riparian vegetation, agricultural nature of the site and likely lack of fish species. The value of the constructed ponds was considered to be low.

a)



b)



Figure 6. a) A permanent reach of Franks Creek and b) The pond acting as the start of the permanent reaches.

Riverside

Terrestrial

The Riverside block is located on the northern side of Gibbston Highway, directly across the road from the Drystone block. The block is mostly flat, with a steep central gully, and measures approximately 31 ha in area.

The land on the eastern side of the central gully was predominantly long grass (Figure 7a). Vineyard infrastructure (i.e. vine supports) was present, however it was no longer operating as a vineyard. Aerial images suggest the vineyard has not been maintained since approximately the mid 2010's. The western side of the gully adjacent to Gibbston Highway contained an operational vineyard.

The area closer to the Kawarau River was heavily vegetated with exotic scrub. The area was dominated by broom and gorse with scattered pines (Figure 7b). Review of aerial images suggests scrub has been periodically cleared over time, however it has always been present to some degree (as per the aerial image record). Goats were observed in this vegetation though it was unclear if they were wild or domestic stock.

In the western extent of the block was a seam of bedrock. This area contained a slightly different vegetation community however exotics were still abundant. Matagouri and coprosma were present and various native saplings had been planted and were being maintained. Planted species included beech and kowhai (Figure 8a). Sweet briar was abundant.

Bird habitat was generally limited to the exotic trees and scrub. Common native and exotic bird species are expected to be present within the site. New Zealand pipit and New Zealand falcon, have been recorded in the immediate vicinity of the blocks and it is assumed they are at least periodically present, though the site is not expected to support falcon on a more permanent basis due to the vineyards and moderate levels of development in the adjacent areas.

Lizard habitat was present in the block though this was limited to rocky seam in the western part of the site. In this area, exposed bedrock was present which provided crevices and other refugia for lizards (Figure 8). Kawarau gecko are known to be present in the vicinity of the site and it is considered likely they are present amongst the rock. The remainder of the site did not present quality habitat for lizards,

though it is possible the common McCann's skink is present in areas where long grass or scrubby vegetation is present.

Bats were considered unlikely to be present for the same reasons as the Eastburn block.

No Significant Natural Areas (SNA) are present on the site. The closest SNA is located approximately 600 m south west of the block, within the gully associated with Camp Creek. No Significant Wetlands, as per the Otago Water Plan, are present within the site or in the surrounding area.

The botanical value of the site is considered to be low. The ecological value of the site for bats is considered negligible. The value for birds and lizards is conservatively considered to be moderate-high due to the potential presence of At Risk – Declining birds and lizards. However, lizard values only apply to areas where lizard habitat is present. The values of the remainder of the site for lizards is considered to be low.

a) **b)**



Figure 7. a) Pasture where vineyards were historically present and b) exotic dominant scrub around the river terrace.

a) **b)**



Figure 8. a) Planted natives amongst lizard habitat and b) potential lizard habitat.

Freshwater

The Kawarau River forms the northern boundary of the block. The lower reaches of Franks Creek flow through the central gully within the Riverside block. The stream was contained within moderately incised banks that were densely vegetated with exotic species (willow, broom, gorse, sweet briar). It

flowed into a constructed online pond (constructed in the late 2000's) before discharging from the pond and flowing into the Kawarau River (Figure 9). The channel downstream of the pond has been realigned which is expected to have occurred at the time the pond was constructed. This portion of the channel contained less flow that the upstream natural reach and was planted with *Carex secta* (Figure 9b).

A single record for Franks Creek is present in the NZFFD, however, no fish were captured. The point where Franks Creek discharges to the Kawerau River includes a steep drop of approximately 15 m. As a result, only fish with good climbing ability are expected to be present in the creek.

No wetlands were present within the Riverside block.

The value of the Franks Creek was considered to be low due to the lack of native riparian vegetation, agricultural nature of the site and likely lack of fish species. The value of the constructed ponds was considered to be low.

a) **b)**



Figure 9. a) Constructed online pond on Franks Creek and b) outlet channel from the pond.

Waitiri

Terrestrial

The Waitiri block is located on a peninsula, bounded on three sides by either the Gibbston Highway or the Kawarau River. The developable area measures approximately 104 ha and is characterised by flat to undulating terrain elevated on a terrace. Cattle were present in some parts during the site visit.

The block was heavily dominated by exotic vegetation, with pasture accounting for the majority of vegetation (Figure 10a). Exotic shelterbelts were present on some paddock boundaries and areas of exotic scrub were present around the terrace edges (Figure 10b). Sweet briar was the most abundant scrub species, however matagouri was also relatively abundant.

Small areas of young, native planting were present around the dwellings and a plant nursery.

Bird habitat was generally limited to the exotic trees and scrub. Common native and exotic bird species are expected to be present within the site. New Zealand pipit and New Zealand falcon, have been recorded in the immediate vicinity of the blocks and it is assumed they are at least periodically present. NZ falcon are not expected to be resident due to the relatively intensive agricultural nature of the block.

Lizard habitat was present within the site however it was limited to two gullies where exposed cobbles provided skink habitat, and to areas of exposed rock around the edge of the terrace (Figure 11). There

were some small areas that had been fenced preventing stock access and as a result grass was longer in these areas. It is possible these areas present lizard habitat, however their isolated nature and lack of connection to higher quality areas significantly limits their value and the chances of lizards being present. The grazed areas of the site present no habitat for native lizards.

Bats were considered unlikely to be present for the same reasons as the Eastburn block.

No Significant Natural Areas (SNA) are present on the site. The closest SNA is located approximately 2.5 km to the west of the site's western most point, on the opposite bank of the Kawarau River. No Significant Wetlands, as per the Otago Water Plan, are present within the site or in the surrounding area.

The botanical value of the site is considered to be low. The ecological value of the site for bats is considered negligible. The value for birds and lizards is conservatively considered to be moderate-high due to the potential presence of At Risk – Declining birds and lizards. However, lizard values only apply to areas where lizard habitat is present. The remainder of the site presents negligible value habitat for lizards.

a) **b)**



Figure 10. a) Pasture and exotic trees and shelterbelts and b) Scrub around the terrace edge.

a) **b)**



Figure 11. a) Lizard habitat within a gully on the terrace edge and b) potential lizard habitat on a rocky outcrop.

Freshwater

No natural waterways were present within the site. A constructed water race flows into the site from the north. The race has been modified over time depending on water use (irrigation, pond storage, gold mining) however it is clearly constructed and flows across the contours of the hill. At present, it mostly flows into a constructed pond, however a second channel flows through paddocks before discharging (Figure 12a). Old channels are visible on aerial images left over from when the race was used for flood irrigation. Water is discharged from the pond via a culvert. During the site visit the culvert was discharging and water was present down gradient. It is expected during summer the pond level drops enough that discharge ceases. Water ultimately is discharged to the Kawarau River through a gully where historical gold mining occurred. A perched culvert was present where the race flows under Gibbston Highway presenting a likely complete barrier to fish passage.

