



Figure 97. Building site (HT), looking south-west.



Figure 98. Bottom of P1, looking south.



Figure 99. Bottom of prospecting trench (P2), looking south.



Figure 100. Prospecting trench (P3), looking south.



Figure 101. Prospecting pit (P4), looking north-west.



Figure 102. Mullock heap (S2), looking south-west.



Figure 103. Mine workings to the west of pit lake and hut 6 (H6), looking west.



Figure 104. Mine workings to the west of pit lake, looking west.



Figure 105. Scarp/terrace (S3), looking east. Former location of Adit I (AI) to the left of the scarp/terrace.



Figure 106. Widening of track at northern end below bottom of prospecting trench (ST), looking south-east.



Figure 107. Stone revetting along track (ST), looking south-west.



Figure 108. Stone revetting along track (ST), looking south-west.



Figure 109. Revetment along track, looking north-west.



Figure 110. Detail of stone revetted track as shown above, looking south.



Figure 111. Major revetment, looking south-west.



Figure 112. Showing the major revetment along the track in relation to the creek, looking north-west.



Figure 113. Major revetment along track, looking south-west.



Figure 114. Condition of major revetment as shown in previous photo, looking north-east.



Figure 115. Plan view of collapsed area in major revetement along track/road (previous two photographs), looking north-east.



Figure 116. Showing northern most end of the water race (WR). Steel waratahs to the left mark extents of Hut 7 and Hut 8, looking west.



Figure 117. Looking along water race (WR), looking south-east.



Figure 118. Looking along water race (WR), looking north-west.



Figure 119. View south-east towards the battery site.

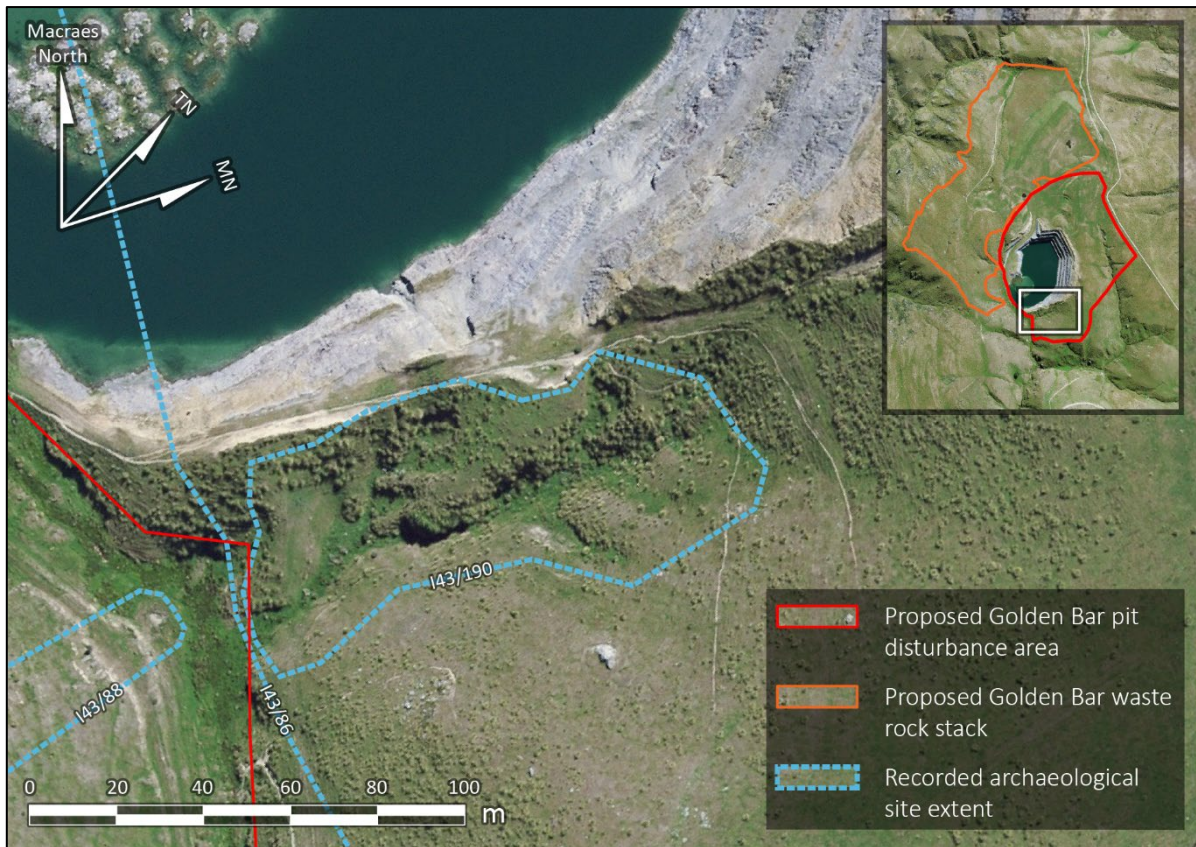


Figure 120. Sluiced areas making up I43/190 (2025 OGNZL aerial photography).



Figure 121. Bottom of slucced gully, looking north.



Figure 122. Sluced gully, looking north-west.



Figure 123. Area of proposed waste rock stack, looking west.



Figure 124. Area of proposed waste rock stack and pit extension, Grid 6, looking north-west towards the existing waste rock stack.



Figure 125. Slumped ground in the proposed waste rock stack area, looking south-west.

8.4 Archaeological Values

The archaeological values of the sites in the project area are assessed in the tables below.

Table 14. Assessment of archaeological values for Golden Bar Mine (I43/86).

Site	Value	Assessment
I43/86 (Golden Bar Mine) and I43/88 (1927 Gold Battery)	Condition	Generally, the features of the Golden Bar Mine are in fair condition. Features associated with the main mine workings¹⁷⁵ have been destroyed by modern mining operations. Remaining features including I43/88, are largely clearly defined. Some hut/building terraces are marked with steel waratahs. There has been some damage to the sites via stock grazing, erosion, and prior excavation. Assessment – Fair
	Rarity/Uniqueness	Late 19th and early 20th century mining sites are common throughout New Zealand and the Waitaki District; however, the site is notable in that it includes features associated with the domestic aspects of mine operation. Assessment – Moderate
	Contextual value	Golden Bar Mine has high contextual value as a collection of infrastructural features relating to the 19th and early 20th century mining of Macraes Flat. Golden Bar Mine was a notable mining operation in the area closely connected to nearby mining operations such as Deep Dell and Ounce Mine, with many noteworthy mining figures involved in its operation over the years. The loss of part of the 'main mine workings' has diminished the contextual value as it relates to the collection of different features that constitute the site itself. However, much of the site remains, including the full range of features that represent the practice of mining (battery, adits, prospecting features, water race, domestic sites). Assessment – High
	Information potential	Previous archaeological investigations at the sites decrease the potential for the site to provide new information. Archaeological excavation was previously undertaken at the 1927 battery site (I43/88) and at Huts 1 to 9. However, probable 19th century hut terraces (HT) were not targeted by previous excavation and have information potential relating to the earlier periods of mine operation. Any previously unrecorded or buried archaeological evidence remaining at the site provides an opportunity to fill gaps in the record concerning both the industrial operation of Golden Bar Mine, early occupation, and the lesser understood domestic aspects of the site. Assessment – Moderate

¹⁷⁵ As recorded by Petchey.

Site	Value	Assessment
	Amenity value	While the Golden Bar Mine site has amenity value as a visible record of the historical Macraes Flat mining landscape, the site is located on private property with no public access. Assessment – Low
	Cultural associations	The Golden Bar Mine is primarily associated with 19 th and 20 th century Pākehā occupation. Assessment – Pākehā

Table 15. Assessment of archaeological values for the sluicings (I43/190).

Site	Value	Assessment
Sluicings (I43/190)	Condition	The site has been unaffected by the modern mining and the Golden Bar Pit. The site is largely well defined, the outer margins are covered with dense vegetation (tussock) in some areas. Areas had been impacted by stock trampling. Assessment – Good
	Rarity/ Uniqueness	Sluicing sites are common across the Otago Region and in the Waitaki District. Assessment – Low
	Contextual value	The site is part of the larger Golden Bar Mine context; however, it is unclear which period of mine operation it relates to. Assessment – Moderate
	Information potential	Sluicing sites are well understood and it is unlikely that further investigation at this site would substantially contribute to the archaeological record, or to our understanding of the Golden Bar Mine. Assessment – Low
	Amenity value	While the features are visible, the site is located on private property with no public access. Assessment – Low
	Cultural associations	The Golden Bar Mine is primarily associated with 19 th and 20 th century Pākehā occupation. Assessment – Pākehā

8.5 Other Heritage Values

No other heritage recognition (e.g., HNZPT listing, or District Plan scheduling) has been identified.

