

Before the Commissioners Appointed by the Central Otago District Council

UNDER

the Resource Management Act 1991

IN THE MATTER

**of RC230179 an application for subdivision and
development of 30-lots at Rocky Point on the
Tarras-Cromwell Road (SH8) and Bendigo Loop
Road**

BY

TKO Properties Limited

Applicant

Statement of Landscape Evidence of Di Lucas

11 November 2024

INTRODUCTION

1. My full name is Diane Jean Lucas ONZM. I am a landscape architect of Lucas Associates, established in 1979, and based in Ōtautahi Christchurch. I originate from Bendigo.
2. I hold the qualifications of BSc in Natural Sciences (Otago), a post-graduate Diploma and a Masters in Landscape Architecture (Lincoln). My landscape planning thesis addressed "*Identifying Acceptable Vegetation Change in High Country Landscapes*".
3. I am a registered NZILA Landscape Architect, and a Life member of the NZLIA. I am a former President of the NZILA and am a member of the Resource Management Law Association. Until this year I was a ministerially appointed member of the South Island High Country Advisory Group.
4. Until I resigned, for 27 years I chaired a national advisory body, the Nature Heritage Fund, enabling the voluntary protection of indigenous ecosystems on private land throughout Aotearoa NZ. Resultant permanent protection included a number of dryland and saline sites within the Upper Clutha.
5. Due to the natural diversity of lands through this country, more than 30 years ago I instigated the use of land typing to address at various scales the underlying nature of land. Now available on-line in GIS, we are providing land typing at some scale across the whole country¹. Our project received the 2024 NZILA Award of Excellence for Research and Communication.
6. With increased wildfire risk, to address the paucity of information, some years ago I included estimated species-specific flammability ratings in our native planting guides for various area in the country. In response to requests we are currently preparing guidance on wildfire recovery. At the request of Scion wildfire experts, I continue as a member of the Collaborative Experts Working Group addressing Extreme Wildfire in Aotearoa NZ. I am also an inaugural member of the recently established group addressing landscape-scale wildfire mitigation on the Port Hills, Christchurch, as this has been recognised as a planning gap. The group includes members from FENZ.

¹ www.LandTyping.nz

7. I have undertaken landscape assessments around Aotearoa NZ including within the Otago Region, the Upper Clutha and Central Otago District.
8. I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. This evidence has been prepared in accordance with it and I agree to comply with it. This evidence is within my area of expertise, except where I state that I am relying on another person, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.
9. I am familiar with the Central Otago District, Upper Clutha catchment, Dunstan Range and Bendigo area. I have visited the proposed subdivision site (The Site).
10. I am providing this statement of evidence for Mrs S. Kenderdine, a submitter.

SUMMARY

11. The updated application proposes to subdivide Lot 1 DP 561457 into 30 lots for residences, chalet accommodation or commercial/communal activity, plus 3 lots for roading within the site and a balance lot.
12. The site is within CODP Rural Resource Area (2) and involves a 'kidney-shaped' Development Area surrounded by an ONL (Rocky Point Map 41D). The currently proposed building platforms and curtilage areas are primarily within but also some are outside the Development Area.
13. Based on Baxter Attachments A and E to IA (5/11/24), I understand that on terms of building location, and use:
 - a. proposed within the Development Area are Lots 1 – 19 and 25 with a building platform delineated for each;
 - b. within the surrounding ONL between the Development Area and Bendigo Loop Road below, Lots 24 and 26 – 30 are proposed each with a building platform and curtilage; and,
 - c. Lots 20 – 23 are proposed to straddle the Development Area boundary to the ONL, with Lot 20 predominantly within the ONL, and the northern curtilages to Lots 22 and 23 within the ONL.
 - d. Lots 11 – 18 are proposed as cabins within the Development Area, with Lots 24, 29 and 30 proposed in the ONL for commercial use, and the other 20 lots are understood to be for residential use.

14. Access is proposed to involve a cul-de-sac from Bendigo Loop Road to all lots excepting Lot 27. Extending off this are secondary culs-de-sac to Lots 1 - 7 and Lots 19 – 21. The main route passes briefly through the Development Area then extends back out into the ONL to provide access to Lots 23 – 25.
15. Halfway up the length of the primary cul-de-sac there is a public parking area beside a walking track to and along elevated areas to provide residents and visitors with outlook as well as site history interpretation.
16. I do not agree with Mr Baxter that the proposal would result in only low level adverse effects overall and thus would be of less than minor significance . However I assess the proposal would result in at least moderate adverse landscape effects.
17. Considering the multi-dimensional landscape, and considered through time, due to the actual and potential effects I assess the proposal would involve inappropriate subdivision, use and development in both the Rocky Point ONL and the Development Area (DA).

BACKGROUND

18. I have read the various iterations of the consent application documentation and evidence provided for TKO, including the primary and supplementary landscape evidence of Mr Paddy Baxter with the **Revised Scheme Plan** dated 5 November 2024. I have read the submissions that responded to the first iteration notified in 2023.
19. I utilise and refer to Mr Baxter's images and attachments and produce others in my attachments. Mr Baxter provides a Landscape Component analysis map (Att. C1 (2023), Att D (2024)) but I have not yet seen any assessment of the proposal in relation to these landscape components, no overlay of the Development Area and ONL, and no overlay of the Proposal on this component mapping. However the map is interpreted with locations indicated on my attachment cover and some components are referenced in my analysis.
20. I have read the Operative Central Otago District Plan (CODP) provisions, the RPS provisions, and the s42A documents from CODC including reports from their experts responding to several iterations.

21. As well as assessment of the ONL against relevant CODP Objectives and Policies, as a non-complying activity, assessment as per RMA Part 2 s.6b is required. As recognised by Mr Baxter, professional practice is guided by Te Tangi a te Manu (TTatM. NZILA 2022). I agree with my colleague regarding use of a 7-point effects rating scale from very low to very high.
22. I note the receiving environment includes a Conservation Covenant (s.77 Reserves Act) on a southern strip of The Site with part of the Development Area within this land (attachment sheet 18). I note the covenant objectives include protecting and enhancing natural character, ecological character, landscape values and historic values.

NATURAL LANDSCAPE and NATURAL CHARACTER

23. Natural character is the combination of a place's natural characteristics and qualities. Natural character comprises a place's natural elements, patterns and processes, how they are perceived and experienced in context. The Site and its locale are considered in terms of their natural character. Considering the natural character of The Site and its context, the proposal is assessed with respect to potential effects on specific natural characteristics and qualities.
24. To assess a natural landscape it is important to address the attributes or values of that landscape. This includes the physical attributes (both abiotic and biotic); the perceptual attributes, and, the associative attributes. However I note Mr Baxter has instead focussed on only visual perception.
25. The plan provisions address 'natural character' which includes natural patterns, processes and elements. The natural character resource is not merely about how it might be viewed from public places; the integrity is to be addressed. Nor is natural landscape merely a visual attribute.
26. Recognising that natural character includes both biophysical and experiential dimensions both of which typically have visual dimensions, in addressing potential visual effects on natural character, relevant natural characteristics and qualities have been considered. Potential effects on valued characteristics and qualities that contribute to the locale's natural character have been assessed. The appropriateness of the proposal has been considered with respect to effects on those characteristics and qualities.

27. Regarding the nature of effects and their rating, I do not agree with addressing only visual amenity. As guided by the CODP provisions, visual effects are not limited to visual amenity effects, for example, visual effects on natural character.

PHYSICAL ATTRIBUTES

28. The rugged schist outcropping that comprises Rocky Point is an important natural feature forming the culmination to the eastern enclosure to the upper Clutha valley (refer Baxter images K1 – K4; also my attachment cover image).
29. Addressing the natural complexity of the site and its context I have considered it in terms of its origins, including in displaying remnants of Lindis aged glacial till and outwash deposits. (attachments sheets 3 – 5)
30. In this dryland environment, a major contributor to the natural character is the natural patterning from the underlying geomorphology resulting in the protruding schist bedrock formations, primarily vegetated in kanuka woodland, and the glacial depositional areas that are predominantly low cushionfield cover. Due to the rugged schist-kanuka character contrasting with the diminutive cushionfields on the glacial smears, in physical, perceptual and associative terms this ecosystem mosaic is a major contributor to natural character and to natural landscape values.
31. I do not reiterate the landscape character assessments of Mr Baxter but state where I agree or disagree with some aspects. I largely agree with Mr Baxter's Description of the Wider Landscape (June 2023 para. 9 – 17; July 2024 para. 10 – 18) and Description of Site Character (June 2023 para. 18 – 29 and para.30; July 2024 para. 19 – 31), also in his primary evidence para. 12 – 16.
32. I note Mr Baxter has focussed on a visual perception analysis and has not addressed the physical landscape itself. For example the glacial history of this landscape - the imprint of glaciation creating major features such as Chinaman's Terrace, and more local features such as the 'Plateau' - has been ignored. Burying the schist formation below, various legible remnants of Lindis aged glacial till and outwash deposits present on the proposed development site contribute importantly to natural landscape, natural character and ecological character.

33. The complex interplay of schist bedrock outcropping and glacial till deposition smears remains very distinctive in the Wider and in the Site landscape character. The contrasts in the resultant terrain, soils and microclimates are important such as in the resulting rugged shrubland versus smooth cushionfield and saline ecosystem lands and the contrasting habitats they create.
34. Whilst successional change is evident, the resulting complex natural geomorphological and ecosystem mosaic is very evident across The Site.
35. The visibility of the mosaic of the dark kanuka-schist concentrations around the light-coloured deposition areas clothed in cushionfields, provides important character. Interestingly, because site disturbance (such as through earthworks for roading, vineyards and structures) can result in exposure of pale-coloured subsoil, in consideration of the wider landscape, the light-coloured natural mosaic units might be mis-read by some, until they gain familiarity with the natural aspects.
36. Native dryland cushionfield species provide a distinctive skin across open lands. The very low stature cover, with deep rooting systems beneath, cue to the distinctive semi-arid Central Otago Ecological Region and Dunstan Ecological District (sheet 6). Such diminutive drylands are a natural characteristic and natural landscape value.
37. The nuances of the landscape at this complex terrace-range interface involve rugged schist gully slopes and smooth till-smeared surfaces. The visual legibility of the contrast between light-coloured gentle open land and rugged dark rock and kanuka clad land is an important attribute.
38. Whilst disrupted by tracking, the site landscape has high visual coherence from the strong natural landform and land cover patterning.

ROLLING FLAT

39. Considering the Rolling Flat landscape component (Baxter Att D. also my attachment cover) I address it in terms of land types, and at a finer scale, landform components.
40. The land immediately south of Bendigo Loop Road involves the southern extremity of the valley floor lands, LT 20 Dry Inland Basin and Major Valley Land Type (attachment sheets 7- 8, 10) with the Low terrace lands (LC 20d) adjoining, and the Fans above (LC 20e). The lapping fans abut the steep rocky lower mountain slopes (LC 21c, sheet 9)

of the Dunstan – Cairnmuir Land Type (LT 21). Refer attachment sheet 11 showing these landform components (LC) annotated, and the land type models sheets 8 and 9.

41. The location provides an important evident physical junction of the valley lands and the mountain lands. It is significant that the ONL includes this junction, the edge to the valley lands forming the base and the foreground to the major Rocky Point landform complex above. (attachments cover)
42. Whilst some earthworks are evident, the valley floor lands meeting the mountain slope are uncluttered by structures. The landforms are legible and provide important natural attributes at this Rocky Point valley enclosure location. As a natural depositional skirt to the dramatic outcropping above, the valley floor lands to the road contribute important physical attributes to the ONL. (Baxter Att K9, K10)
43. Whilst east of the site there is viticulture on the deposition lands of Chinaman's Terrace above (Baxter Att K11) and on the valley floor edge below (attachment 15), as assessed by Mr Baxter I agree The Site itself exhibits high natural character, and also high natural landscape value.
44. The lands connecting the valley floor from the road to the mountain slope are assessed as contributing importantly to the ONL particularly regarding physical and perceptual attributes.

THE PLATEAU

45. To the west the site extends down to the highway corridor beside the lake. The pale-coloured cover to the smooth flat depositional lands of the 'Plateau' are evident as a distinct landform feature between the kanuka-clad gullies either side. (attachment cover) The character cues to distinctive pale ground-hugging cushionfields that are characteristic of these drylands, and to very gradual shrubland succession.
46. The simplicity and legibility of the Plateau landform contributes importantly to the ONL. Whilst largely appearing highly natural, the associative values from the dense human-based activity in this locale more than 150 years ago is cued to only minimally with a few archaeological features recognised (sheets 18, 20). The physical, perceptual and associative attributes of this apparently simple flat landform contribute importantly to the ONL including for the stark contrast with the densely wooded gullies either side. The smooth deposition lands slope down from the plateau to the lakeshore below (attachment cover)

47. Excepting for local power lines and the High Voltage Line carrying power from the Clyde Dam northwards (attachment sheets 12, 14 and 22), the Plateau lands are uncluttered by structures and are high in naturalness. The Plateau landscape component is bound to both north and south by steep Kānuka-wooded gullies. (Baxter Att K8)

ELEVATED ROCKY KNOLLS

48. Distinct arched schist formations extend down from the high points to outcrops now forming the shore to Lake Dunstan / Te Wairere (image sheet 2, sheets 15, 22, 23).
49. To the north the rocky knoll is the end of the Tarras valley, the pinchpoint or gatepost standing above the entry of the Clutha River / Mata-au to Lake Dunstan / Te Wairere. (Baxter Att J)
50. The combination of naturalness provided by the delta and lake waters, with the schist formations outcropping close by, enclose this junction. (attachment cover)
51. Together the delta, lake and Rocky Point mosaic lands provide very important natural landscape value for their physical, perceptual and associative attributes.

ASSOCIATIVE ATTRIBUTES

52. Rocky Point was named by settlers in 1862, prior to 'Bendigo'. It formed a major activity hub for the upper Clutha valley on both sides of the Clutha / Mata au, and was culturally diverse.
53. Down on the flat below, Rocky Point was a social and accommodation base for the valley including having a hotel, the post office, and, the punt which crossed the river. The elevated lands above were an important location not only for small-scale alluvial mining, but more importantly the hub for Chinese residents who grew food for the community – with a flower garden in front, a vegetable garden behind, chooks, and a tethered goat typical of the many sites.²
54. Tangata whenua record connections with the locale, with the trails from over the Lindis and over Thomsons Gorge heading through this location *en route* to the west coast. A waka paddle was located up in a cave on Rocky Point in 1870, by which time a large Rocky Point Punt was in use.

² Dr Lloyd Carpenter *pers.com*.

55. The highly natural character of the slopes with kanuka shrubland demonstrate strong recovery since being cropped for firewood and timber by the mining communities here more than a century ago. Highly rabbit resistant once established, the kanuka has re-sprouted and re-clothed the lands, particularly the more rugged terrain with rock niche habitats. The kanuka-dominated shrubland is a recognised major signature of this landscape. Other less prominent or dominant native plant species, and the wildlife associated with the natural woodlands and outcrops, provide particular interest.
56. The locale of The Site was intensively lived in and worked 150 years ago. Whilst today the natural character is again dominant, heritage landscape layers remain.
57. With predominant use just light merino grazing for a century, a long-established local power line along the lower western slopes, a transmission line above to the east, and the site entirely building-free, except for the tracking, overall a high degree of naturalness is experienced.
58. I recognise the importance of associations of takata whenua with the Mata-au and the landscape connections including from Koina to the Mata-au. Such cultural attributes contribute to ongoing associative landscape values.