It is unlikely fish are present in the water race due to the lack of connection to surface water and the steep climb fish would need to make from the Kawarau River to reach the water race discharge point (approximately 60 m in vertical elevation for 130 m in horizontal distance) and the perched culvert.

Four other constructed ponds were present on the site. Discussions with a worker at the plant nursery revealed these ponds are also fed by the water race. All ponds have been constructed in the 2000s.

Various areas of hydrophytic vegetation were present in the site, however all areas were associated with either the constructed ponds or the water race (Figure 12b). As a result, they were not considered to be natural inland wetlands as per the definition in the NPS-FM as the definition expressly excluded constructed water bodies and wetlands associated with constructed waterbodies.

The ecological value of the water race and constructed ponds was considered to be low.

a) **b)**



Figure 12. a) Constructed water race and the pond it feeds and b) non-natural wetland as a result of the constructed pond discharge.

Glenroy and Glenlee

The Glenroy and Glenlee blocks have been assessed via desktop and through observations made from outside of the blocks due to access constraints at the time the site visit was undertaken. Therefore, values have been assessed on a more conservative basis. If the project progresses to a substantive application, additional investigations will be undertaken and the features will be refined. It is not

expected additional features will be identified or features will be larger, due to the conservative nature of this assessment.

Terrestrial

Vegetation within the site is heavily dominated by pasture (Figure 13). Some areas of scrub, expected to be exotic dominated and consistent with the species observed on the other blocks, is present in the western and central gullies, as well as in the higher elevations and on steeper areas. Review of aerial images suggests scrub has always been present, and coverage has been relatively consistent for the last 25 years. Stock are expected to be intermittently present which likely contributes to controlling the spread of the scrub.

An area of pine trees is present in the central southern part of the site. Exotic vegetation, including shelterbelts or hedges are present around the homestead area of the Glenroy block.

Bird habitat is generally limited to the exotic trees and scrub. Common native and exotic bird species are expected to be present within the site. New Zealand pipit and New Zealand falcon, have been recorded in the immediate vicinity of the blocks and it is assumed they are at least periodically present.

Lizard habitat is present within the site however it was limited to areas of exposed rock that are visible along some of the ridgelines and on the northern boundary of the Glenlee block. It is likely this rock provides habitat for Kawarau gecko. The vegetation around the homestead area and any areas of long grass not subject to heavy grazing may provide habitat for native skinks, including the common McCann's skink. However, the area is not directly connected to higher quality habitat and therefore high numbers of lizards are not expected.

Bats were considered unlikely to be present for the same reasons as the Eastburn block.

No Significant Natural Areas (SNA) are present on the site. The closest SNA is located approximately 200 m to the north of the Glenlee block. No Significant Wetlands, as per the Otago Water Plan, are present within the site or in the surrounding area.

The botanical value of the site is considered to be low. The ecological value of the site for bats is considered negligible. The value for birds and lizards is conservatively considered to be moderate-high due to the potential presence of At Risk – Declining birds and lizards. However, lizard values only apply to areas where lizard habitat is present. The remainder of the site presents negligible value habitat for lizards.



Figure 13. Glenlee and Glenroy as viewed from the other side of the Kawarau valley.

Freshwater

One permanent stream, Toms Creek, is present within the blocks. Water was visible in the channel as it flows under Gibbston Highway. It is expected the upper reaches of the stream within the block are ephemeral. Review of aerial images shows the gully containing Toms Creek is vegetated, likely with mixed exotic and native scrub. Three other intermittent streams are present. Aerial imagery does not suggest they contain water on a permanent basis. A site visit will be needed to determine where they become ephemeral.

One constructed pond is present in the site. The aerial image record shows it has been present since at least the 1980s and that its size can fluctuate significantly.

There is one record in the NZFFD for Toms Creek however no fish were caught. Fish may be present, however the steep drop where it discharges to the Kawarau River, coupled with expected barriers to fish passage mean only fish with climbing ability will be present. High numbers of fish are not expected.

Assessment of Effects

Proposal

Oaks Property intends to develop the blocks as rural and residential subdivisions, with a range of section sizes ranging from high density to large >2 ha lots. The development will include more than 1000 residential lots of various sizes as well as a dedicated commercial zones, a solar farm, plant nursery, golf course, school, roads, cycle paths and landscaping and greenspace. A masterplan of the development is included in Attachment C.

The development will avoid the reclamation of natural wetlands and waterways. All natural freshwater features are planned to be contained within open/green space and are expected to be enhanced through the development of the site. Constructed ponds may be reclaimed or reworked as part of the greenspace development.

Effects on terrestrial values

Terrestrial ecological values on site are limited to areas of lizard habitat around the blocks, and areas of exotic vegetation. The majority of the vegetation is exotic scrub which provides only limited habitat for native fauna. At least some of the small amount of mature exotic trees present across the blocks are expected to be removed, however as they only provide habitat for common native and exotic birds, impacts are expected to be limited. The removal of vegetation to accommodate the proposed development is considered appropriate for the project and is not expected to result in a significant loss of ecological function or terrestrial habitat. Significant revegetation will occur and planting associated with private lots, greenspace and streetscaping is expected to provide similar or higher quality vegetation than is currently present. More than 280 ha of open space will be incorporated into the development, across the separate sites. The bulk of this will be revegetated with appropriate native species. The revegetation is focused around gullies, escarpments, and waterways, where scrub is already present. It is expected exotic species within the scrub will be controlled, and these areas will be underplanted with native species. An increase in the diversity of the plant community is expected to occur.

Lizards and lizard habitat may be impacted through development, however extensive planting will improve lizard habitat values through provision of refuges, increased food resources and a significant increase in arboreal habitat for gecko species. Areas of high value lizard habitat have been largely

avoided, by excluding these from development areas. The majority of identified high value lizard habitat will be contained within open space. The only exception to this is the habitat present in the Waitiri block where some will be located within future lots. However, these lots are all larger than on hectare, and it is expected physical development in these areas can be largely avoided. A significant improvement of lizard habitat values will come as a result of the extensive pest control that will be required to occur in conjunction with native revegetation. Control of predators such as rats and mustelids will greatly decrease predation pressure on native lizards and result in an increase in the lizard population, if present, within the site. Direct impacts on lizards can be adequately mitigated through management plans including measures such as rescue and relocation from impacted areas. Any relocation of lizards as a result of the project will require approval under the Wildlife Act (1953).

Low quality bird habitat will be impacted temporarily, during construction. However once established, the extensive planting will provide higher quality habitat than what is currently present. Displacement of NZ falcon and pipit is not expected. These species are expected to be mobile and resilient to the scale of development proposed, particularly given the availability of similar habitat in the surrounding landscape. While there may be some reduction in nesting habitat for ground nesting species such as pipit, falcon and harrier, there will be significant similar unimpacted habitat in the immediate vicinity of all blocks. Additionally, falcon are known to nest in proximity to human development. Given the low average density nature of the proposed subdivisions all blocks except Riverside, some nesting is expected to continue to occur.