Other heritage values are considered in a separate heritage assessment prepared for Resource Consent purposes.

8.6 Effects of the Proposed Works

The proposed works will not directly affect any archaeological features associated with the Golden Bar Mine and Battery sites (I43/86 and I43/88). Though these sites are located within the pit disturbance area, they are outside

of the proposed pit shell and will be specifically avoided by the other various activities associated with open pit mining.

The *Blasting Assessment* prepared as part of the wider MP4 project did not anticipate any vibration effects on the dry-stone structures with I43/86.¹⁷⁶

The expansion of the pit shell will destroy the 19th century sluicing site (I43/190).

Effects on values for the project component, considering the recommendations proposed below, are summarised in Table 16.

Table 16. Summary of Golden Bar Pit and Waste Rock Stack effects.

Site Number	Site Name/ Description	Site Type	Effect	Notes
I43/86	Golden Bar Mine	Mining – gold	None	Waste rock stack and pit disturbance area modified to avoid site.
I43/87	Golden Bar Battery (1901)	Mining – gold	None	
I43/88	Golden Bar Battery	Mining – gold	None	Waste rock stack and pit disturbance area modified to avoid site.
I43/190	Slucings	Mining – gold	Destroyed	Site has moderate to low archaeological values. The proposed archaeological investigations will realise the low information potential. The other values will be lost.

8.7 Alternative Options

The waste rock stack footprint has been pared back from that proposed in the initial iteration of the project listed in Schedule 2 of the FTAA. This initially extended into additional gullies to the north-east of the existing pit where there was the potential for archaeological sites to be present.

Subsequently, the footprint of the waste rock stack was again altered to avoid affecting any features associated with the historic Golden Bar Mine and battery sites. It has also been confirmed by OGNZL that activities supporting mining will be designed to avoid the remainder of Golden Bar Mine and Battery features located within the pit disturbance area.

The alteration of the pit shell to avoid the sluicing site would require substantial alteration of the core mining proposal. This is considered both unfeasible and disproportionate given the generally low archaeological values of the site.

¹⁷⁶ Nick Elith, *MP4 Project Fast Track Blasting Vibration and Airblast Effects Assessment* OGNZL Macraes New Zealand (Unpublished report for Oceana Gold (New Zealand) Ltd, 2026), Section 5.2.

8.8 Recommendations

- An Archaeological Authority is required for the proposed works. The authority should provide for the destruction of the sluicing site (I43/190). The authority should have a duration of 15 years, to align with MP4 timelines.
- An archaeological management plan prepared to support this authority should specify:
 - Archaeological recording of the sluicing site prior to project earthworks proceeding.
 - Areas around the archaeological features making up the Golden Bar Mine and Battery (I43/86 and I43/88) to be demarcated and protected on the ground using physical barriers to avoid any accidental disturbance during project works.
 - A regular maintenance regime for the physical barriers at the site, to ensure they remain visible and effective throughout the project duration.
 - An on call-protocol for managing the discovery of any archaeological material beyond the monitoring areas.

Proposed archaeological authority conditions and an archaeological management plan incorporating these recommendations for the Golden Point Mine and Waste Rock Stack is included as Appendix C1 and C2.

9 Golden Bar Haul Road

9.1 Proposed Works and Project Area

9.1.1 Haul Road Reinstatement and Associated Infrastructure

A disused haul road is present adjacent to Golden Bar Road (Figure 126-Figure 128). This haul road connects the Golden Bar Pit to the wider Macraes haul road network. As part of the MP4 project it is proposed that this will be recommissioned to service the expansion of the Golden Bar Pit. The precise nature of works associated with this recommissioning has not yet been established, but it is expected that all ground within the haul road infrastructure corridor (the project area) will be substantially graded to create the necessary road surface. A pipeline and pump stations will also be established within the corridor. Disturbance of the existing ground level of up to 500mm can be expected in the project area. Beyond the project area, silt ponds established as part of the original haul road use will also be recommissioned and new ponds constructed.

9.2 Research Results

9.2.1 Historic Record

Golden Bar Road dates to at least 1867. By this date a track, roughly following the current Golden Bar Road alignment along the ridgetops, is noted on an early topographic survey.¹⁷⁷ Trig D is also noted as present by this time. By 1874 the road reserve had been surveyed.¹⁷⁸ Several plans indicate mining and occupation sites in the gullies to the south-west of the road, but nothing in the immediate vicinity of the road alignment (Figure 129).¹⁷⁹ Historic aerial photographs show little change over time beyond the appearance of modern mining to the north (Figure 130). The proposed project area aligns with the haul road formation established for the operation of the Golden Bar Mine in the early 2000s.¹⁸⁰

9.2.2 Previous Archaeological Work

ArchSite records two sites in the vicinity of the project area (Figure 131). These sites, I42/33 and I42/41, were both recoded during a 1991 survey by Jill Hamel.¹⁸¹ These were subsequently identified during MP4 fieldwork as being outside of the project area (see below). No Archaeological Authorities have been issued for either of these sites.

Table 17. Details of recorded archaeological sites within or relevant to the project areas.

Site Number	Site Name	Site Type	Details	Archaeological Authorities	Site Condition
I42/33 ¹⁸²	N/A	Mining – gold	PROSPECTING PIT	N/A	Fair
I42/41 ¹⁸³	Trig D	Transport/ communication	TRIG STATION	N/A	Good

¹⁷⁷ SO 4535.

¹⁷⁸ SO 625.

¹⁷⁹ SO 421, 4095, and 4089

¹⁸⁰ Pers. comm., [REDACTED] (OceanaGold).

¹⁸¹ Hamel, *Changes in Gold Mining at Macraes*.

¹⁸² Hamel, *Changes in Gold Mining at Macraes*.

¹⁸³ Hamel, *Changes in Gold Mining at Macraes*.



Figure 126. Golden Bar Haul Road project area (2025 OGNZL aerial photography).