PERCEPTUAL ATTRIBUTES

59. With extensive views available around the valley, the framing of the valley by both glacial terracing and schist formations that extend up to range summit silhouettes, and the high natural and rural character, daytime views as well as views at dusk, dawn and night-time are important for enjoying their naturalness.
60. Mr Baxter has addressed visual attributes as enjoyed only during daytime, including their naturalness.

LIGHTING

61. From dusk, the visual effects of domestic and other lighting experienced from off-site, would considerably affect open space, landscape, natural character, amenity and historic values. The valued darkness of this landscape is vulnerable to dispersed, clustered and cumulative visual effects from lighting installations. It is not only outdoor lighting that is a potential adverse visual and landscape effect. Indoor lights in buildings on elevated sites are typically evident for some kilometres in this valley landscape. With

considerable allowance for areas of roofed indoor-outdoor spaces, in practical terms, it is unclear how light-spill from these would be effectively addressed in the suggested design controls.

62. The visual effects on the valley from lights in elevated houses can be very considerable. Houses that visually nestle into the surrounds during the daytime can become visual beacons at night merely from indoor lights being evident. The disruption to landscape experience can be considerable.
63. Given the potential elevation of buildings on the platforms, and with provision for substantial glazing for northern and western facades, even if only 50% glazed, where visible from off-site I assess that domestic lighting visible would have adverse visual effects on the natural character and amenity of this landscape. As lighting can be visible in the landscape for some kilometres, and thus indoor lighting is identified as a potential significant adverse landscape and visual effect. Evident fixed lighting can adversely affect the physical, perceptual and associative dimensions of the natural landscape.
64. It is unclear what design controls are to be applied in the extensive roofed outdoor spaces that are proposed can extend out from buildings.

MITIGATION VEGETATION

65. In my opinion the proposal is dependent on mitigation measures involving vegetation screening, both existing and planted, that I assess as inadequate or inappropriate in this location.
66. Whilst the sites have a scatter of kanuka, their replacement is proposed for visual mitigation following clearance for building and curtilage, however to be practical the likelihood of achieving or sustaining such visual mitigation is questioned. Removal for wildfire resilience and space is likely over time. Mitigation will likely reduce. Hence there are potential cumulative natural landscape and natural character effects through time.
67. The semi-arid climate, the need to clear areas for fire resilience, and the fire vulnerability from increasing domestication and flammable cover have not been adequately factored in for management through coming decades. As observed elsewhere, the potential for failure is significant.
68. Due to the potential for non-achievement or loss of visual mitigation with the screen vegetation, I do not assess these as contributing to the proposal and consider potential

adverse visual effects need to be assessed without any dependence on mitigation by vegetation.

69. However Mr Baxter states (July 2024, para 37, page 10) that *“Kanuka will be retained as the predominant tree species in order to maintain the existing landscape character and to avoid any reduction in the existing vegetative cover that forms a significant part of the landscape character of the site.”* Whilst a commendable aspiration, it is likely impractical and unsustainable.
70. I note Mr Baxter (July 2024, para.40) states that with all proposed building platforms additional kanuka planting is proposed to match or exceed the existing kanuka on each lot. With additional Kanuka planting between and around building platforms for the purpose of mitigation, privacy and overall amenity. However, he also states, *“from a fire management perspective there are limited areas where replanting can practicably occur.”* I agree. In fire management terms, considering the overall landscape, merely retaining the kanuka cover in and around such a settlement would be of ever-increasing concern.
71. Retaining the natural landscape values whilst introducing dispersed domestication are likely increasingly incompatible due to wildfire risk to the wider landscape.³ The wildfire protection methods proposed are very limited to protecting people and buildings, and not the context landscape. The methods also assume an uphill fire.

CUMULATIVE EFFECTS

72. Overall a considerable quantity of domestication is proposed, with both a scatter and groups of buildings. As various buildings would be visible from off-site, the naturalness of the rural character would be significantly visually affected through the domestication and commercial development proposed.
73. With their visibility in the DA, and the reduced of naturalness in the ONL, evident individual or groups of buildings are both assessed as having a potential significant adverse effect in this location. The high landscape value of this locale, the high natural character, open space and amenity value, the public access and interest, are such that evident cumulative domestication is assessed as a significant issue.

³ Langer 2018; Pearce, 2028

74. I recognise the vulnerability of the locale to the increasing likelihood of wildfire and the need to not only provide protection methods for people and residences as currently proposed, but to recognise the potential risks to the site and wider locale that are exacerbated by the proposal.
75. Instead of the dispersal of lots as currently proposed, addressing instead a compact cluster within the Development Area has the potential to be designed and managed to avoid adverse effects, as intended by the zoning.

ASSESSMENT

76. I assess the actual and potential landscape effects of the proposed subdivision regime as a non-complying activity in terms of particular CODP Objectives and Policies.
77. In terms of the proposed development outside of the Development Area, I assess the activity would have significant adverse effects on the ONL, and would be inappropriate given the landscape values and the landscape protection intended for this area.

ROLLING FLAT

78. In the Rolling Flat landscape component, the lots proposed beside Bendigo Loop Road (Lots 27 – 30) and their associated activity would be clearly evident and would individually and collectively significantly adversely affect the ONL even with the areas of screen plantings as now proposed (Baxter Att 1A).
79. I disagree with Mr Baxter that the evident development sought on these four lots would have a landscape connection to the Rocky Point Stables site. Nor would they appear as part of the Bendigo Station farm buildings. The station's farm node is down across a hard rock ridge (LC 20h, sheet 10) which provides enclosure and containment to the existing group of buildings, and separation from this Rolling Flat across Bendigo Loop Road. Located within a separate landscape component, proposed lots 27 – 30 would involve a very different character.
80. The presence of the built coverage with extensive curtilages, the built presence and associated works and activity would very significantly reduce the physical, associative and perceptual values of this important valley-to-mountain transition locale.

81. The lots would detract and distract from the display legibility and prominence of the skirt to the mountain slope (sheet 11), the valley floor landforms lapping and smearing the bedrock country. (Baxter Att K9 and K10).
82. At this arrival location to the valley closure by the Rocky Point formations, proposed Lots 27 – 30 would have adverse effects on the ONL through the disruption of the arrival, the considerable reduction in the physical, perceptual and associative landscape values of this landscape component and its importance to provide the valley-mountain legible landscape experience. The buildings would disrupt the base of the ONL that importantly provides a mountain to valley connection.

LOWER MOUNTAIN SLOPES

83. Above the valley floor lands the steep, dissected rocky lower mountain slopes form a very distinctive landform feature (LC 21c. sheet 11). The landform forms the wall enclosing the valley and culminating in the Rocky Point formation (Baxter Att K1 to K5).
84. From within the valley to the north, such as travelling down SH8, the lower mountain slope formation contributes important natural landscape value both physically and perceptually. With the summit named Chinaman's Terrace and viticulture extensive, they contribute to associative attributes. However the site involves high natural landscape values up the slope to the complex mosaic lands above.
85. Lot 26 is proposed up on this landform. It is potentially visible from the highway. Whilst design controls would reduce its daytime visibility, located in the ONL it is expected would have dusk, dawn and nighttime indoor lights visible for kilometres.
86. I assess Lot 26 would be inappropriate located in the ONL and cued to by lighting.
87. Lot 24 proposed on the knoll above this site would also have potential adverse effects as viewed from out on the valley floor, including as night falls. As the northward outlook for a commercial hospitality venue, it would likely have significant lighting evident.
88. Any evidence of the Lot 24 and Lot 26 developments from the valley such as when travelling south on SH8 is assessed would have adverse effects on the naturalness of the ONL that are at least moderate. The proposed kanuka screening should not be assumed as achievable or sustainable.

89. Within the Development Area, Lot 25 is proposed in the Upper Valley above. As identified by Mr Baxter, buildings on this lot are potentially visible from along SH8 (Baxter K1 to K4). Whilst the scale and materials would be expected to enable significant daytime visibility from several kilometres away, the kanuka screening cannot be assumed, so that at the closer views some daytime visibility would be expected. In addition, as night falls lights would become very evident. The proposed Lot 25 is assessed as inappropriate in breaching the 'not visible from the highway' threshold of the DA.

THE PLATEAU

90. Considering the proposed development up on the upper front slope to the plateau landform, Lots 1 – 7 and Lot 10 are of particular concern. Proposed as two rows of platforms and curtilages covering the width of this glacially smeared open sloping landform, plus Lot 10 upslope behind, any visibility of the domestication from Lake Dunstan would be inappropriate.

91. As identified by Mr Baxter, they are all potentially visible from the lake (Baxter K8). With this upper area of the lake a popular recreational area and boating route, and with boat launching, toilets and freedom camping on the shore (attachment cover), it is well used.

92. Nine lots proposed up the slope of the Plateau overlooking this lake area would result in their visibility. The proposed design controls are assessed would not prevent visibility of the domestication from the lake, day and night. As this visibility would breach the Development Area threshold, and adversely effect the natural landscape and natural character, I assess the group would have high adverse landscape effects.

93. Considered from SH6 across the valley, these nine lots on the front upper of The Plateau would have potential visibility (Baxter K6 and K7). In addition, Lot 19 in the upper valley within the Development Area is also potentially visible. Even from a two-and-a half kilometre distance, or more the group and scatter of lighting would be evident.

94. With the complex schist formations from mountain ridge down to the culmination at Rocky Point, the natural landforms and natural character are highly appreciated. The dominantly dark character from the kanuka and schist forms the framework to the pale glacial smeared landforms with diminutive vegetative cover. The Plateau is one such

component. It is a distinct open area strongly contrasting with the dark kanuka and schist around.

95. The open Plateau and the rocks and shrubs dotted up the slope are legible from a considerable distance.
96. Evident domestication of the Plateau through evident development such as Lots 1 – 10, and cumulatively 19, 20, 24 and 25 particularly as night falls, is assessed would have high adverse landscape effects. I note that Lots 20 and 24 are proposed in the ONL outside of the Development Area, the other lots are proposed within the Development Area.
97. In terms of the proposal within the Development Area, the kidney, I assess that a number of the lots as currently proposed would have significant adverse landscape effects due to their visibility from either the state highway or Wairere/ Lake Dunstan.

RATINGS

98. The development of the residences, curtilages and access as proposed on Lots and the activity generated by that use, day and night, is assessed would have at least moderate landscape and visual effects. The potential for achievement of appropriate mitigation through vegetation retention or plantings, as proposed for some lots, is assessed as too uncertain to influence this rating.
99. In introducing evident modern domestication to this historic and highly natural locale, I assess the landscape and visual effects of the proposed development as moderate to high, that is, having more than minor adverse effects.
100. The proposal would disrupt and detract from the natural ecosystem mosaic that is a core attribute of the Rocky Point landscape. The natural character, natural landscape and rural character of Rocky Point would be affected.
101. As per CODP Objective 4.33, assess the proposal would not maintain the rural amenity values created by the open space, landscape and natural character. The lack of any domestication on the Rocky Point promontory formations contributes important rural amenity values. The proposal would be disruptive of the open natural character of this natural cornerstone formation at the forefront of the schist range. (attachment cover, sheet s 2, 22).

102. Considering Policy 4.4.2, whilst attempts at avoidance and mitigation are proposed, these are assessed as inadequate and uncertain to adequately manage the adverse effects on open space, landscape, natural character and amenity values. The open natural character of the prominent place and prominent natural feature of Rocky Point connects to the dramatic hills and mountain range above. The proposal would result in land use activities that would not avoid remedy or mitigate adverse effects on the open space, landscape, natural character and amenity values. The effects would be significantly adverse.

103. The development as currently proposed is assessed as not compatible with the surrounding environment.

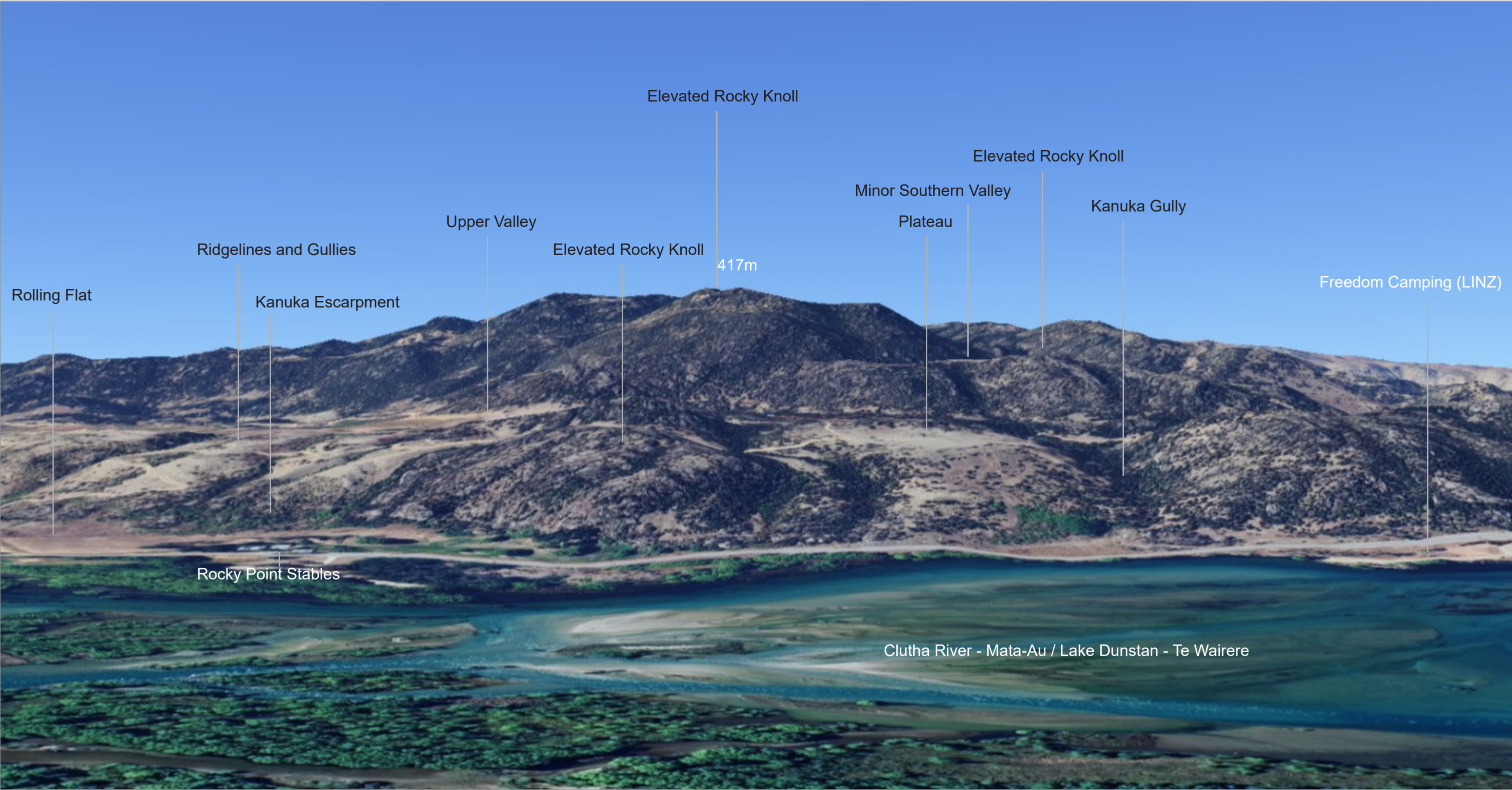
104. The proposed location and design of a number of the buildings at this pivotal location are such that the natural character of the hills and range would be compromised.