The proposal offers the opportunity for extensive planting within the planned open/green space, including within the margins of freshwater environments such as the wetlands. Extensive ecological restoration planting is planned for the Eastburn, Glenlee/Glenroy and Waitiri blocks, with smaller areas on the Riverside and Drystone blocks. Weed control will be undertaken, including within the area to be planted, in order to remove exotic weeds such as hawthorn, gorse and broom. Ongoing weed and pest control will occur across all areas to prevent weeds becoming established within the areas where active planting is not proposed.

Native vegetation is significantly limited in the Gibbston area. The establishment of a natural seed source of more than 280 hectares in size will have significant local and regional benefits. There are other revegetation projects occurring in the wider Queenstown area (e.g. Project Tohu on the lower slopes of Coronet Peak). When all potential revegetation projects are considered together, they account for significant seed source for natural vegetation and a flyway for native birds. The more than 280 ha of native plantings will represent a significant increase in ecological values and biodiversity, including for vegetation, birds and lizards, and it will also increase ecological values of streams and wetlands when it occurs on their banks.

Any potential direct effects on indigenous fauna can be appropriately managed through fauna management plans.

Effects on freshwater values

Streams are present on the Eastburn, Glenlee, Glenroy, Riverside and Drystone blocks. Natural wetlands are only present on the Eastburn block, though areas of potential wetland were identified on the Waitiri block. The status of these potential wetlands will be confirmed prior to lodging future consent applications.

The proposal has initially been designed to avoid reclamation of any wetlands, intermittent streams or the water races. Constructed ponds will either be incorporated into the planned open/green space, or be reclaimed. A small number of stream crossings will be required to facilitate access to parts of the blocks, including at Riverside and Glenlee/Glenroy. An existing crossing on the Drystone block is likely to require upgrades. Stream crossings have been minimised to reduce direct impacts on streams.

Proposed planting, including around the wetlands, as well as construction of stormwater treatment infrastructure has the potential to significantly increase aquatic ecological values. The proposal is expected to result in an improvement in water quality through increasing the filtration function of the riparian vegetation, providing higher levels of shade, increased bank stability, and organic matter inputs to aquatic habitat. The riparian planting will also increase terrestrial fauna habitat and provide buffering and connectivity to the wider area. The existing streams and wetland habitats are generally in poor to average condition. Restoration activities within the site will represent a measurable increase in freshwater value.

Earthworks, diversions and discharges within 100 m of the wetlands can be managed to ensure the hydrological function and water level range of the wetlands is not significantly impacted.

It is unlikely fish will be present in the streams due to existing barriers to fish passage and the steep drops all streams experience when discharging to the Kawarau River. The water race on Eastburn will be retained. Any works associated with upgrades or works (e.g. culverts) can be adequately managed through best practice design and methodologies.

Indirect effects, such as sedimentation or pollution of freshwater environments from works, are proposed to be adequately mitigated through appropriate controls and following best practice guidelines, ensuring adverse effects on ecological values are no more than minor.

Accordingly, effects on freshwater ecological values are expected to be low, and capable of being managed through standard design and mitigation measures.

If adverse effects on streams or wetlands are unavoidable, the effects management hierarchy will be applied to ensure the proposed activities meet the relevant standards within the National Environmental Standards for Freshwater 2020 (NES-F).

Relevant legislation

The proposal is considered to align with the policies and objectives of key pieces of environmental legislation, such as the NPS-FM and the National Policy Statement for Indigenous Biodiversity (NPS-IB).

The main objective of the NPS-FM is to ensure the health and well-being of water bodies and freshwater ecosystems are prioritised. To prioritise the health and well-being of freshwater ecosystems on site, Oaks Property has engaged Viridis to conservatively identify and qualitatively assess these features, so that site development can accommodate these features. Potential adverse effects for future development such as sedimentation, loss of wetlands, loss of wetland vegetation and discharges of water to water will be able to be appropriately avoided, minimised, remedied, offset or compensated for under the effects management hierarchy. Furthermore, the proposal will result in the establishment of riparian and wetland planting, which will improve the overall quality of freshwater environments on site.

The main objective of the NPS-IB is to ensure, at a minimum, that no overall loss in New Zealand's biodiversity occurs by protecting and restoring indigenous biodiversity values. The proposal is

considered to be consistent with the objectives of the NPS-IB, as the biodiversity values of the site have been identified, qualitatively assessed, and no loss in terrestrial biodiversity is anticipated as a result of development of a subdivision. Rather, the proposal provides the opportunity to improve the site's terrestrial biodiversity through planting and enhancement activities, which will improve the overall diversity, native species habitat and quality of the site's terrestrial features.

Conclusion

The potential impacts of the proposed subdivisions in Gibbston Valley, Queenstown, have been assessed in relation to the ecological values currently associated with the sites. These include areas of low value exotic vegetation, exotic dominant scrub, natural inland wetlands (on the Eastburn block only), various permanent and intermittent waterways, constructed online and offline ponds, and two water races. Ecological values of the features were generally considered to be low, with the exception of the sites for birds owing to At Risk – Declining pipits and falcon being present in the area, and specific areas that provide habitat for At Risk – Declining lizards. While suitable habitat is present in discrete areas, the overall availability and connectivity of habitat is limited. Due to the potential At Risk – Declining lizards and birds to be present, the values for birds, and the value of specific areas of lizard habitat is considered to be conservatively moderate-high. Areas of high value lizard habitat will be avoided as far as practicable noting these areas are difficult to develop due to being located on terrace edges or large rocky areas. The proposal has been initially designed to avoid reclamation of any permanent or intermittent streams, or any wetlands. Exotic vegetation will be retained as far as practicable. Significant planting is proposed within the open/green space. Given the scale of the proposed ecological restoration and revegetation, the resulting increase in indigenous habitat and connectivity within the wider landscape is considered to be regionally significant.

Attachments

Attachment A – Maps of key ecological features

Attachment B – 1958 Historic aerials

Attachment C – Masterplan

References

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Cosgrove G.; Dodd M.; James T., 2022. National list of exotic pasture species. Prepared for the Ministry for the Environment by AgResearch Ltd. Wellington: Ministry for the Environment.