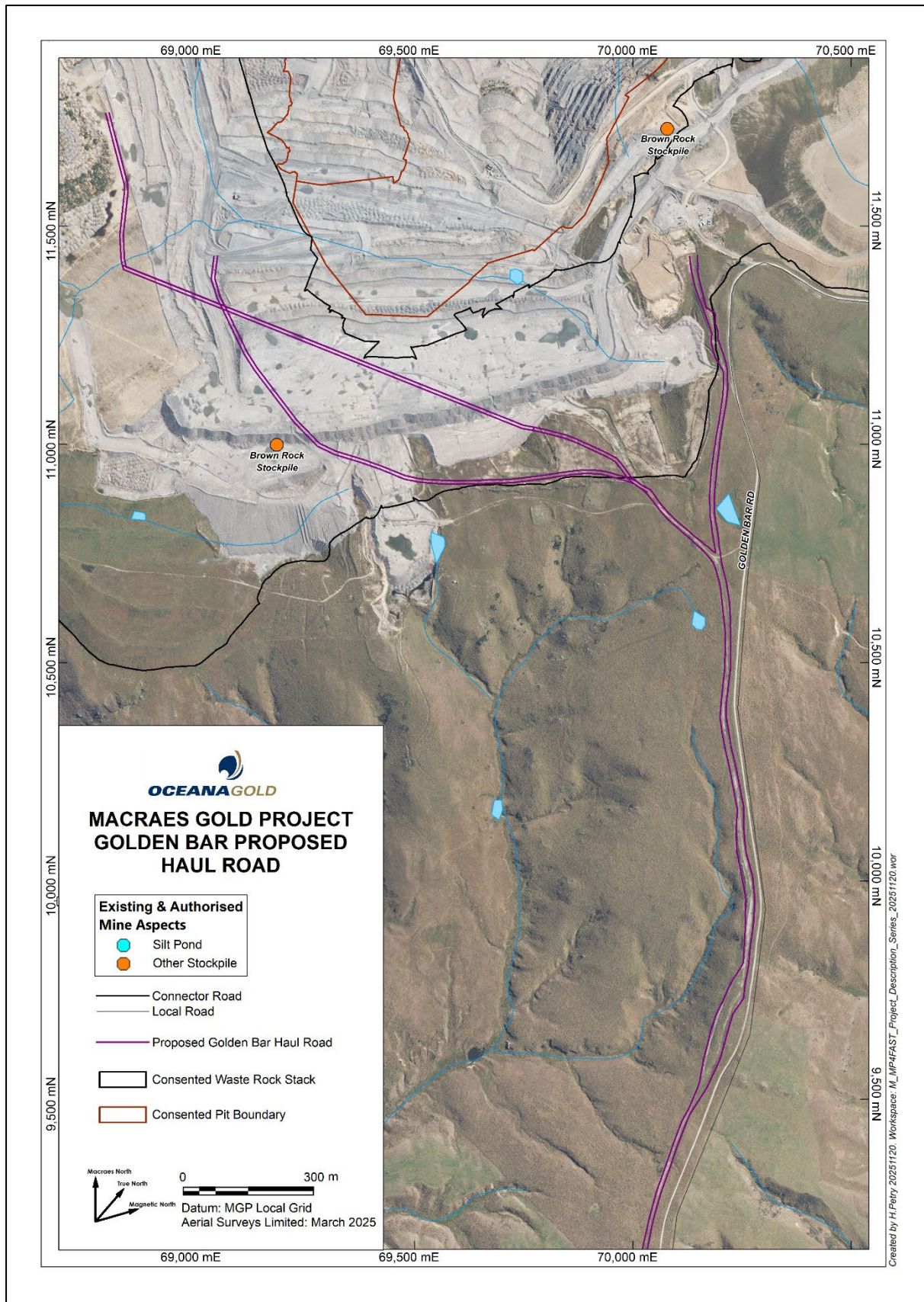


Figure 127. Golden Bar Haul Road, northern extents.¹⁸⁴

¹⁸⁴ OceanaGold.

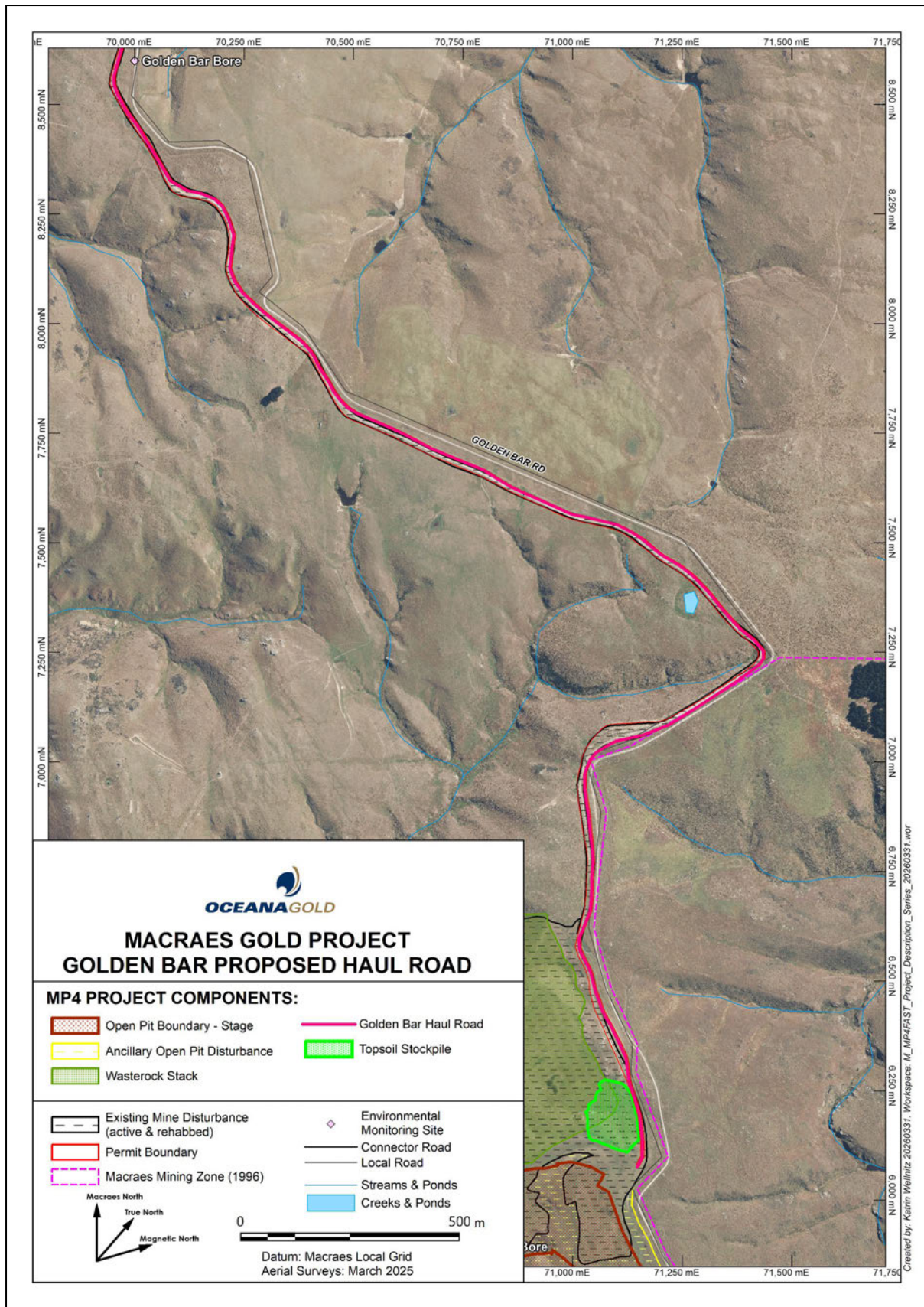


Figure 128. Golden Bar Haul Road, southern extents.¹⁸⁵

¹⁸⁵ OceanaGold.



Figure 129. Golden Bar Road, proposed haul road project area, Trig D, and adjacent mining claims and occupation sites (2025 OGNZL aerial photography).



Figure 130. Aerial photographs showing the project area over time (Retrolens and OGLNZ 2025 aerial photograph).¹⁸⁶

¹⁸⁶ Retrolens.



Figure 131. Locations of recorded archaeological sites in and around the project area (2025 OGNZL aerial photography).

9.3 Survey

A survey of the project area was undertaken by Jeremy Moyle and Chris Jennings on 24 November 2025 with a return visit to I42/33 by Jeremy Moyle on 2 March 2026.¹⁸⁷ Figure 132 shows the general areas that were visited based on the identification of archaeological features or areas with archaeological potential during the desktop review. The area around the haul road route consists of vacant pastureland along the ridgeline between Tipperary/McCormicks Creek and Murphys Creek. The haul road project area runs immediately adjacent to Golden Bar Road. Given the history of this road, the potential for historic stone culverts was anticipated in the targeted survey, but none were identified on the ground. The length of Golden Bar Road was driven in addition to the targeted survey areas. No additional archaeological sites were identified beyond the two previously recorded sites discussed below. On site it was evident that almost all the Haul Road project area has already been significantly disturbed by past road formation (Figure 133).

Aside from the sites discussed below, it was determined that the potential for unrecorded archaeological sites in this project component is low based on the desktop review and survey.

9.3.1 I42/33

Hamel described this site as a:

... pond which has been partially dug out. These ponds tend to form in sink hollows along the line of the lode and either someone has tested it for 'pay dirt' or a famer has deepened it for stock water.¹⁸⁸

Her diagram of the site indicates a spoil heap adjacent to the deepened pit (Figure 134). At the time of the site visit there was no clear evidence of the excavated area or spoil heap, though a patch of greener grass may indicate the former (Figure 136). A kidney-shaped depression is indicated on Hamel's site record, though it appears she did not interpret this as archaeological. It is now surrounded by earthworks associated with modern mining activities (Figure 135 and Figure 137). A road passes between this depression and the dug-out pit.

9.3.2 I42/41 - Trig D

The historic Trig D survey mark consists of an approximately 200mm high circular plinth, walled with schist boulders, surmounted with an iron 'bayonet' type marker (Figure 138-Figure 139).¹⁸⁹ The feature is overgrown with grass. Hamel¹⁹⁰ interpreted this as a 19th century feature, and it possibly dates to the establishment of the mark at some point prior to 1867.¹⁹¹

¹⁸⁷ This site was not able to be located during the initial site visit.

¹⁸⁸ Hamel, *Changes in Gold Mining at Macraes*, 13.

¹⁸⁹ Pers. comm., Richard Hemi (University of Otago School of Surveying).

¹⁹⁰ Hamel, *Changes in Gold Mining at Macraes*.

¹⁹¹ SO 4535.