105. I assess that overall the adverse effects would be moderate to high, that is, more than minor. The application would also be contrary to various objectives and policies.

REFERENCES

Langer, E. R., McLennan, J., & Johnston, D. M. (2018). Editorial: **Special Issue on the Port Hills wildfires**. *Australasian Journal of Disaster and Trauma Studies*, 22, 29-33. Retrieved from http://trauma.massey.ac.nz/issues/2018-2/AJDTs_22_2_Editorial.pdf

Pearce, H.G. (2018) **The 2017 Port Hills wildfires – a window into New Zealand’s fire future?** *Australasian Journal of Disaster and Trauma Studies*, 22, 35 - 50



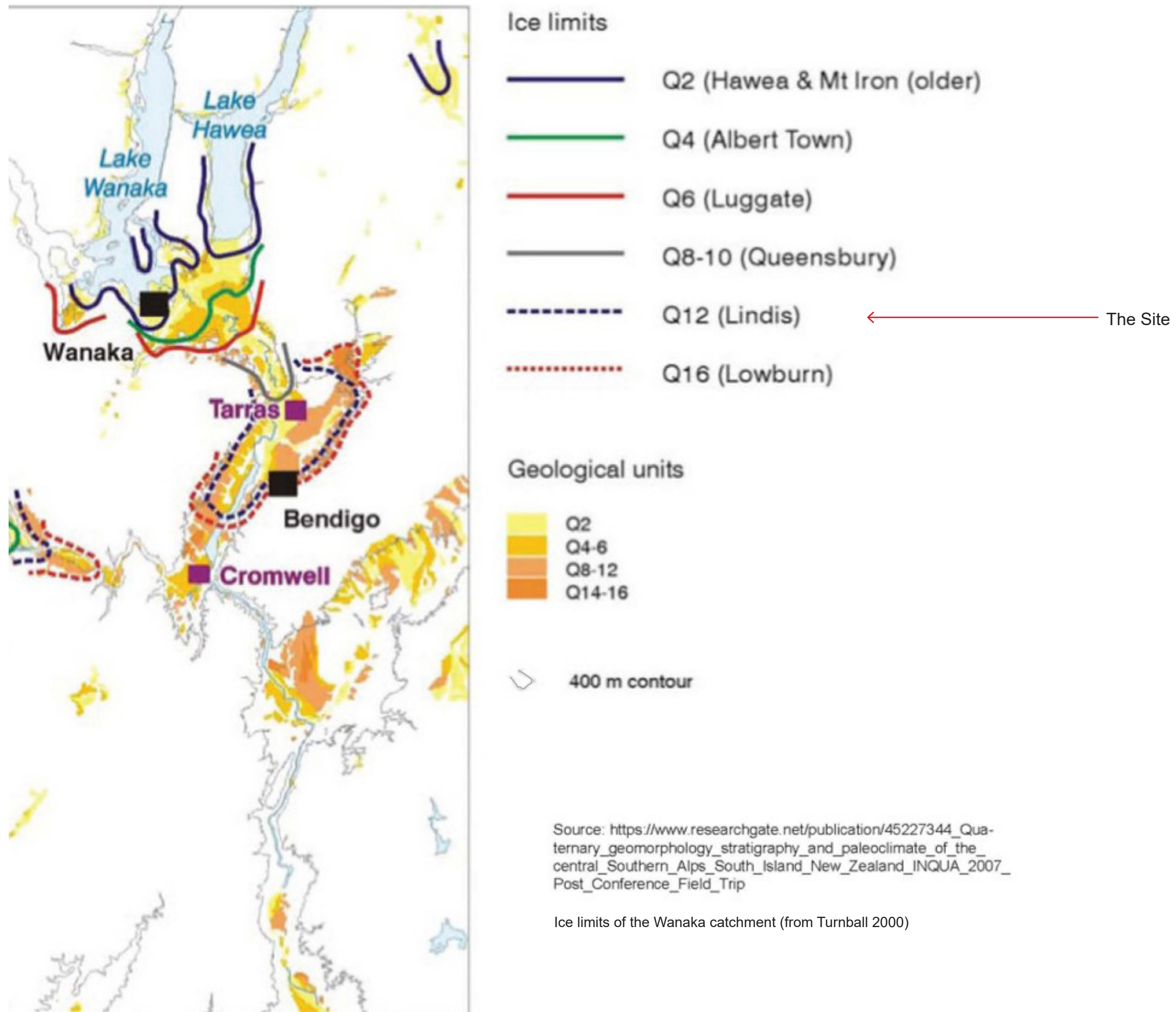
Google Earth

Landscape Components within The Site (Baxter)

Contents

sheet 1	Cover oblique image of site from Google Earth with Landscape Components (Baxter)
sheet 2	Contents and The Site locator map
sheet 3	Glacial Extent (Ice limits)
sheet 4	Lindis Glacial Deposits
sheet 5	Geology
sheet 6	Ecological Regions and District map
sheet 7	Land Types 1:250k map
sheet 8	Land Type 20 model & chart
sheet 9	Land Type 21 model & chart
sheet 10	Valley Floor Landform Components LT11, LT13, LT20
sheet 11	Baxter Attachment K9 with mountain & valley Land Typing overlain
sheet 12	Context
sheet 13	Context with SNA, ONL, Historic Reserve & Power Lines
sheet 14	Site locator map with ONL on topo
sheet 15	Site locator map with ONL on aerial
sheet 16	Proposed scheme plan with ONL on topo map
sheet 17	Proposed scheme plan with ONL on aerial
sheet 18	ONL, Covenant, Freedom Camping, The Site boundary & revised scheme plan
sheet 19	Public access map
sheet 20	Archaeological Sites
sheet 21	Bendigo Station Tenure Review Map
sheet 23	Photo of site
sheet 24	Photo of site





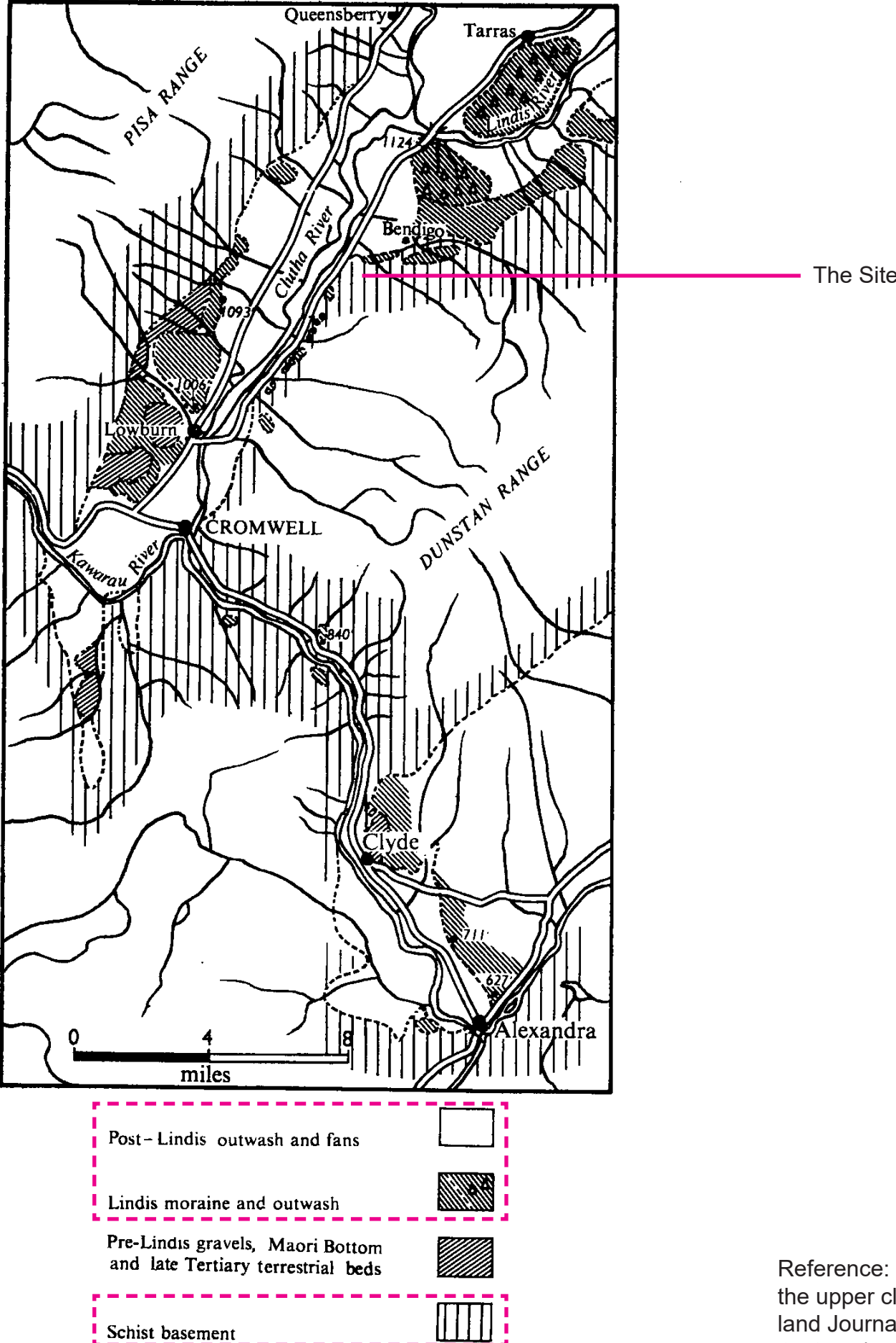


FIG. 12—Map of the Clutha Valley from the Lindis River Junction to Alexandra showing distribution of Lindis moraine and outwash. Heights are from N.Z.M.S. 10 and one mile S.D. Lithos.

Reference: I. C. McKellar (1960) Pleistocene deposits of the upper clutha valley, otago, new zealand, New Zealand Journal of Geology and Geophysics, 3:3, 432-460, DOI: 10.1080/00288306.1960.10422087 <https://doi.org/10.1080/00288306.1960.10422087>

Geology

Plot symbol: Qt

Name Middle: Quaternary till deposits
Description: Pebbly to bouldery gravel, sand, silt and mud.

Geologic history: Middle Quaternary
Simple name: Zealandia Megasequence Terrestrial and Shallow Marine Sedimentary Rocks (Neogene)

Plot symbol: YTrs

Name: Rakaia Terrane Permian-Triassic TZIV schist
Description: Pelitic and psammitic schist (TZIV) with areas of greenschist or amphibolite and minor metachert, metagabbro and nephrite.

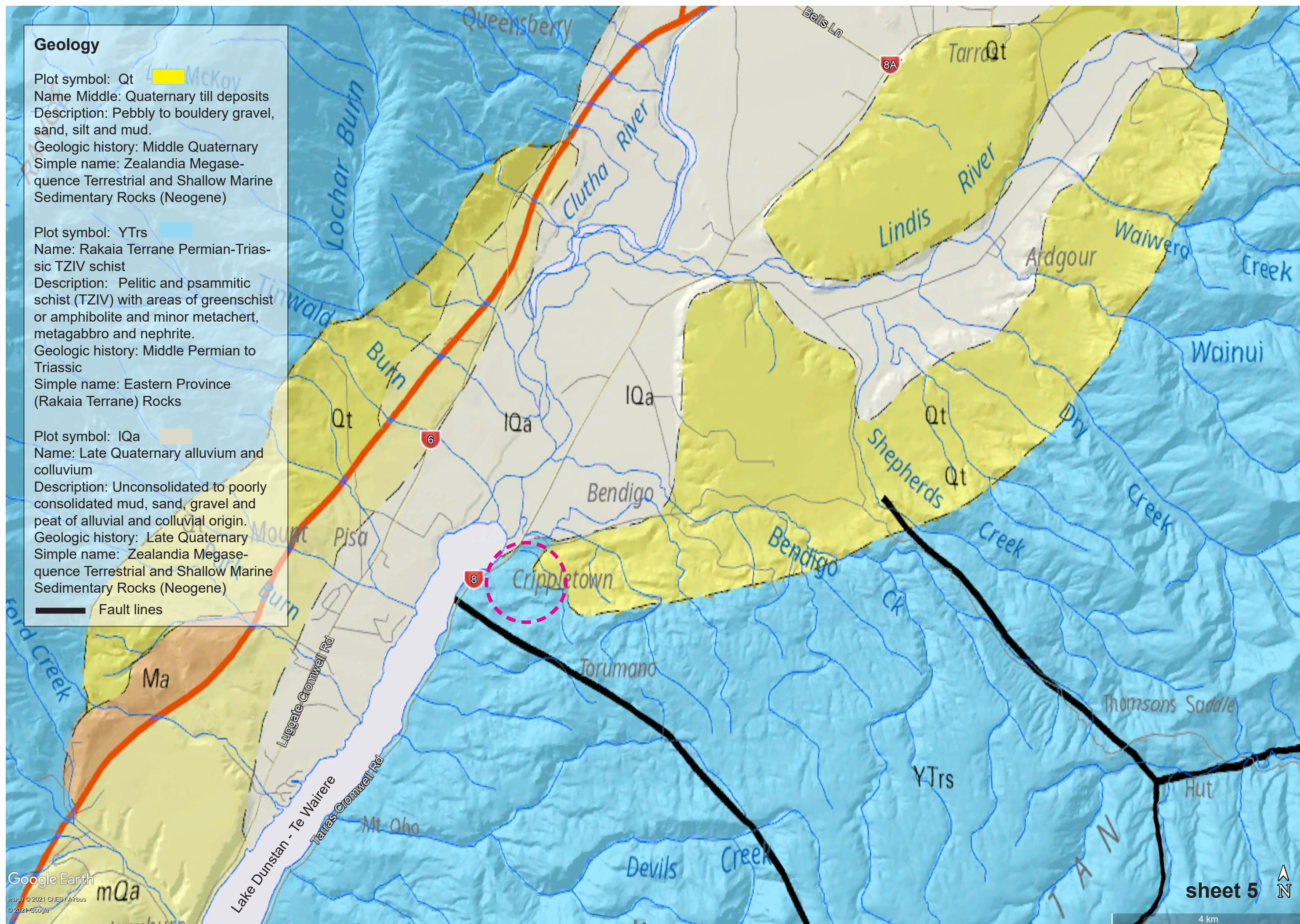
Geologic history: Middle Permian to Triassic
Simple name: Eastern Province (Rakaia Terrane) Rocks