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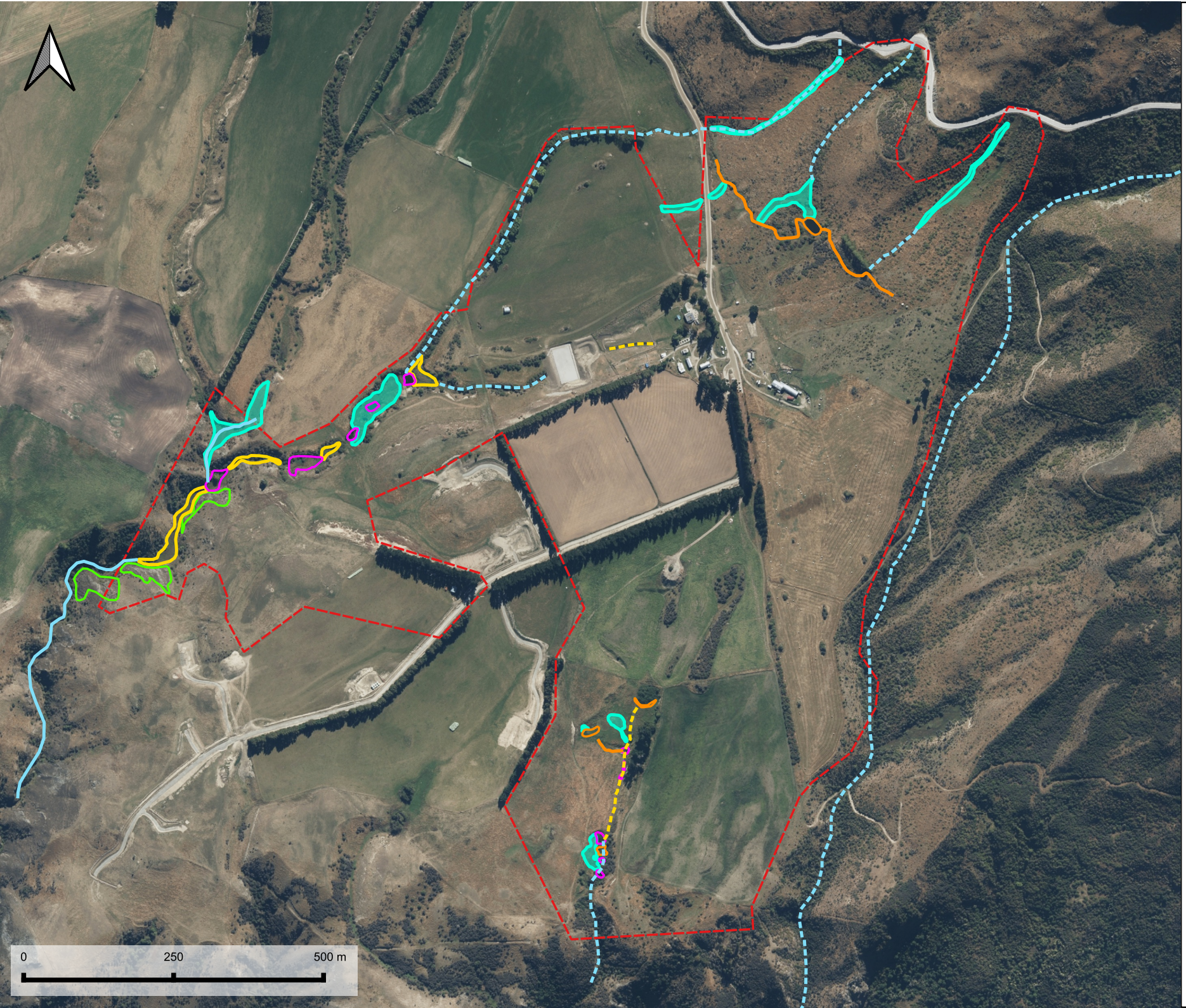
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Ecological features - Eastburn

- Indicative developable area
- Potential high quality lizard habitat

Waterways
- Permanent
- Intermittent
- Artificial
- Ephemeral

Wetlands
- Natural
- Induced

Pond
- Constructed
- Online

SOURCES
Otago 0.2m rural aerials

DISCLAIMER: This map/plan is not an engineering draft. This map/plan is illustrative only and all information should be independently verified on site before taking any action.

SCALE **1:8,000** @ A4

PROJECT NO.	10382
MAP NO.	Map1-B
DRAWN BY:	AJC
DATE:	07/04/2026



VIRIDIS
Environmental Consultants

Ecological features - Riverside and Drystone

Indicative developable area
Potential high quality lizard habitat

Waterway
Ephemeral
Permanent

Pond
Constructed
Online

SOURCES
Otago 0.2m rural aerials

DISCLAIMER: This map/plan is not an engineering draft. This map/plan is illustrative only and all information should be independently verified on site before taking any action.