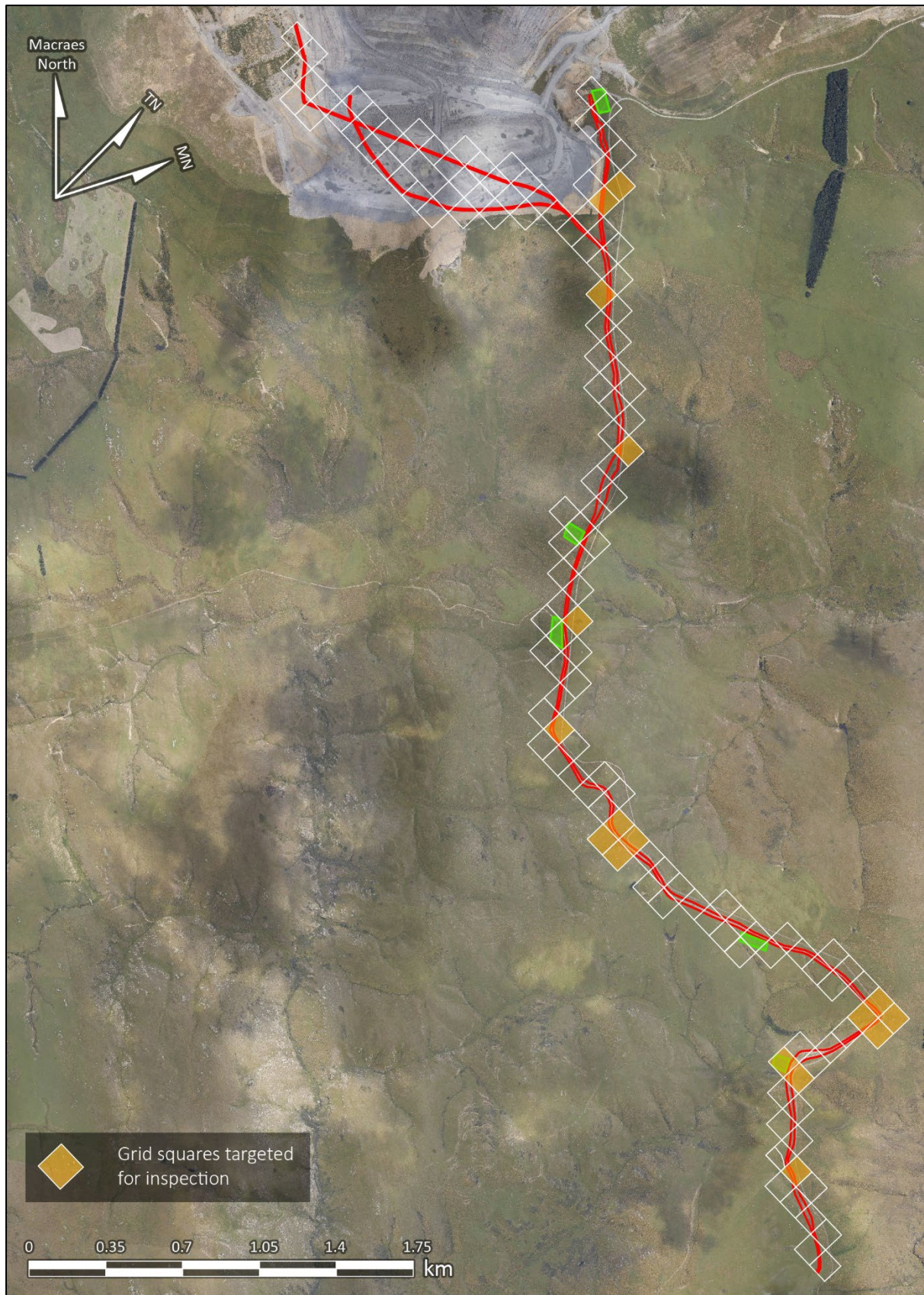


Figure 132. Areas identified for survey based on desktop review (2025 OGNZL aerial photography).



Figure 133. Example of the existing haul road formation, with Golden Bar Road in the foreground.

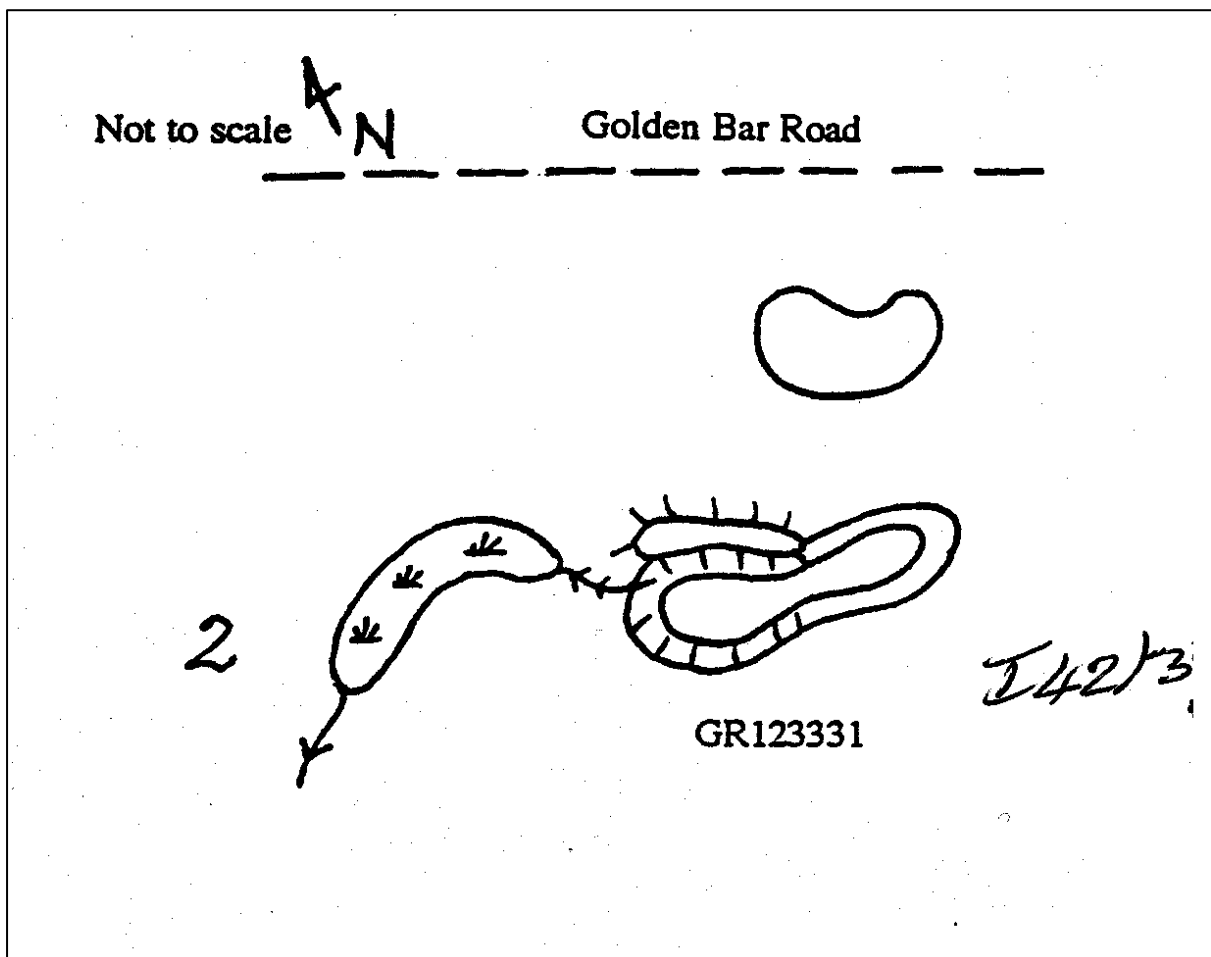


Figure 134. Diagram of I42/33.¹⁹²

¹⁹² Hamel, *Changes in Gold Mining at Macraes*.