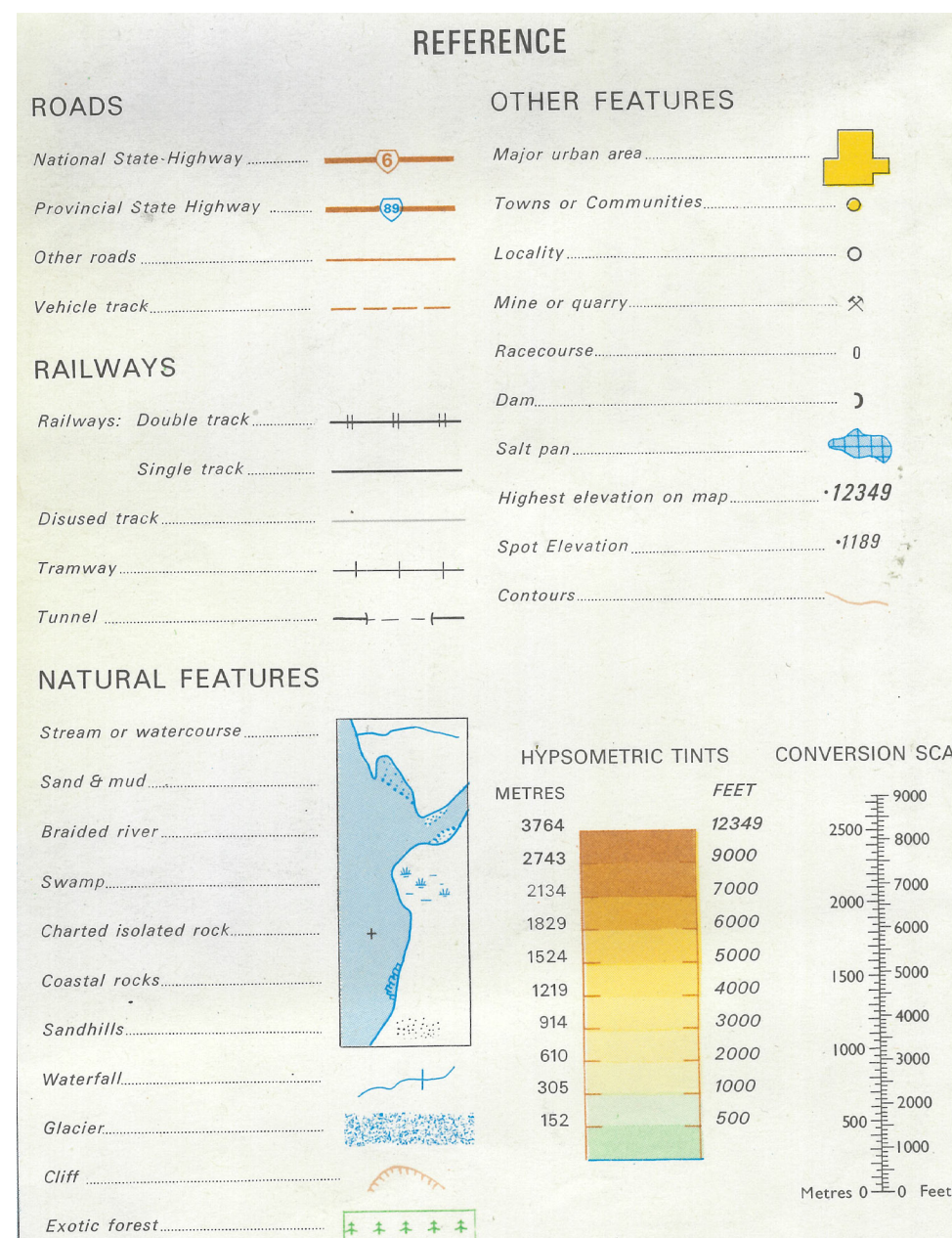
Plot symbol: IQa

Name: Late Quaternary alluvium and colluvium
Description: Unconsolidated to poorly consolidated mud, sand, gravel and peat of alluvial and colluvial origin.

Geologic history: Late Quaternary
Simple name: Zealandia Megasequence Terrestrial and Shallow Marine Sedimentary Rocks (Neogene)

— Fault lines





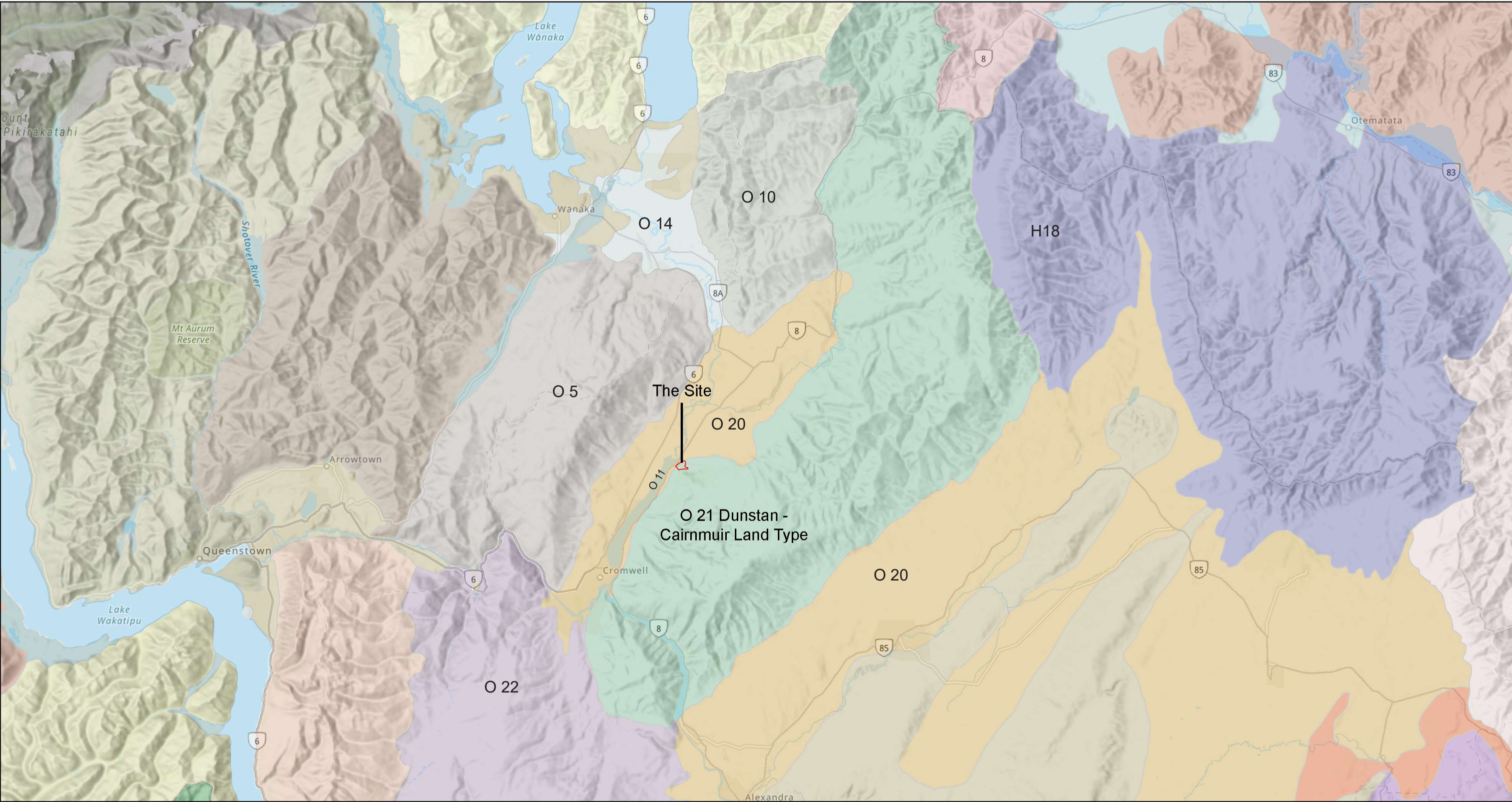
● The Site

The Dunstan Ecological District is characterised by the tilted, block-faulted schist Dunstan Mountains and their surrounding lowlands, glacial outwash gravels and moraines. The climate is dry and subcontinental, with snow lying for weeks on the mountains over winter. On rolling, hilly and steep slopes the soil is shallow to moderately deep with variable loess cover. The soil is shallow to deep on terraces and fans in the valleys. In the east are rare small remnants of Hall's totara, with extensive areas of kanuka shrubland to the southwest. (Information from Ecological Regions and Districts of New Zealand, W. Mary McEwen [ed], 1987)

Source: <https://www.doc.govt.nz/Documents/science-and-technical/Ecoregions4.pdf>



A snapshot from Landtyping.nz



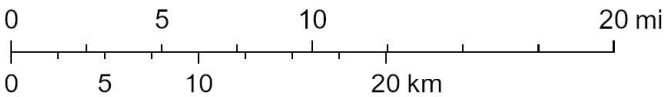
11/8/2024, 3:23:27 PM

Land Type (1:250,000) Canterbury, Otago

- H4 Basin Floor Outwash Plains
- H15 Southern Subhumid to Humid Mountain Range
- H17 Semi Arid to Humid Mountain Range
- H18 Semi Arid to Humid Fault Block Mountain Range
- L15 Southern Soft Rock Hills & Downs + L14 Southern Loess Mantled Soft Rock Hills & Downs + L16 Southern Structural Soft Rock Hills
- L22 Southern Hard Rock Hills and Mountain
- L25 Exhumed eastern peneplain
- L27 Tertiary structural volcanic rock
- O 1 Cecil

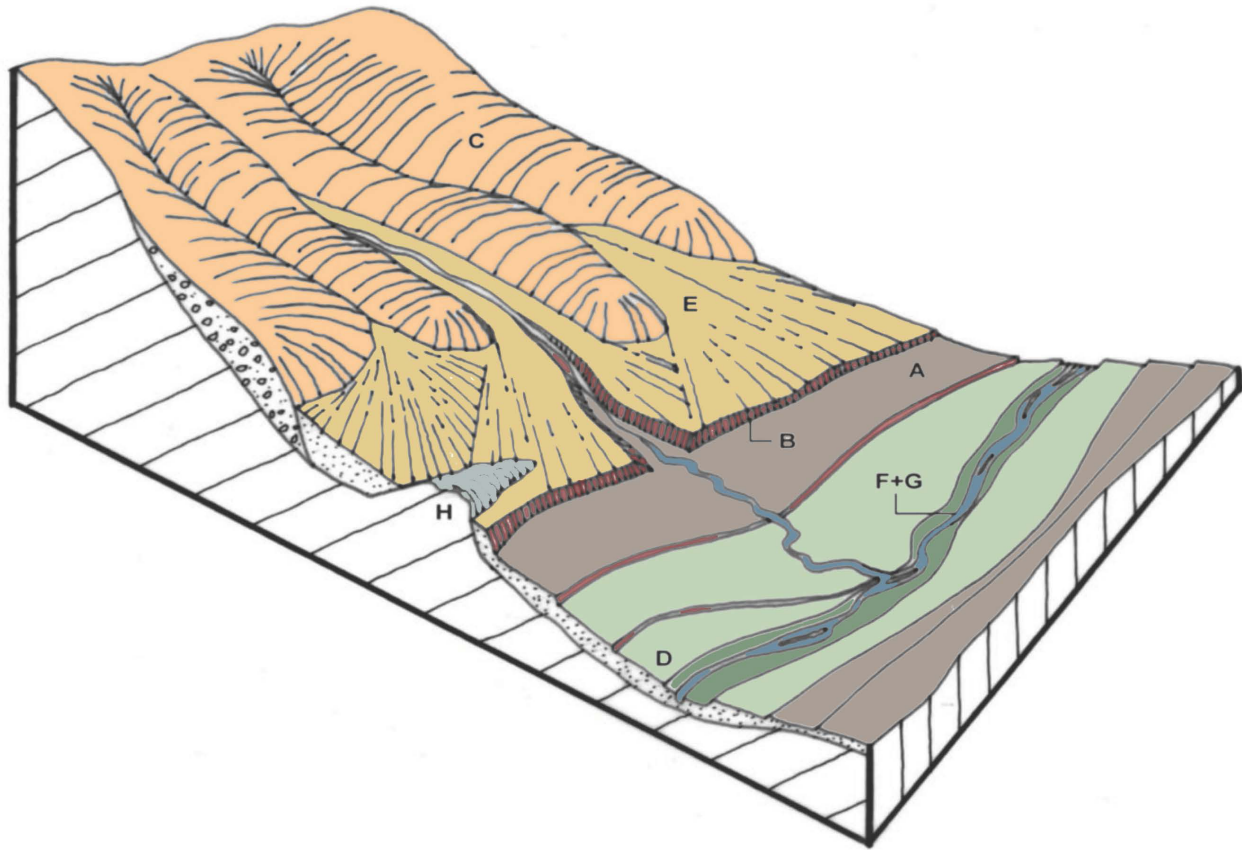
- | | |
|--|---|
| O 2 Nicholas | O 13 Moraine & Fluvial Outwash |
| O 4 Main Divide & associated Mountain ranges | O 14 Outwash Plains |
| O 5 Pisa | O 15 Isolated Mountain |
| O 6 Remarkables | O 16 Major Lake |
| O 7 Harris - Cardrona | O 20 Dry Inland Basins and Major Valley |
| O 8 Richardson | O 21 Dunstan-Cairnmuir Mountain |
| O 9 Wanaka - Hawea Mountains | O 22 Old Man - Old Woman |
| O 10 Grandview | O 23 Knobbs |
| O 11 Major river, valley fill | SR7 Eyre Mountains |
| O 12 Glacial & Fluvial Valley Floor | |

1:564,343



Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth,
© OpenStreetMap contributors., Eagle Technology, Land
Information New Zealand