SCALE **1:10,000** @ A4

PROJECT NO.	10382
MAP NO.	Map4-B
DRAWN BY:	AJC
DATE:	07/04/2026



Ecological features - Waitiri

PROJECT NO.	10382
MAP NO.	Map5-A
DRAWN BY:	AJC
DATE:	07/04/2026
SCALE	**1:10,000** @ A4

Indicative developable area

Potential high quality lizard habitat

Waterway

Artificial

Wetlands

Potential wetland

Pond

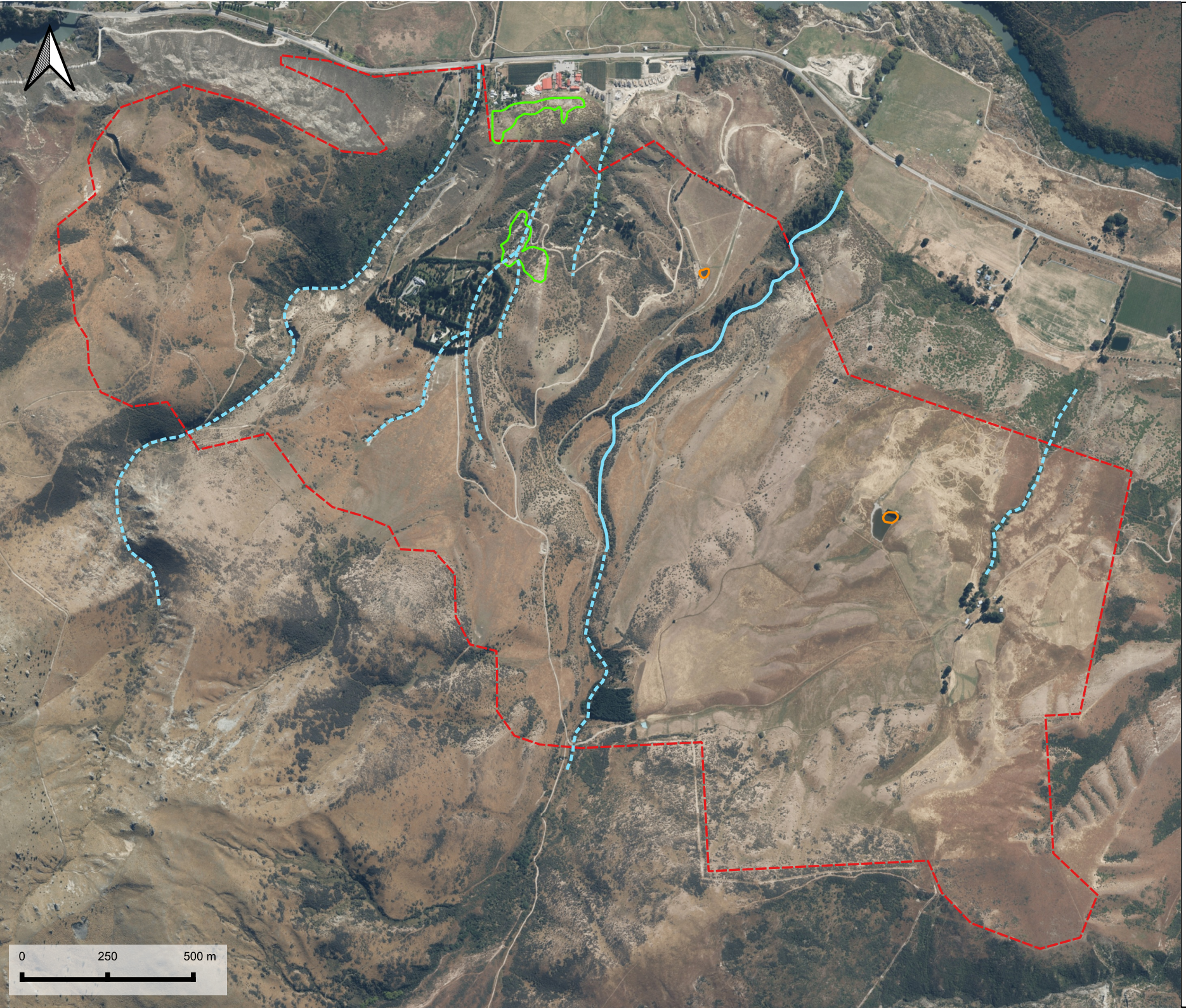
Constructed

VIRIDIS Environmental Consultants

SOURCES

Otago 0.2m rural aerials

DISCLAIMER: This map/plan is not an engineering draft. This map/plan is illustrative only and all information should be independently verified on site before taking any action.