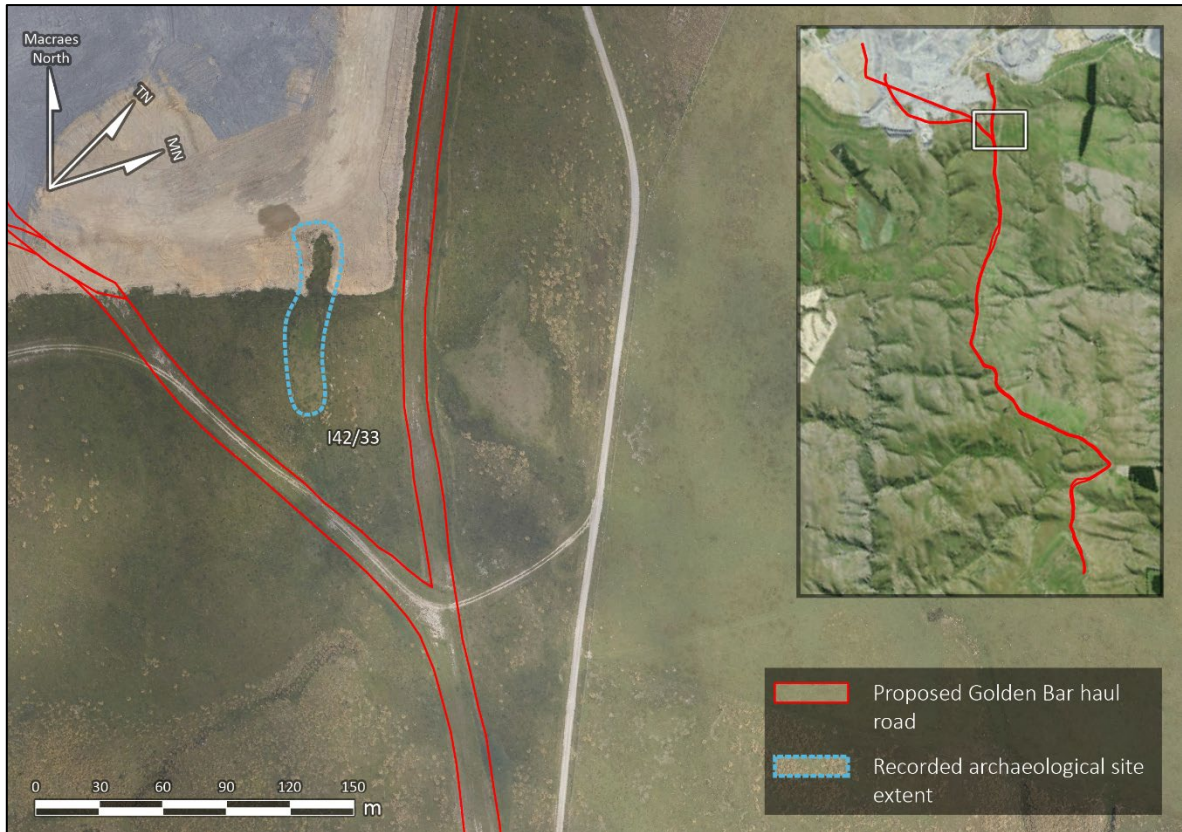


Figure 135. I42/33 sitting between the proposed branches of the haul road (2025 OGNZL aerial photography).



Figure 136. I42/33, looking south-east.



Figure 137. I44/33, looking north-west.



Figure 138. I42/41 (Trig D), looking north-east towards a truck on Golden Bar Road in the background.



Figure 139. Bayonet type survey marker at Trig D.

9.4 Archaeological Values

No archaeological values are assessed as no sites were identified in the project area. The likelihood of additional sites being present is negligible.

9.5 Other Heritage Values

No other heritage recognition (e.g., HNZPT listing, or District Plan scheduling) has been identified.

Other heritage values are considered in a separate heritage assessment prepared for Resource Consent purposes.

9.6 Effects of the Proposed Works

The proposed works will not affect archaeological evidence.

Effects on values for the project component, considering the recommendations proposed below, are summarised in Table 18.

Table 18. Summary of Golden Bar Haul Road effects.

Site Number	Site Name/Description	Site Type	Effect	Notes
I42/33	Prospecting Pit	Mining – gold	None	
I42/41	Trig D	Transport/communication	None	

9.7 Alternative Options

No alternative options have been considered as the proposed works will not affect archaeological evidence.

9.8 Recommendations

- Since an Archaeological Authority is not required, the management of archaeological sites associated with this project component should be facilitated through resource consent conditions.
- Site I42/33 (prospecting pit) is flanked by two branches of the proposed haul road; a post and wire fence should be erected around this site – at least while the haul road is in use – to make its location apparent and protect it from any accidental damage.

10 Coal Creek Dam and Reservoir

10.1 Proposed Works and Project Area

10.1.1 Coal Creek Dam

The proposed Coal Creek Dam and Reservoir constitute a portion of the MP4 project's proposed water quality management methods, specifically taking on the role of water storage and the provision of flow augmentation if required.

The proposed dam will sit across Coal Creek at a location immediately north-west of the Coronation North pit and will consist of an embankment with approximate measurements of 27m high, 225m wide across the creek, and 160m in depth along the creek's length (Figure 140-Figure 141). The formation of the dam will create a reservoir with a footprint of approximately 9.3 ha with a capacity of approximately 670 million litres of water.

A Resource Consent for this project component is already in place, having been issued as part of the previous development of the Coronation North pit.¹⁹³ An Archaeological Authority was also issued for this work in 2016.¹⁹⁴ This has since expired without being actioned and a new authority is required as part of MP4.

10.2 Research Results

10.2.1 Historic Record

Coal Creek, as its name implies, was first noted for its abundance of easily accessible lignite coal. The first mentions of the creek come from a series of newspaper reports from May 1862. These reports focus on the initial discovery of gold at Mount Highlay and of the potential for the goldfield to be a profitable one. The main issue discussed in the reports is the landscape's lack of trees meaning that there is no easily accessible timber for either fuel or construction.¹⁹⁵ The reports do however go on to note that while firewood is non-existent lignite is available and easily accessible at Coal Creek, with one report describing that "Lignite of a very superior description crops out on the banks [of Coal Creek]."¹⁹⁶

While it may have begun as a convenient source of fuel for gold miners it soon became part of the rush. By September 1862 it was reported that sluicing was underway both within the bed of the creek as well as along the banks.¹⁹⁷ Most early gold mining in the area is described at this time as "paddocking" involving the

¹⁹³ ORC RM16.138; DCC LUC-2016-234 and LUC-2013-225A; WDC 201.2016.779 and 201.2013.360.1.

¹⁹⁴ 2017/430.

¹⁹⁵ *Otago Daily Times*, "Locality of the Supposed New Gold Field," 10 May 1862, 8.; *Otago Daily Times*, "The New Gold Field in the North", 15 May 1862, 4.

¹⁹⁶ *Otago Daily Times*, "The Gold Fields Manual for New Arrivals," 3 October 1862, 6.

¹⁹⁷ *Otago Daily Times*, "The Goldfields," 17 September 1862, 5.

excavation of shallow pits about 3 feet (approximately 90cm) deep. Based on the descriptions available it appears that mining here was never on the same scale seen elsewhere in Otago, being confined mostly to small scale and low capital style operations. By 1863 the activity around Coal Creek is described as still consistent but limited in scope. It appears that the activity at Coal Creek remained limited and short-lived as mentions of the goldfield tapered off in 1863 with all further mentions referring to a Coal Creek Hotel located in the nearby Shag Valley.

In the late 1880s, there was a resurgence of hard-rock mining operations in the area, with several mines opened. In 1887 a party consisting of Hugh McAuley, James Thomas, Niece McNally, and Nicholas Thomas applied for a licensed holding of 25 acres on the western slopes of Mt Highlay, and it became known as the Mt Highlay Mine. Subsequent hard-rock mines were opened in Coal Creek to the south (New Zealand Gold and Tungsten Mine) and in Maori Hen Creek. The Donaldson brothers, who began operating a battery at Golden Point in 1890, were also involved prospecting Coal Creek in the early 1900s, before the creation of the New Zealand Gold and Tungsten Mine in 1905,¹⁹⁸ which began operations in 1907.¹⁹⁹ They targeted both gold and scheelite, and material was conveyed to the battery using a three-rail inclined tramway, a system that was popular at the time. The Warden's Reports on quartz mining in the Macraes area make frequent mention of hard-rock mining operations in the area in the early 20th century. All the mines eventually closed during the first half of the 20th century, with some small resurgence of depression era, small-scale mining operations. Pastoral farming, present from the earliest settlement of the area by Europeans, became the dominant activity until more modern mining operations began in the 1990s.