Land Types mapped at 1:250,000 **sheet 7**

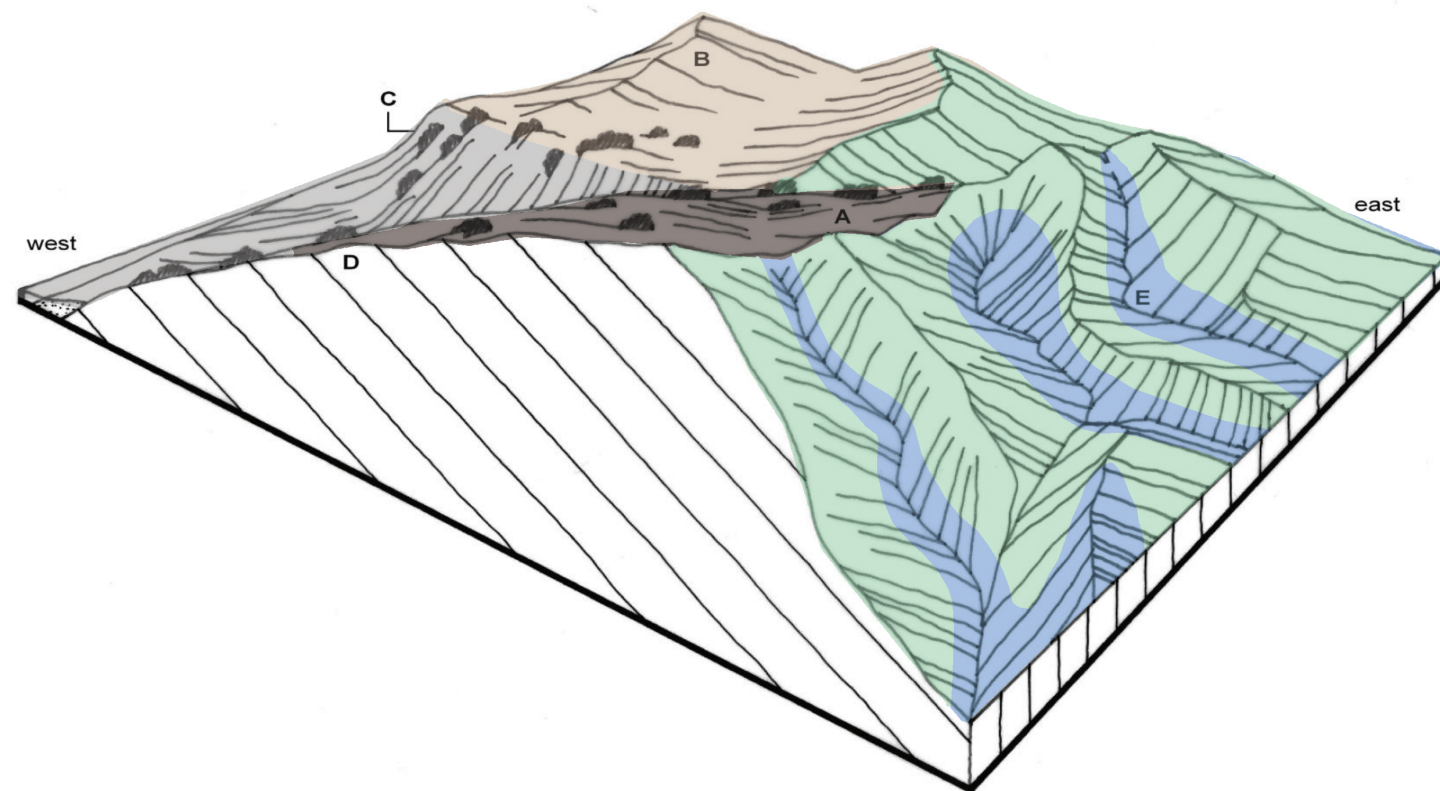


20. DRY INLAND BASIN AND MAJOR VALLEY LAND TYPE

The land type comprises the lower Maniototo and Manuherika basins, and the Clutha Valley between Queensberry and the head of Lake Dunstan. Landforms include extensive flat to gently undulating, to rolling fluvial and fluvioglacial outwash terraces, and fans; and rolling to strongly rolling, often dissected, marginal piedmont fans composed of schist, greywacke and mixed greywacke and schist alluvium, with a variable loess mantle; braided and meandering floodplains, and associated backswamps and low terraces; and tor-covered isolated low schist hills often with remnant Tertiary rock cover. The basin floor alluvium is frequently a thin veneer overlying Tertiary-aged sands and clays, leaching soluble salts. Climate is predominantly semi-arid with dry summers and cold winters. Elevation ranges from 140 to 600 m, with the majority below 400 m, and rainfalls between 300 and 800 mm p.a. Predominantly improved and semi-improved pasture, feed and cereal crops, with some orchards and vineyards. Areas of matagouri, sweet brier and kānuka are associated with undeveloped areas. Attention to conservation needs of dryland habitat and ecosystems is critical.

Landform component	Geological formation	Elevation (m)	Remnant native vegetation	Present land use	Agronomic potential	Potential land use	Potential impacts
A Fluvioglacial outwash and alluvial terraces	Late Pleistocene outwash and alluvial gravels, some loess	140–600	Short tussock with matagouri, kānuka/kōwhai /coprosma scrubland	Semi-intensive and intensive grazing, feed and cereal cropping, mining	Medium	Intensive grazing, feed and cereal cropping, orchards & vineyards, lifestyle settlement	Increase in exotic pasture, and trees, fencing, irrigation, dairying, lifestyle settlement, mining
B Terrace scarps	Late Pleistocene outwash and alluvial gravels	140–600	Short tussock with matagouri, kānuka/kōwhai /coprosma scrubland	Extensive grazing, mining	Low	Semi-intensive grazing, exotic forestry	Increase in exotic pasture, and trees, fencing, mining
C Piedmont fans	Dissected early to late Pleistocene fan deposits	200–600	Short tussock and matagouri, kānuka scrub, some red tussock	Intensive and extensive grazing, feed cropping, shelter trees	Medium	Intensive and extensive grazing, feed cropping, lifestyle settlement, shelter trees	Increase in exotic pasture, cropping, shelter trees, cultivation, fencing, irrigation, lifestyle settlement
D Low terraces	Holocene fluvial deposits	140–380	Short tussock with matagouri, kānuka/kōwhai /coprosma scrubland	Intensive and extensive grazing, feed cropping, shelter trees, mining	Medium	Intensive and extensive grazing, feed cropping, lifestyle settlement, shelter trees	Increase in exotic pasture, cropping, shelter trees, cultivation, fencing, irrigation, lifestyle settlement, mining
E Fans	Late Pleistocene and Holocene fan deposits	140–380	Short tussock with matagouri, kānuka/kōwhai /coprosma scrubland	Intensive and extensive grazing, feed cropping, shelter trees, mining	Medium	Intensive and extensive grazing, feed cropping, lifestyle settlement, shelter trees	Increase in exotic pasture, cropping, shelter trees, cultivation, fencing, irrigation, lifestyle settlement, mining
F Braided floodplains (minor)	Holocene fluvial deposits	140–380	Raoulia cushionfields, gravel fields with moss and tussock	Extensive opportunist grazing	Low	Extensive opportunist grazing, recreation	Largely a 'natural' environment, exotic river control trees and 'weed' establishment
G Meander floodplains and backswamps	Recent alluvium and swamp deposits	140–380	Wetlands, sedge, reed, and rushlands, red tussock, raupō	Extensive grazing	High	Intensive grazing, feed cropping	Increase in exotic pasture, drainage, cultivation, fencing, decrease in wetland vegetation
H Low hard rock ridges	High-grade schist (t.z. III & IV) of the Haast Schist Group	200–600	Sshort tussock, matagouri, kānuka scrub and fern	Extensive grazing	Medium to low	Semi-intensive grazing,	Increase in exotic pasture, fencing, tracking, decreased tussock and scrub
I Remnant Tertiary, inliers & outliers	Cretaceous–Tertiary sandstone, mudstone, conglomerate and lignite	200–600	Short tussock, matagouri, kānuka scrub and fern	Extensive grazing	Medium to low	Semi-intensive grazing,	Increase in exotic pasture, fencing, tracking, decreased tussock and scrub, lifestyle settlement

The Site



Source: Land Types of the Clutha Corridor
Ian H. Lynn, Landcare Research Contract Report
LC0506/131 Dated June 2006

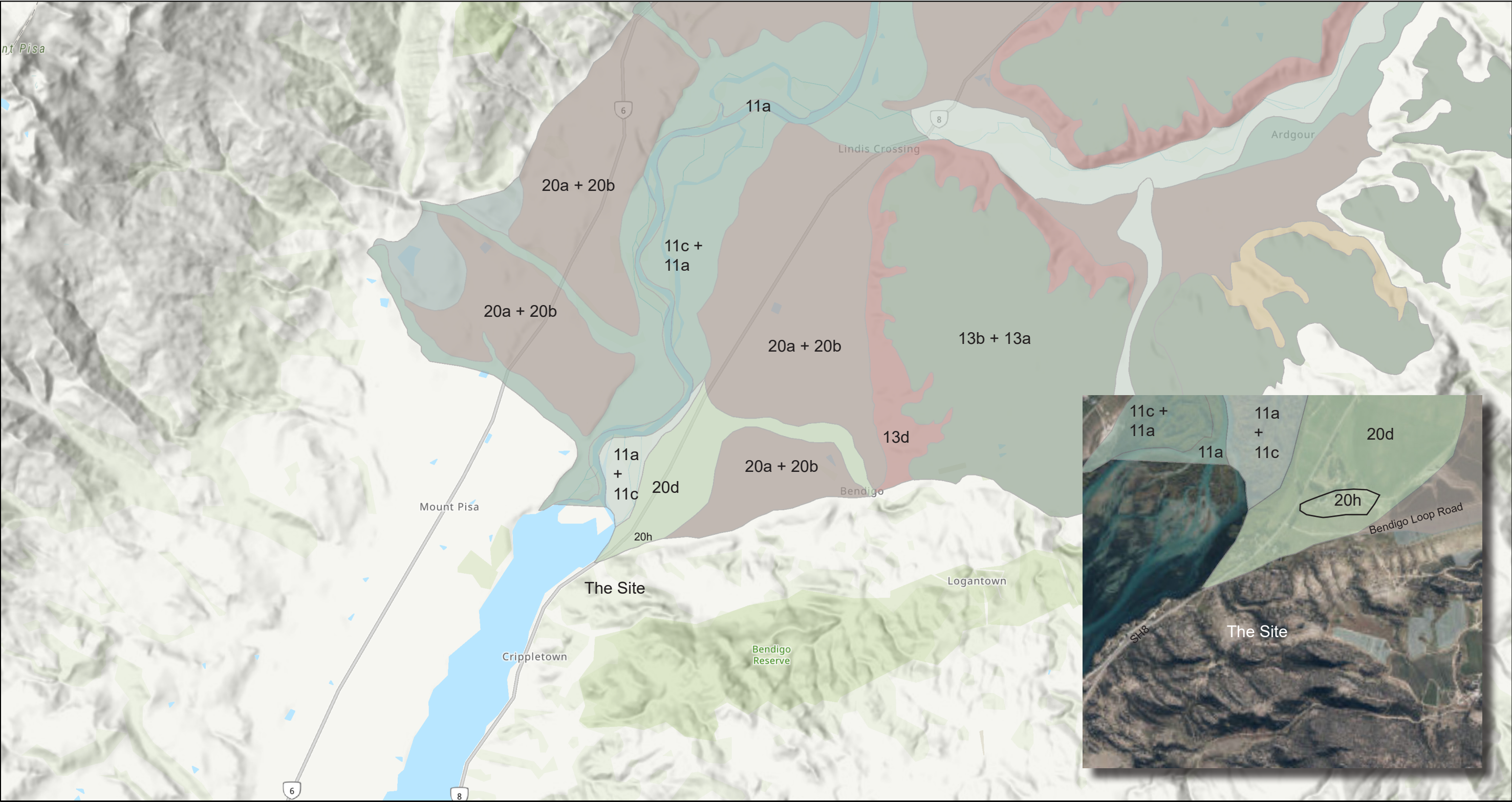
LandPlan landTyping.nz

21. DUNSTAN-CAIRNMUIR LAND TYPE

The Dunstan-Cairnmuir land type comprises the Dunstan and Cairnmuir ranges. Asymmetric fault-block mountain ranges with steep to very steep side slopes and crests, and significant areas of undulating to rolling, to moderately steep plateau summits with extensive schist tors, seeps, and bogs. Hilly land with common schist tors and fretted schist outcrops form the foothills of the ranges to the west. Steeply entrenched streams drain the upper slopes, e.g. Devils and Lauder creeks. Heavy periglacial imprint with deep regolith mantles and extensive, rippled, partly collapsed solifluction slopes at higher elevations. The land type is developed predominantly on high-grade schist (t.z. III & IV). Elevation ranges from 200 to 1668 m, and rainfall from 560 to approximately 1200 mm p.a. with a strong elevation gradient. Much of the precipitation on upper slopes is from winter snowfall and fog. Fescue tussock grassland gives way upslope to narrow-leaved snow-tussock grassland, which predominates from about 1000 to 1500 m. Cushionfield and blue-tussock grassland cover much of the summit plateau, with a few areas of slim snow-tussock grassland and wetland vegetation. Vegetation contains a number of endemic species. No beech forest, rare Hall's tōtara remnants, extensive kānuka shrubland.

The Site

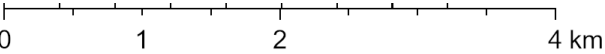
Landform component	Geological formation	Elevation (m)	Remnant native vegetation	Present land use	Agronomic potential	Potential land use	Potential impacts
A Undulating to rolling to moderately steep plateau summit and crests	Predominantly high-grade schist (t.z. III & IV) of the Haast Schist Group, colluvium and solifluction deposits	1300–1668	Snow- and alpine-tussock grassland, herb and cushionfield, subalpine and alpine scrub, fellfield and bog vegetation	Extensive grazing, conservation land, recreation	Low to nil	Conservation land, recreation, 'wild' animal grazing, gold mining	Recreation impacts, tracking, buildings, tow lines etc., mining
B Steep to very steep upper mountain slopes	Predominantly high-grade schist (t.z. III & IV) of the Haast Schist Group	1150–1300	Snow- and short-tussock grassland with matagouri, and subalpine scrub and herbs, tōtara forest-woodland	Extensive grazing, conservation land, recreation, 'wild' animal grazing	Low	Extensive grazing, recreation, conservation land	Recreation impacts, tracking, fencing
C Steep, to very steep dissected, rocky, lower mountain and hill slopes	Predominantly high-grade schist (t.z. III & IV) of the Haast Schist Group, colluvium, minor outwash and moraine	500–1150	Short-tussock grassland with matagouri, and mānuka-kānuka scrub, tōtara forest-woodland	Extensive grazing	Low	Extensive grazing, recreation, exotic forest below 1000 m	Tracking, fencing, recreation impacts, exotic forest and wildings
D Strongly rolling to moderately steep eastern mountain hill and steep land	Predominantly high-grade schist (t.z. III & IV) of the Haast Schist Group and colluvium	200–1150	Short-tussock grassland with matagouri, mānuka-kānuka and broadleaved scrub	Extensive and semi-intensive grazing	Low to medium	Semi-intensive grazing, recreation, exotic forestry	Tracking, fencing, recreation impacts, exotic forest and wildings
E Entrenched streams and valley floors	High-grade schist (t.z. III & IV) of the Haast Schist Group, alluvium and colluvium	200–1100	Short-, snow- and alpine-tussock grassland and herbfield, subalpine and matagouri scrub	Extensive grazing	Low to nil	Conservation land, recreation, alluvial gold mining	Recreation impacts, mining



11/10/2024, 3:58:21 PM

Landform Component (1:50,000) - South Island

- | | |
|---|---|
| <div></div> 11a Braided valley fill | <div></div> 13d Moraine and terrace scarps |
| <div></div> 11a + 11c Braided valley fill + Floodplain terrace treads and scarps | <div></div> 13j Erosional "hard" rock hill slopes |
| <div></div> 11c Floodplain Terrace treads and scarps | <div></div> 20a + 20b + 11d Fluvioglacial outwash and alluvial terraces + Terrace scarps + Fans |
| <div></div> 11c + 11a Floodplain terrace treads and scarps + Braided Valley Fill | <div></div> 20a + 20b Fluvioglacial outwash and alluvial terraces + Terrace scarps |
| <div></div> 13b Glacial Outwash Terraces, Minor Moraine Dumps | <div></div> 20d Low terraces |
| <div></div> 13b + 13a Glacial outwash terraces and minor moraine dumps + Extensive ablation & terminal moraine fields | <div></div> 11c + 11a Braided Valley Fill |
| | <div></div> 13a + 13b Extensive ablation & terminal moraine fields + Glacial outwash terraces and minor moraine dumps |
| | <div></div> 20h Low hard rock ridges |



Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth,
© OpenStreetMap contributors., Eagle Technology, Land
Information New Zealand

Landtyping.nz
Lucas Associates 2024

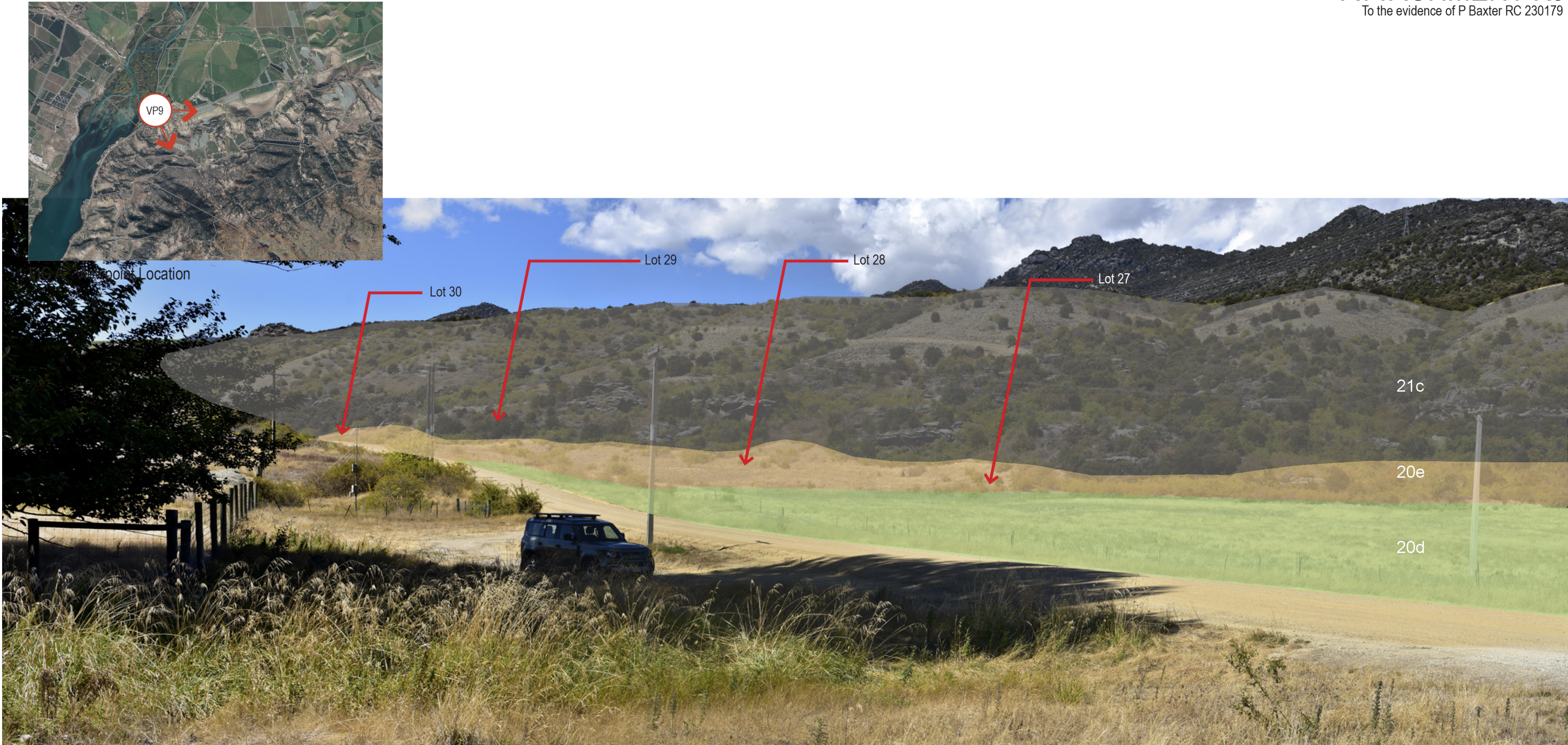
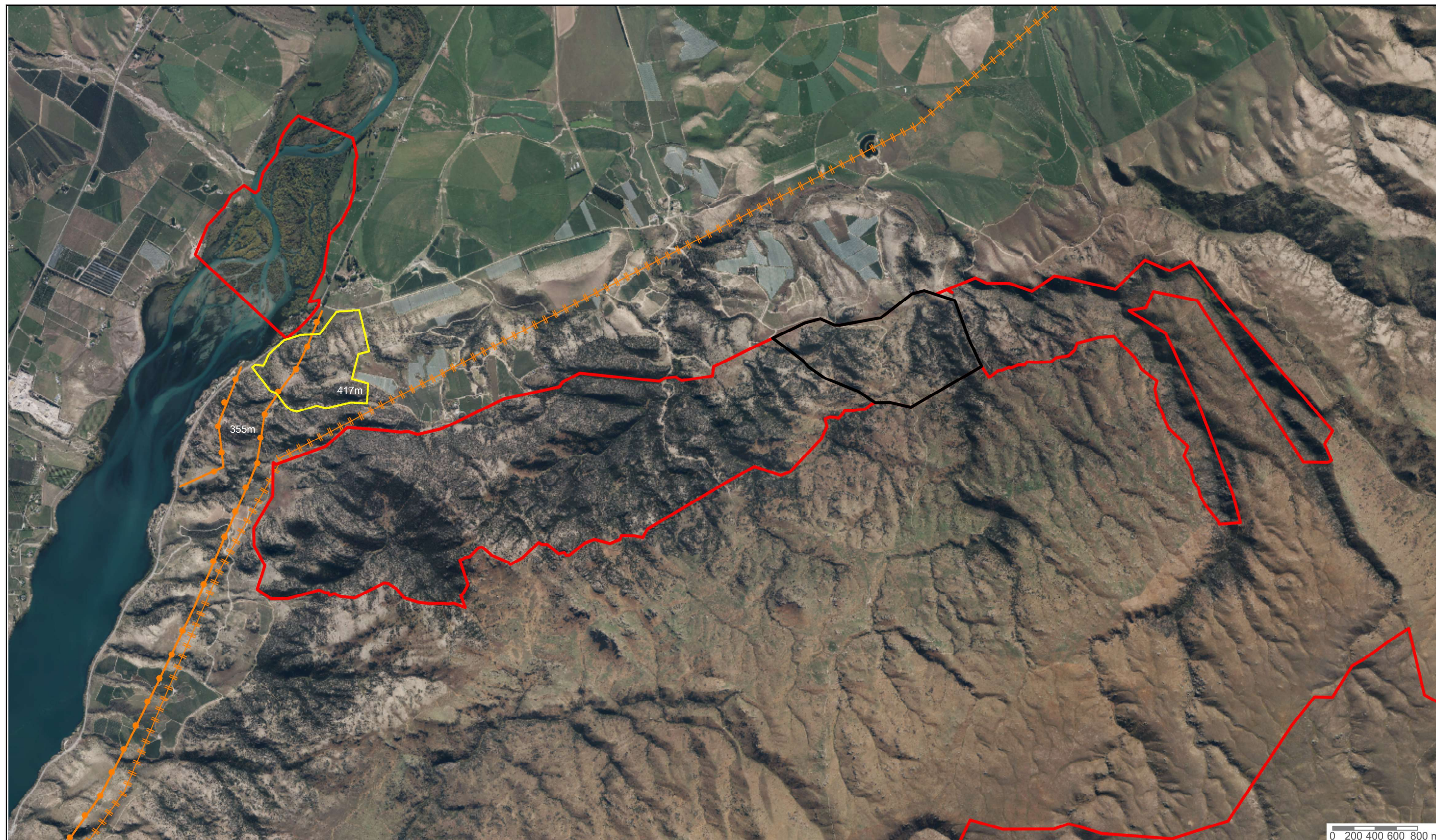


FIG B. Panoramic Image
Approximately 220m from Lot 32

Land Type	Landform Component
21. Dunstan - Cairnmuir	21c Steep, to very steep dissected, rocky, lower mountain and hill slopes (lower slopes)
20. Dry Inland Basin & Major Valley	20e Fans
	20d Low terraces

NOTE:
Arrows indicate approximate location of structures potentially visible from this viewpoint

Panoramic image created from four portrait images captured at 50mm Full Frame Equivalent with minimum 25% overlap then stitched together using Image Composite Editor.



Scale: 1:34014
Original Sheet Size A3

Projection: NZTM2000
Bounds: 1305351 52270047 5012951 16586274
1318751.75982513 5020771.72063866

The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>.
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.



Significant Natural Areas



Historic Reserve



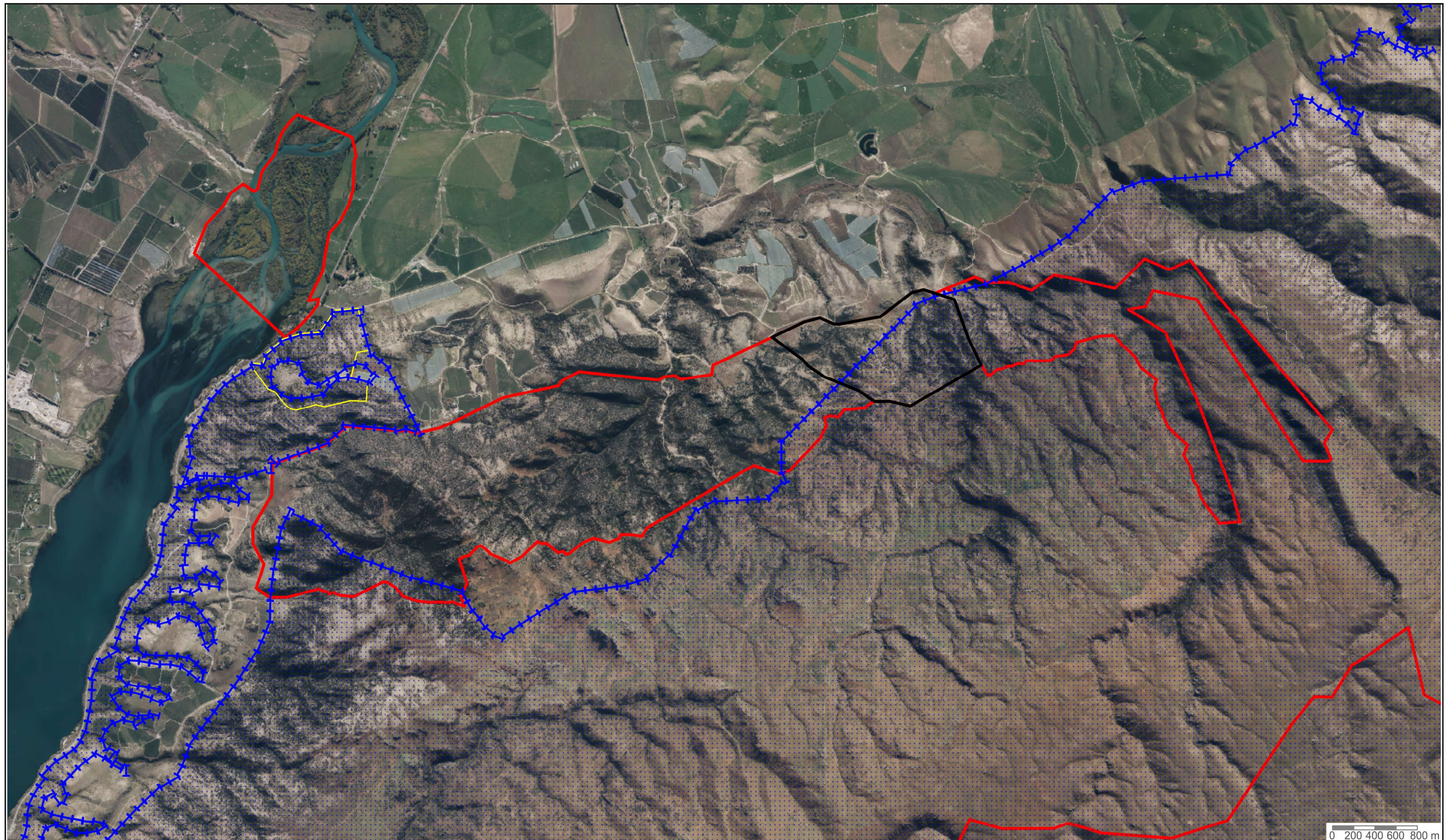
High Voltage Line



Power line



The Site



Scale: 1:34014
Original Sheet Size A3

Projection:
Bounds:

NZTM2000
1305351.52270047,5012951.16586274
1318751.75982513,5020771.72063866

The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.



Significant Natural Areas



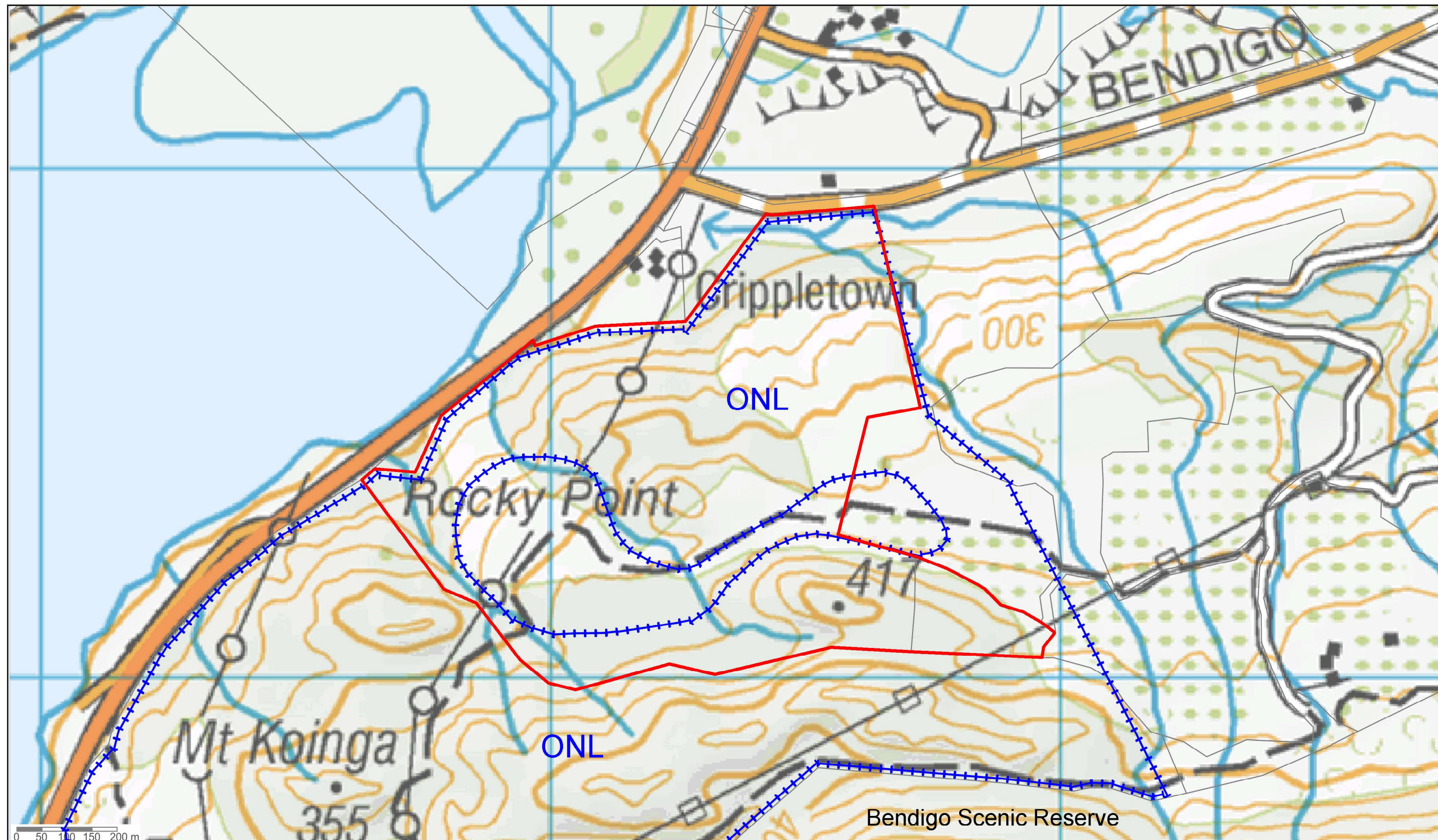
Historic Reserve



ONL



The Site



Scale: 1:7133
Original Sheet Size A3

Projection:
Bounds:

NZTM2000
1306939 99739998 5016679 31396983
1309750 23080862 5018319 40317877

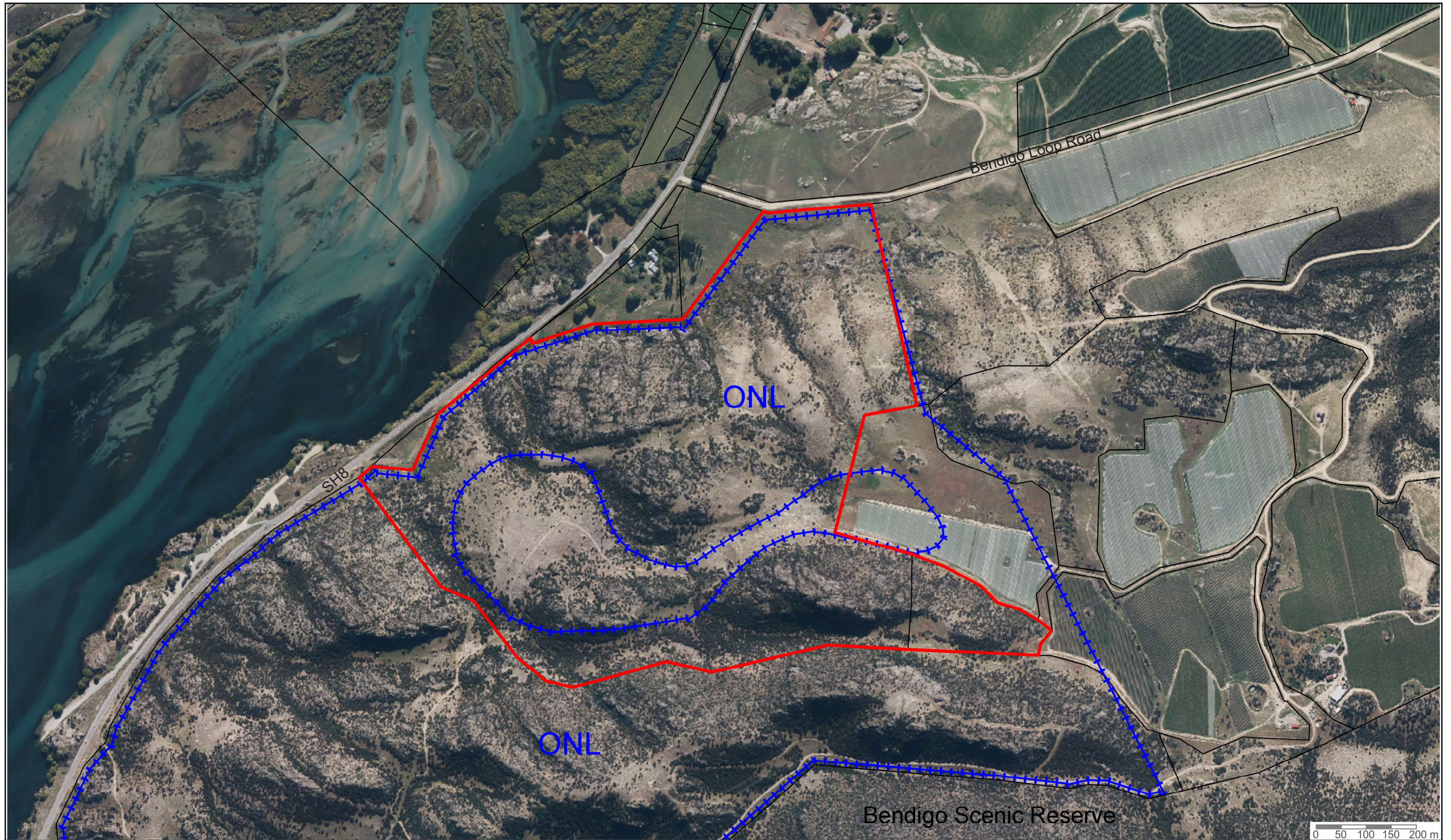
The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.



ONL



Site boundary



Scale: 1:7133
Original Sheet Size A3

Projection: NZTM2000
Bounds: 1306939.99739998, 5016679.31396983
1309750.23080862, 5018319.40317877

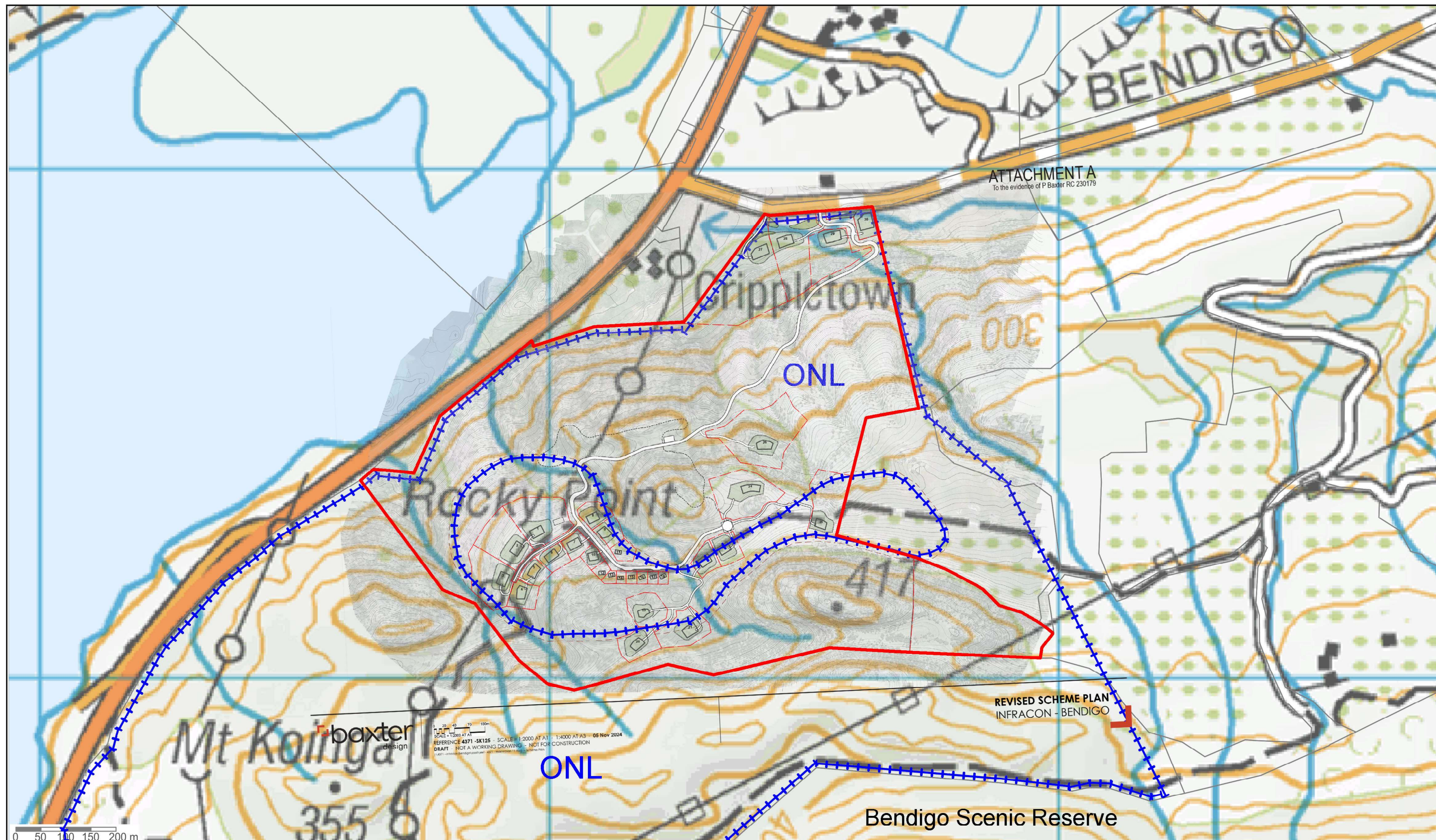
The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.



ONL



Site boundary



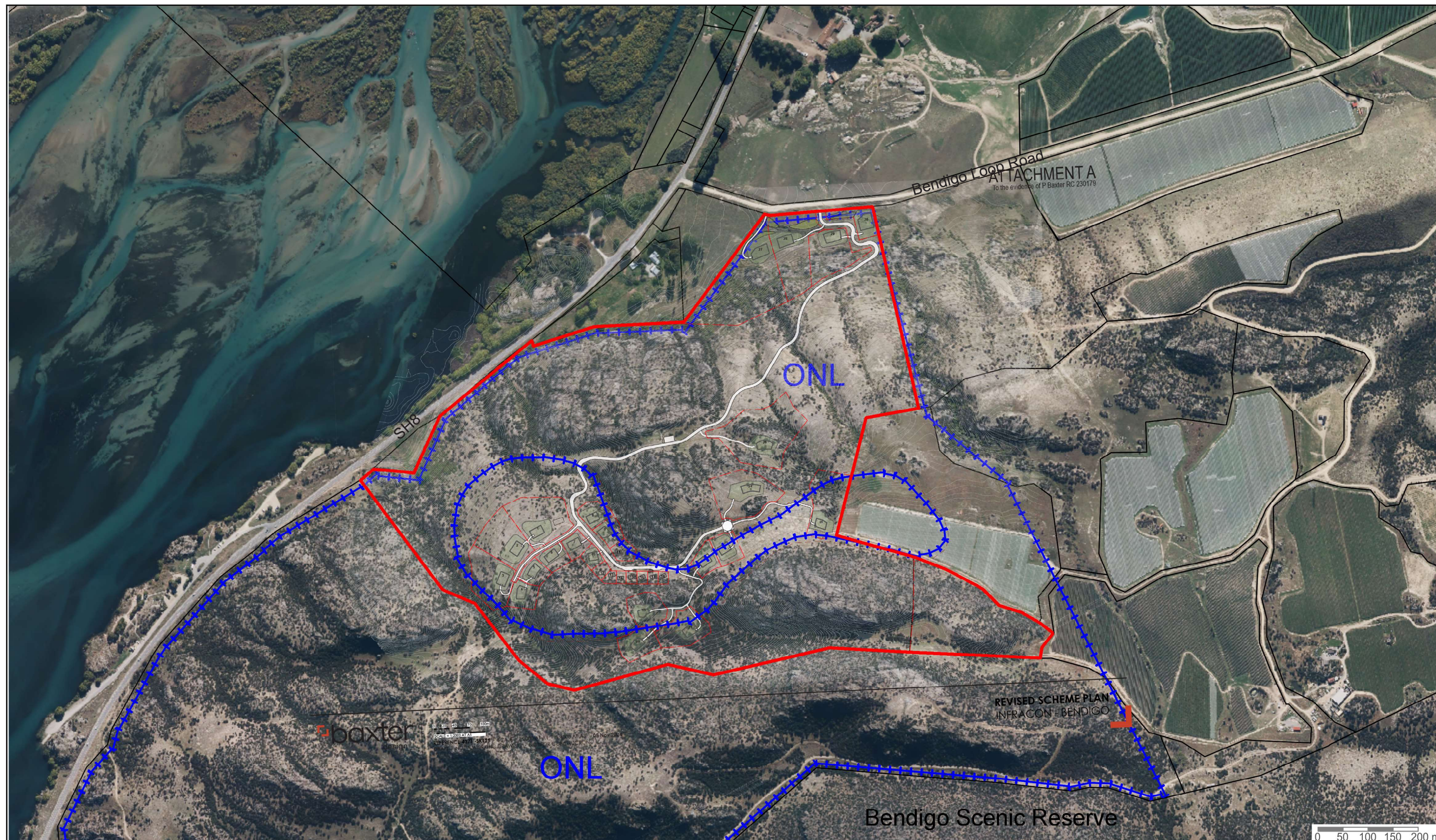
Scale: 1:7133
Original Sheet Size A3

Projection: NZTM2000
Bounds: 1306939 99739998, 5016679 31396983
1309750, 23080862, 5018319, 40317877

The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.