VIRIDIS
Environmental Consultants

High level ecological features - Glenroy/Glenlee

Indicative developable area

Pond

Constructed

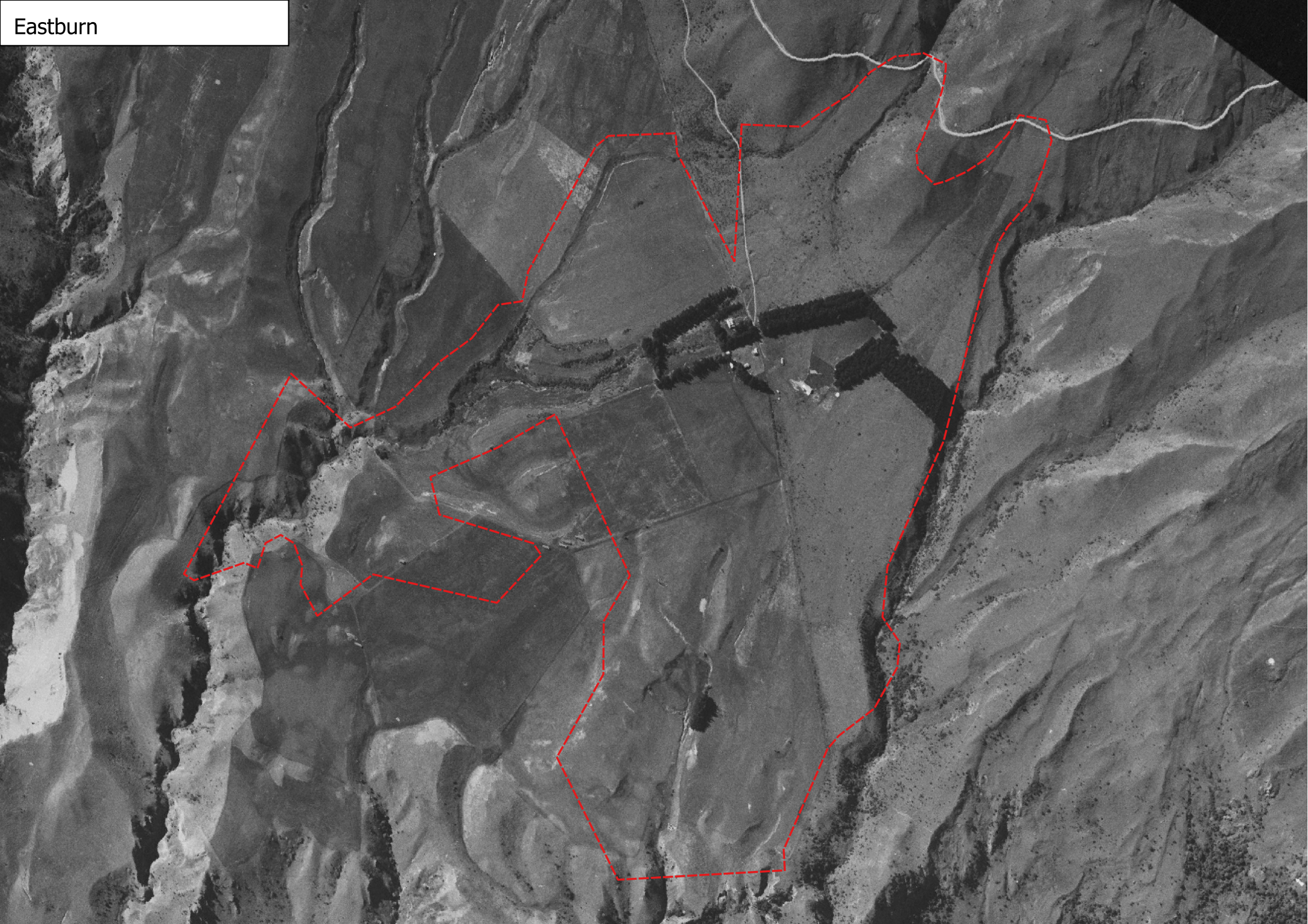
Potential high quality lizard habitat

SOURCES
Otago 0.2m rural aerials

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SCALE **1:14,000** @ A4

PROJECT NO.	10382
MAP NO.	Map3-B
DRAWN BY:	AJC
DATE:	07/04/2026


Eastburn

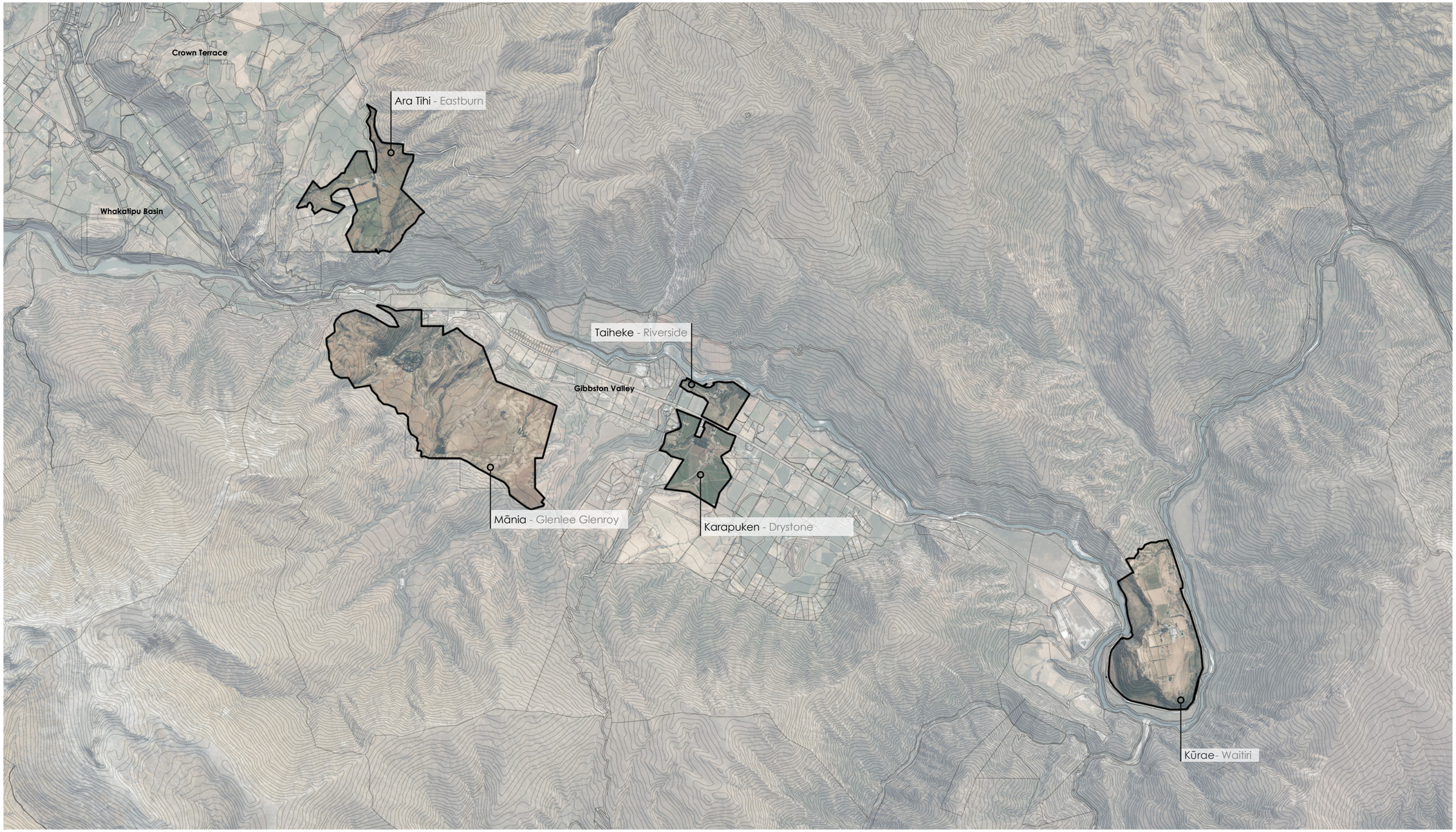

Riverside and Drystone


Waitiri


Glenlee and Glenroy

a. Landscape Context

scale: 1:50,000 @a3



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CONTEXT - Wider Landscape

FOR CONSULTATION

Waitiri Development

Issue # : IS18 Project #: PA25851 Sheet #: 4

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a. Kūrae - Waitiri

scale: 1:7,500 @a3

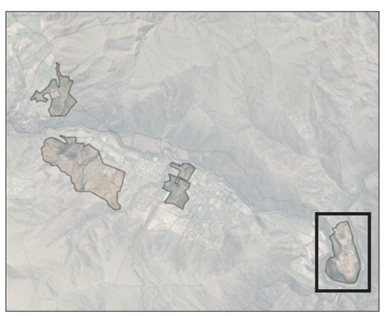
LEGEND

	Open Space	98.76 ha
	Rural Visitor	2.89 ha
	Community Hub	0.57 ha
	Nursery	4.47 ha
	Solar Farm	3.73 ha

Lots		Qty.
	Medium Density Lots ~500m²	119
	Low Density Lots ~700m²	137
	Large Lot Residential[1] ~1,000m² < 4,000m²	97
	Rural Living ~4,000m² < 2 ha	33
	Total:	386

[1] *Large Lot Residential with no label ~1,000m²*

**Contour intervals site @ 2m*
Contour intervals surrounding @ 20m





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Client / project Name : Oaks Living Ltd.
Drawing Date : 2 April 2026
Drawing Name : Kūrae Subdivision
Scale @a3 : 1:7,500 @a3

Issue : Concept Subdivision
Issue # : IS18

FOR CONSULTATION

Waitiri Development

Project #: PA25851 Sheet #: 8

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a. Taiheke - Riverside

scale: 1:3,000 @a3

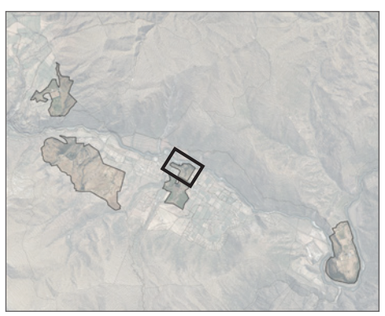
LEGEND

	Open Space	5.73 ha
	Cultural Development Node	6.15 ha
	Pedestrian underpass	

Lots		Qty.
	High Density Lots ~250m²	74
	Medium Density Lots ~500m²	28
	Low Density Lots ~700m²	59
	Large Lot Residential ~1,000m² < 4,000m²	27
	Rural Living ~4,000m² < 2 ha	4
	Total:	192



**Contour intervals site @ 1m*
Contour intervals surrounding @ 20m



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Client / project Name : Oaks Living Ltd.
Drawing Date : 2 April 2026
Drawing Name : Taiheke Subdivision
Scale @a3 : 1:3,000 @a3