10.2.2 Previous Archaeological Work

ArchSite records three sites in and around the project area (Figure 143 and Table 19). Most sites in the vicinity of the project area, including I42/97 and I42/98, were recorded by Jill Hamel during the 1990s (Figure 144).²⁰⁰ Site I44/221 within the project area was recorded during a subsequent survey made by Ben Teele in 2015 (Figure 145).²⁰¹ Archaeological Authority 2017/430 was issued following this latter work for the construction of the Coal Creek Dam, but never exercised. An Authority – 2004/58 – was also issued for I42/97 and I42/98, but the work covered by this has not been identified and no report was required.²⁰²

Table 19. Details of recorded archaeological sites within or relevant to the project areas.

Site Number	Site Name	Site Type	Details	Previous Authorities	Site Condition
I42/97 ²⁰³	NZ Gold and Tungsten	Mining – gold	QUARTZ MINING	2004/58	Good
I42/98 ²⁰⁴	NZ Gold and Tungsten	Mining – gold	BATTERY	2004/58	Good
I42/221 ²⁰⁵	Coal Creek Alluvial Workings	Mining – gold	Mound, Tailings, Water race	2017/430	Good

¹⁹⁸ *Otago Daily Times*, "Mining," 8 June 1905, 9.

¹⁹⁹ Appendix to the Journals of the House of Representatives, 1907.

²⁰⁰ Hamel, *Changes in Gold Mining at Macraes*.

²⁰¹ Teele, *Coronation North, Macraes: Archaeological Assessment*.

²⁰² Pers. comm., HNZPT.

²⁰³ Hamel, *Changes in Gold Mining at Macraes*.

²⁰⁴ Hamel, *Changes in Gold Mining at Macraes*.

²⁰⁵ Teele, *Coronation North, Macraes: Archaeological Assessment*.

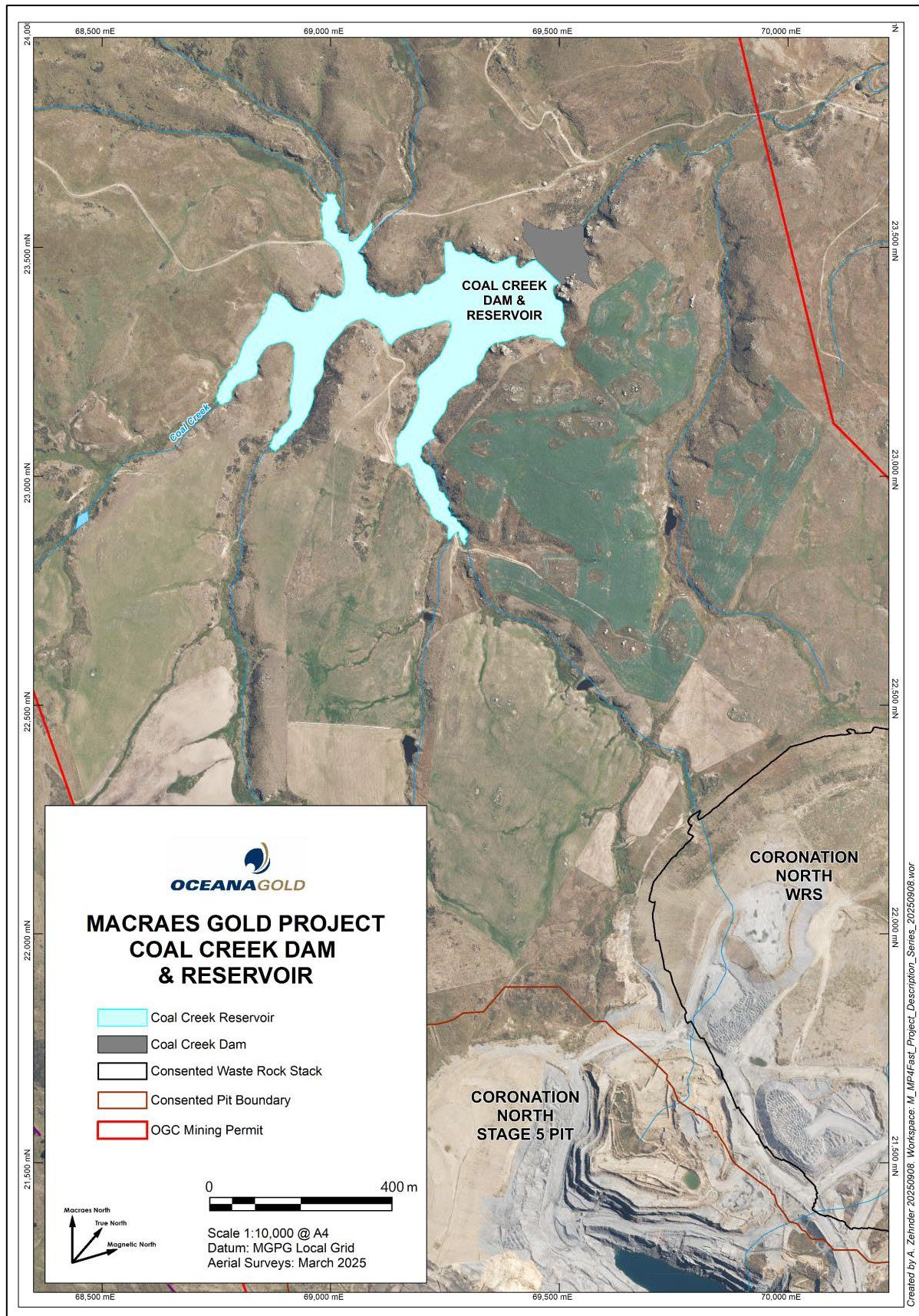


Figure 140. Coal Creek Dam and Reservoir.²⁰⁶

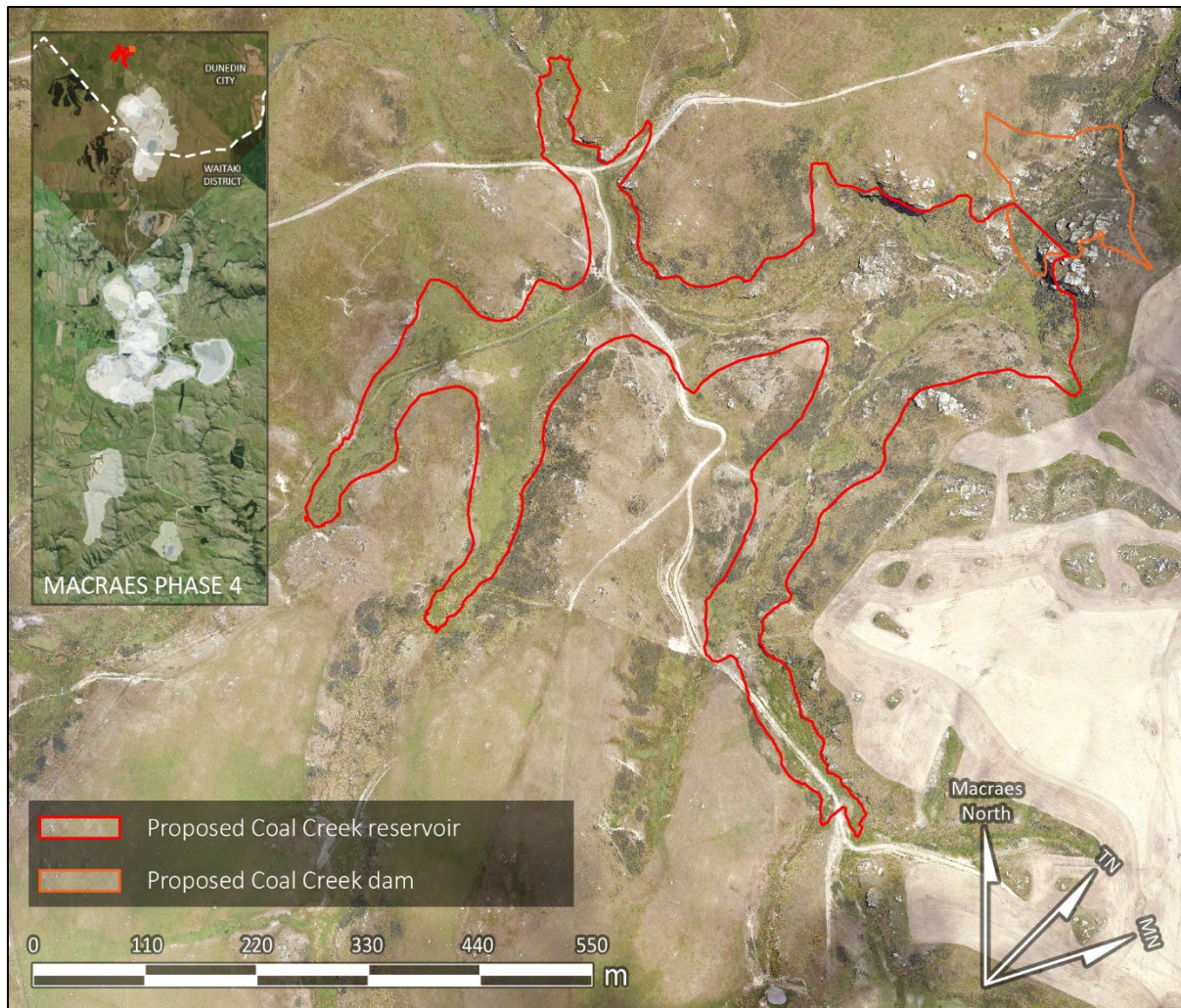


Figure 141. Area of the Coal Creek Reservoir and Dam in relation to the wider operation (2025 OGNZL aerial photography).