ONL

Site boundary



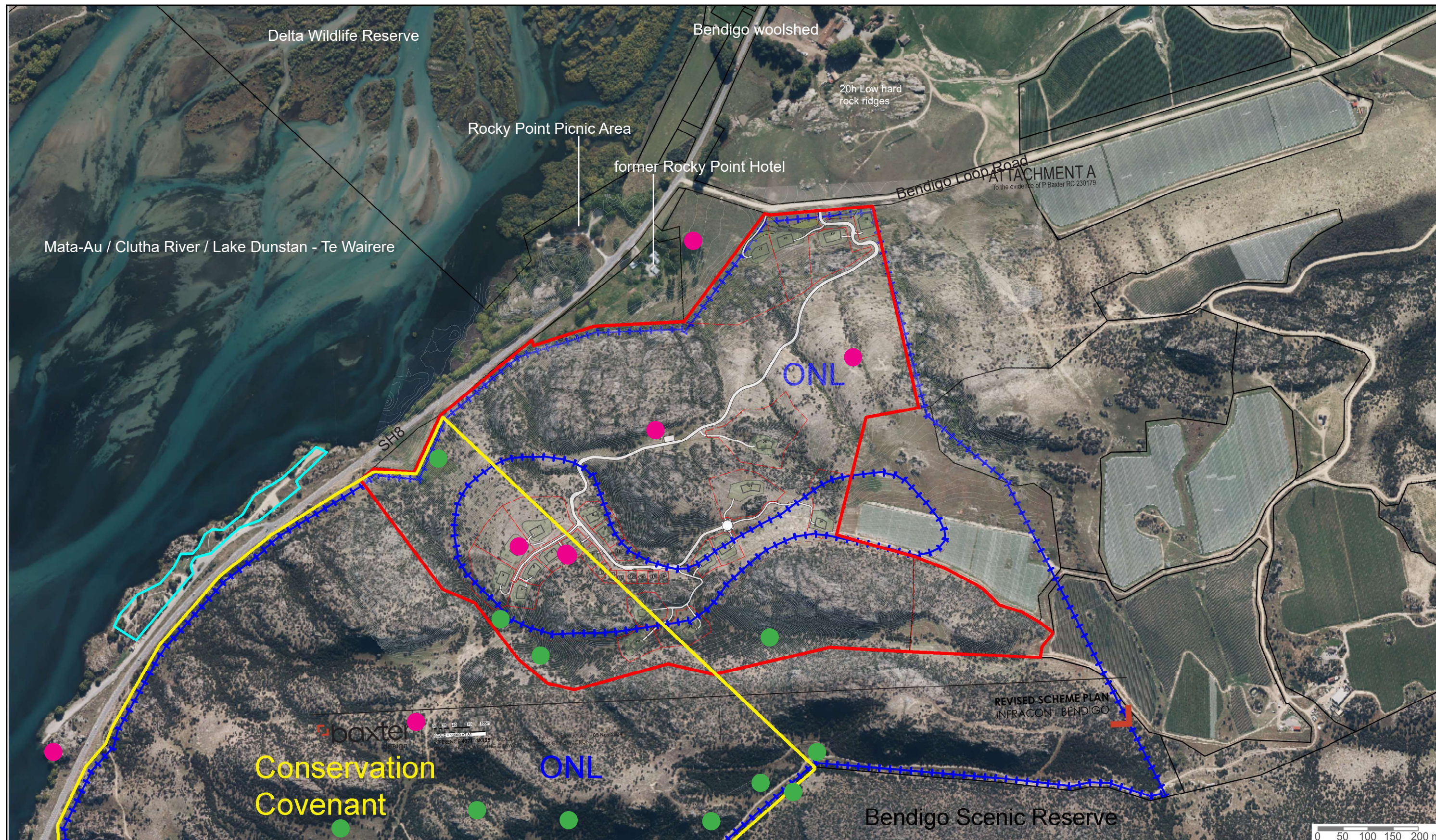
Scale: 1:7133
Original Sheet Size A3

Projection: NZTM2000
Bounds: 1306939 99739998, 5016679 31396983
1309750, 23080862, 5018319, 40317877

The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.

ONL

Site boundary



Scale: 1:7133
Original Sheet Size A3

Projection: NZTM2000
Bounds: 1306939.99739998, 5016679.31396983
1309750.23080862, 5018319.40317877

The information displayed in the Geographic Information System (GIS) has been taken from Central Otago District Council's (CODC) databases and maps.
Digital map data sourced from Land Information New Zealand (LINZ). Licensed under the Creative Commons Attribution 4.0 International licence <https://creativecommons.org/licenses/by/4.0/>
It is made available in good faith but its accuracy or completeness is not guaranteed. CODC accepts no responsibility for incomplete or inaccurate information.
If the information is relied on in support of a resource consent it should be verified independently.

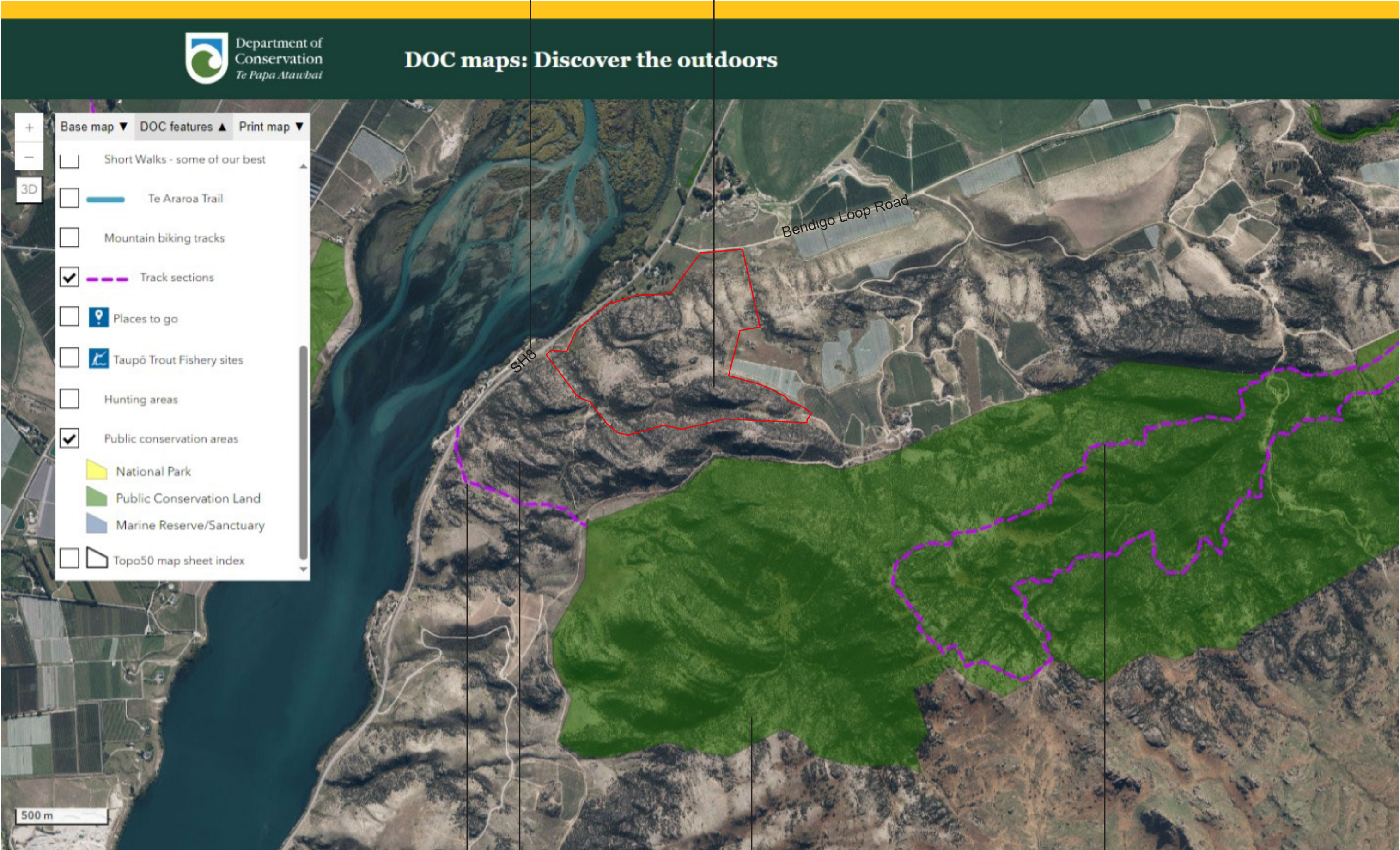
 ONL Covenant Freedom camping (LINZ) Site boundary

● Proposed offset sites (Andrew Wells (appendix 2))

● Archaeological sites (<https://nzaa-archsite.hub.arcgis.com/pages/public-map/>)

Bendigo Freedom Camping (LINZ)

417m



Site boundary

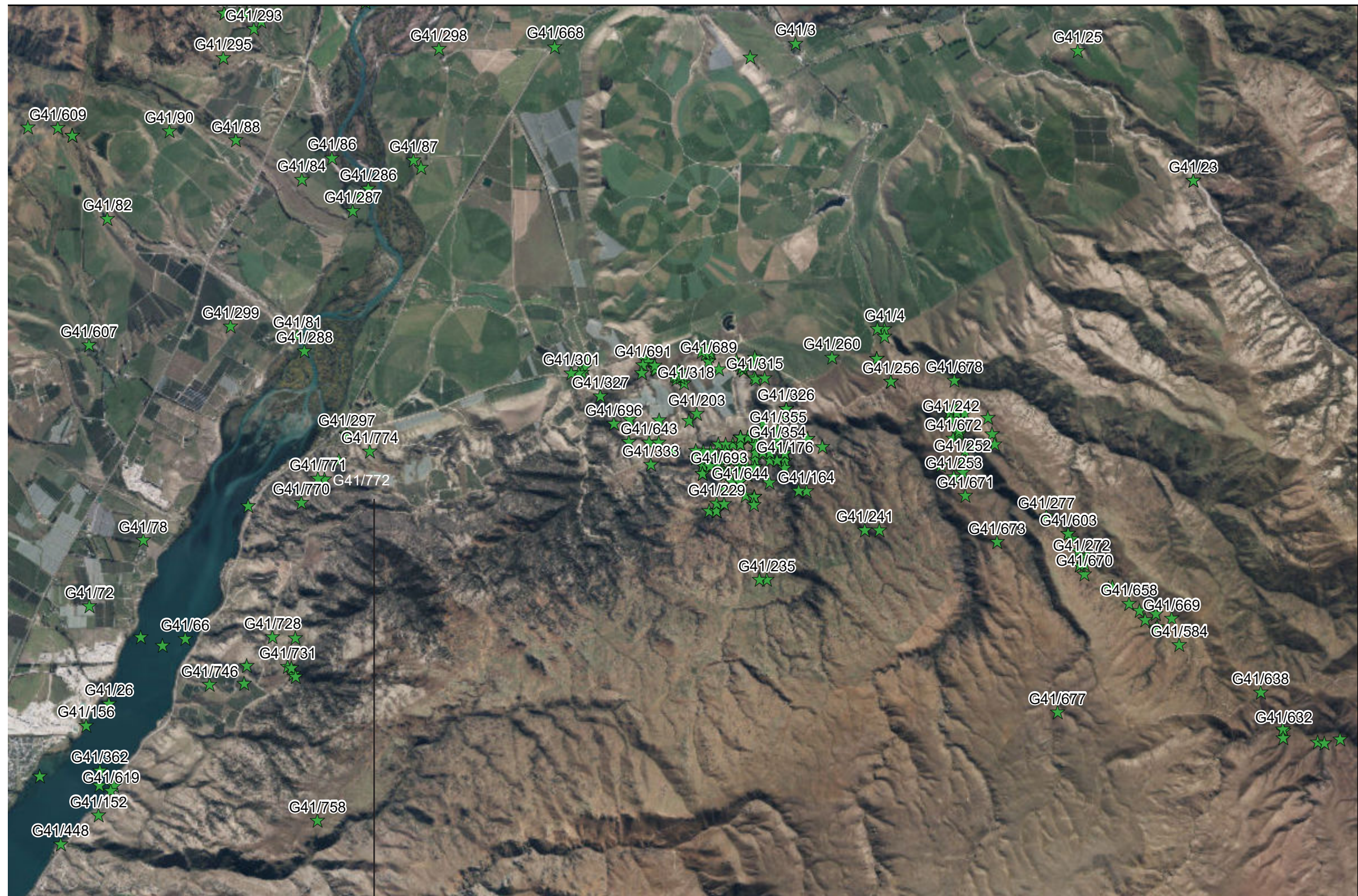
Mt Koinga 355m

Mt Koinga Track

Bendigo Scenic Reserve

Kanuka Loop Track (Baxter viewpoint 11)

ArchSite



The Site, Rocky Point high pt 417m

Archaeological sites:

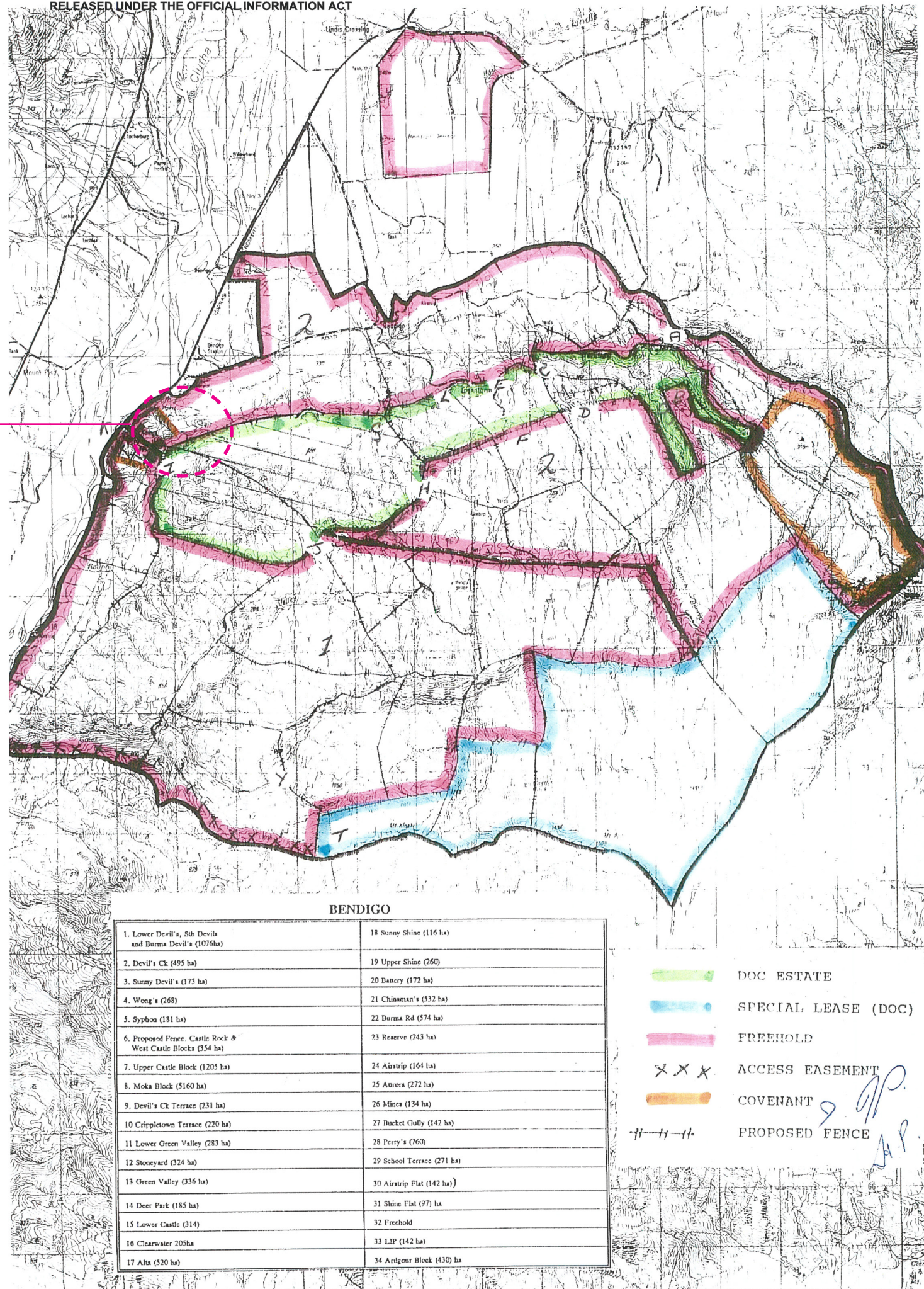
- G41/771 – Earth bank feature
- G41/772 – Stone retaining wall
- G41/773 – Earth bank feature
- G41/774 – Sluicing Area

1:80,077



Eagle Technology, Land Information New Zealand,
GEBCO, Community maps contributors

The site



High Voltage Lines

Plateau

Power line

417m

Kanuka Gully

Freedom Camping (LINZ)

Mt Koinga 355m



Kanuka Gully

Freedom Camping