Issue : Concept Subdivision
Issue # : IS18

FOR CONSULTATION

Waitiri Development

Project #: PA25851 Sheet #: 12

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a. Karapuke - Drystone

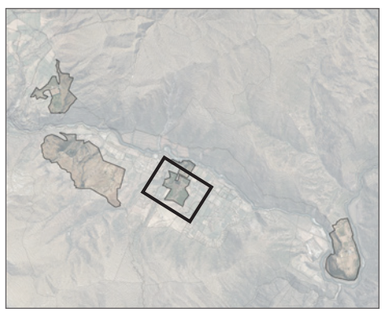
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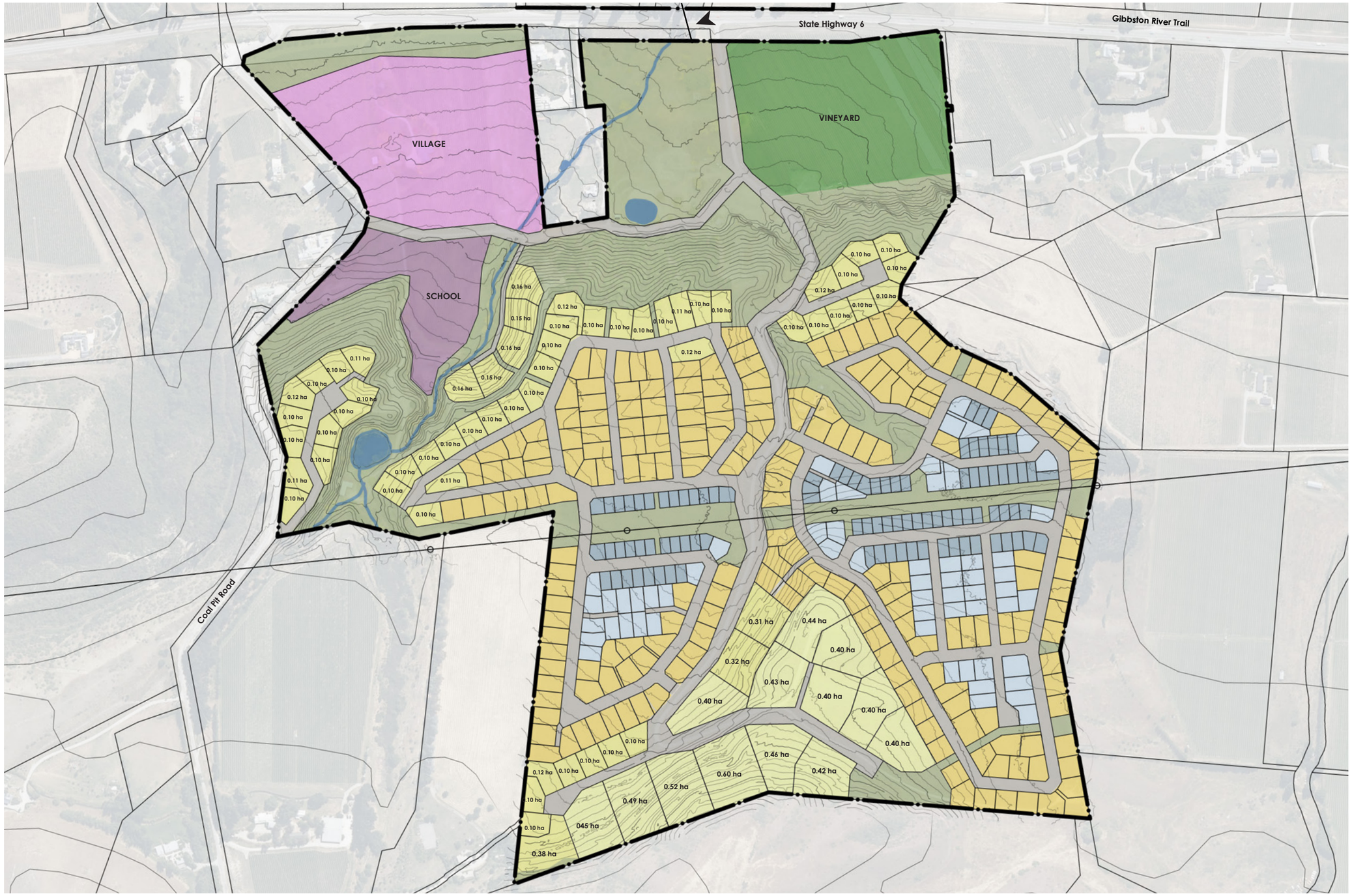
LEGEND

Open Space	22.19 ha
Village Precinct	5.51 ha
School	2.10 ha
Pedestrian underpass	

Lots	Qty.
High Density Lots ~250m²	93
Medium Density Lots ~500m²	62
Low Density Lots ~700m²	197
Large Lot Residential ~1,000m² < 4,000m²	59
Rural Living ~4,000m² < 2 ha	13
Total:	424

**Contour intervals site @ 1m*
Contour intervals surrounding @ 20m





Client / project Name : Oaks Living Ltd.
Drawing Date : 2 April 2026
Drawing Name : Karapuke Subdivision
Scale @a3 : 1:5,000 @a3