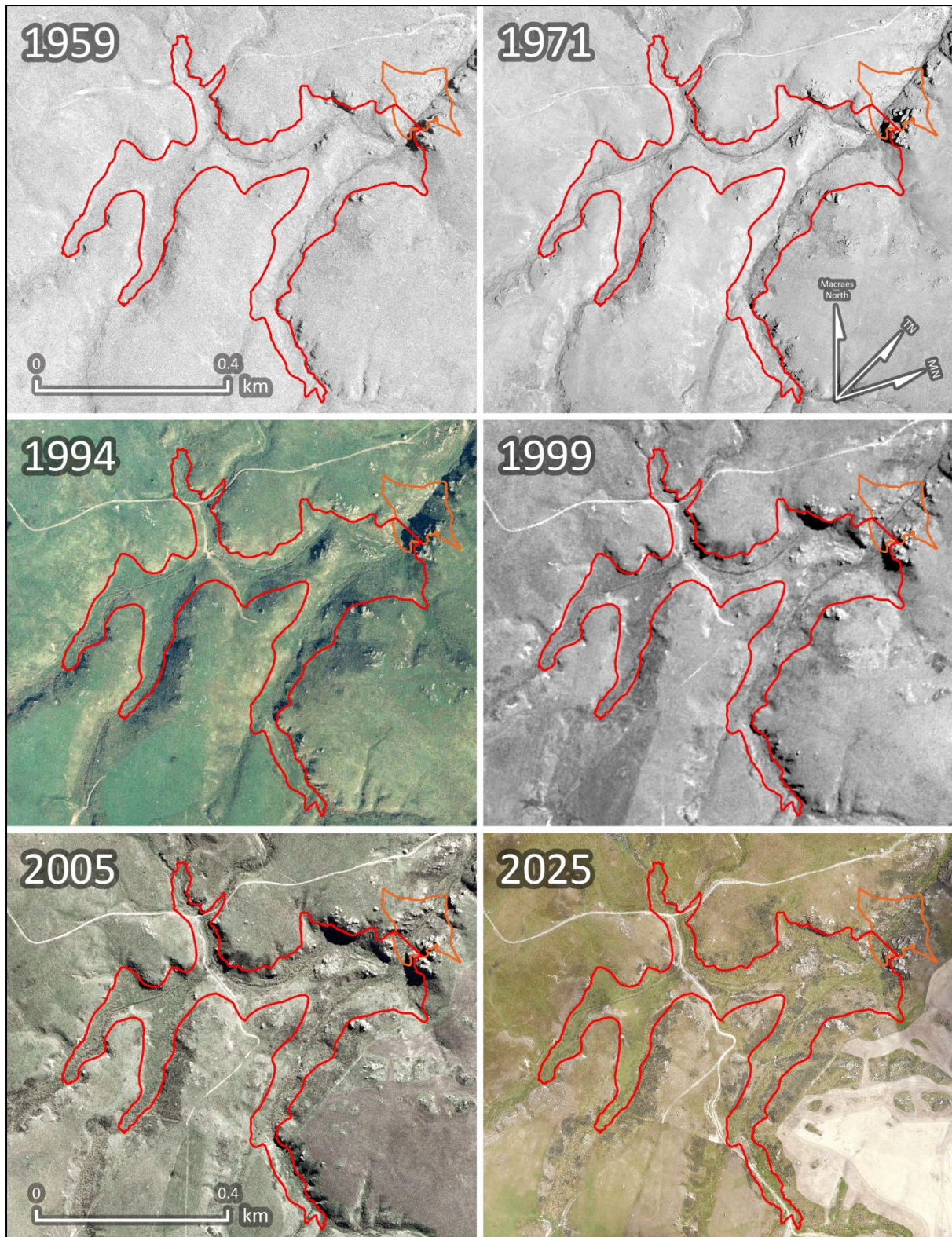


Figure 142. Historic aerial photographs showing the project area over time.²⁰⁷

²⁰⁷ Retrolens.

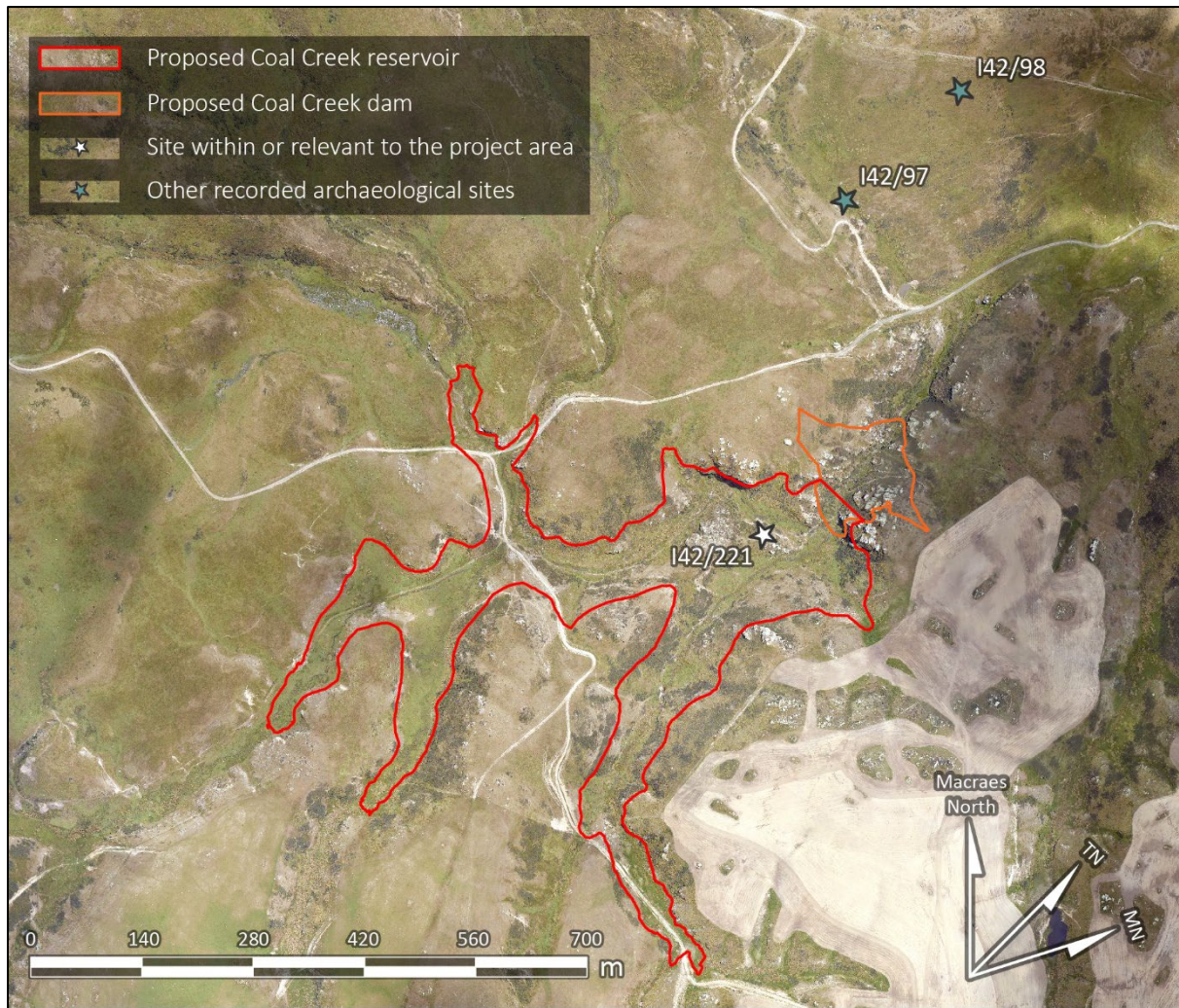


Figure 143. Locations of recorded archaeological sites in and around the project area (2025 OGNZL aerial photography).