Issue : Concept Subdivision
Issue # : IS18

FOR CONSULTATION

Waitiri Development

Project #: PA25851 Sheet #: 16

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a. Mānia - Glenlee Glenroy

scale: 1:12,500 @a3

LEGEND

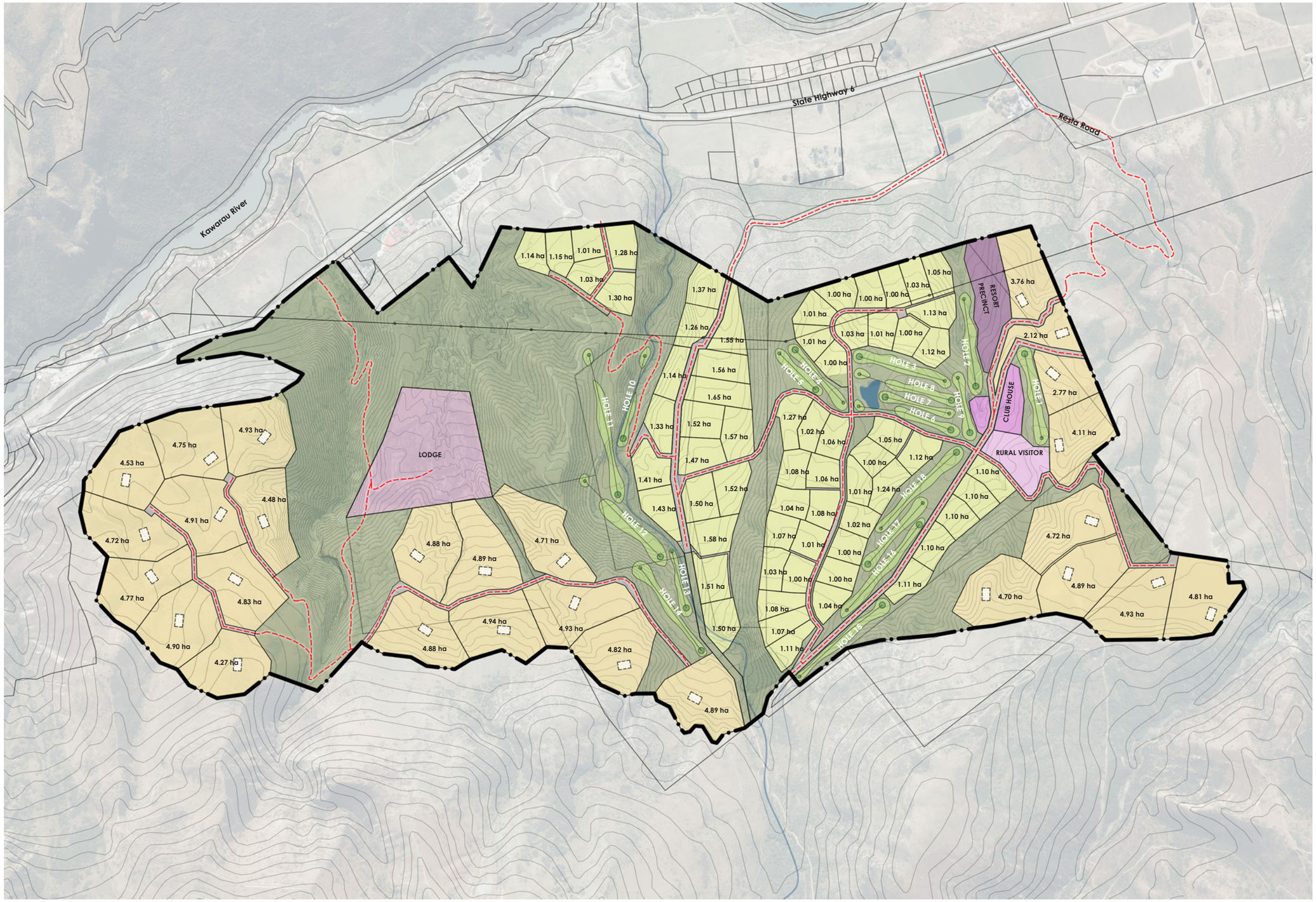
- Building Platform (1,000m²)
- Access

Open Space	157.70 ha
Rural Visitor	2.52 ha
Resort Precinct	3.96 ha
Existing Lodge	12.50 ha
Club House Community Hub	2.06 ha
18 - Hole Golf Course	

Lots	Qty.
Rural Living ~4,000m² < 2 ha	64
Rural > 2 ha	27
Total:	91

**Contour intervals site @ 5m*
Contour intervals surrounding @ 20m





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Client / project Name : Oaks Living Ltd.
Drawing Date : 2 April 2026
Drawing Name : Mānia Subdivision
Scale @a3 : 1:12,500 @a3

Issue : Concept Subdivision
Issue # : IS18

FOR CONSULTATION

Waitiri Development

Project #: PA25851 Sheet #: 22

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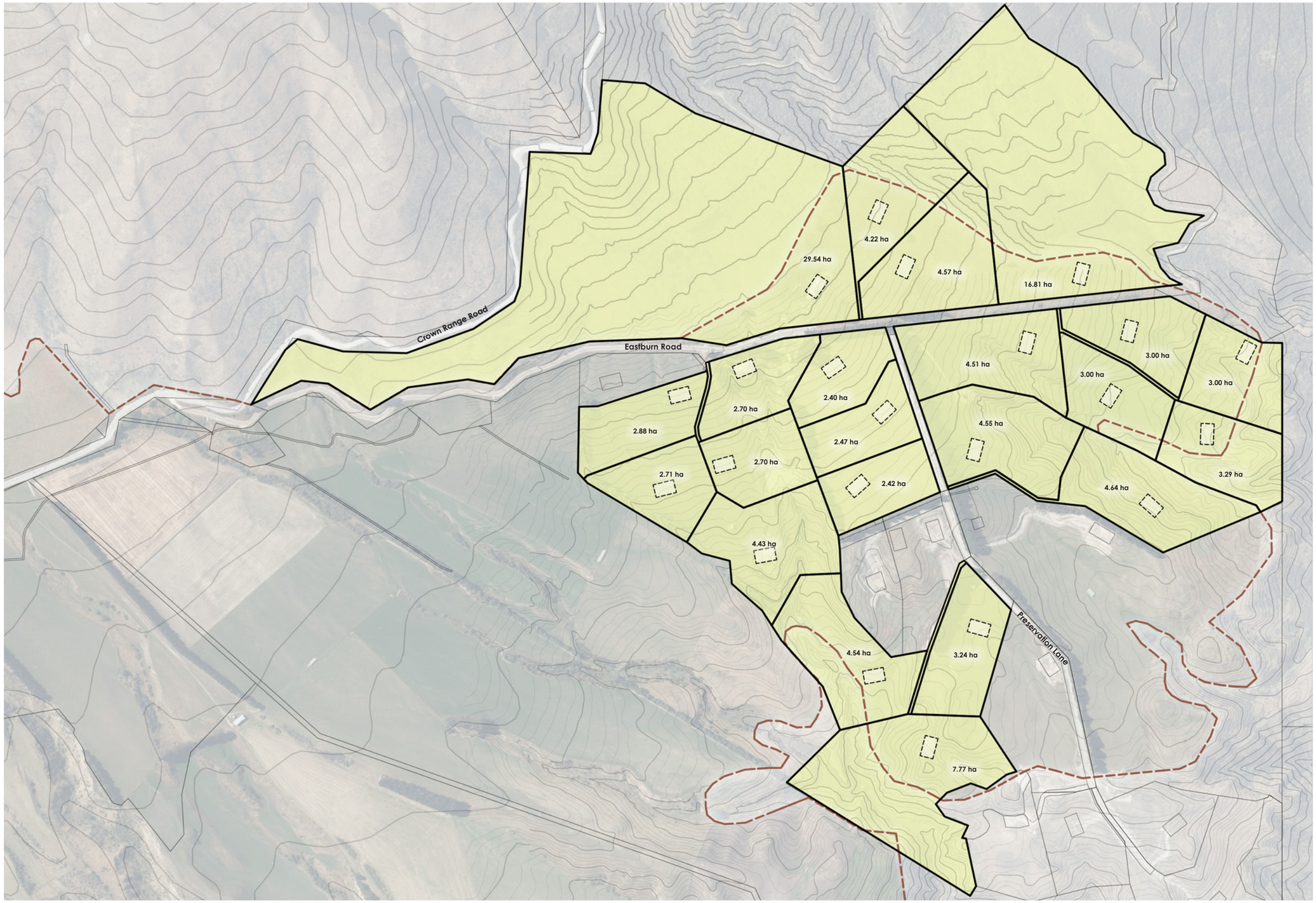
a. Ara Tihi - Eastburn

scale: 1:7,500 @a3

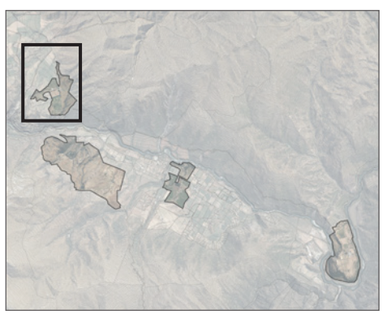
LEGEND

- ONL boundary line
- Building Platform (1,000m²)

Lots	Qty.
Rural > 2 ha	22



**Contour intervals site @ 2m*
Contour intervals surrounding @ 20m



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Client / project Name : Oaks Living Ltd.
Drawing Date : 2 April 2026
Drawing Name : Ara Tihi Subdivision
Scale @a3 : 1:7,500 @a3

Issue : Concept Subdivision
Issue # : IS18

FOR CONSULTATION

Waitiri Development

Project #: PA25851 Sheet #: 26

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