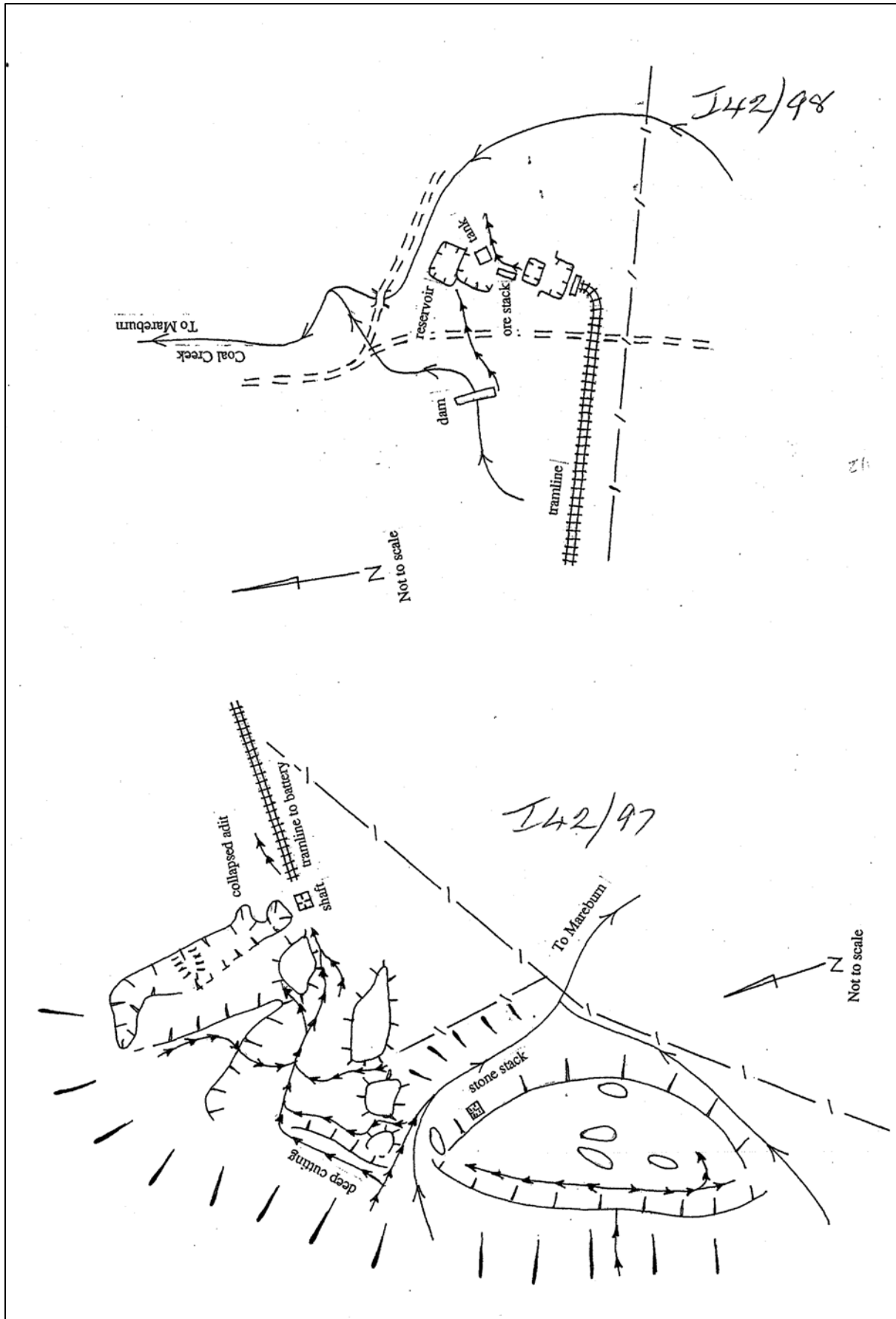


Figure 144. Diagrams I42/97 and I42/98; Figure 57 from Hamel's 1991 survey.²⁰⁸

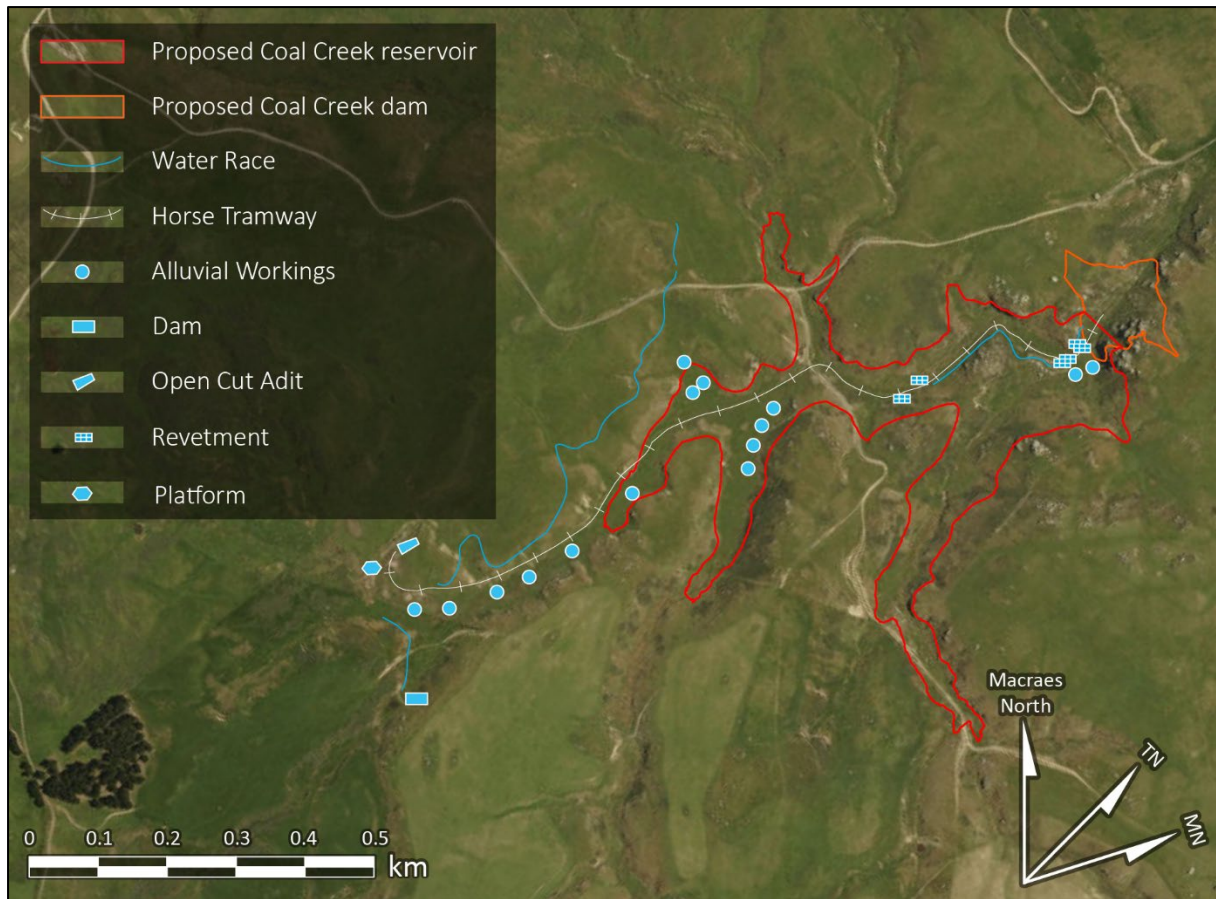


Figure 145. Adaptation of Figure 17 from Teele's 2015 report showing features recorded during survey (2023 LINZ aerial photography).²⁰⁹

²⁰⁸ Hamel, *Changes in Gold Mining at Macraes*.

²⁰⁹ Teele, *Coronation North, Macraes: Archaeological Assessment*.

10.3 Survey

A survey of the project area was undertaken by Russell Cook and Chris Jennings on 17 December 2025. The entire dam and reservoir area was surveyed as well as the area immediately north of the proposed dam. Teele's previous survey had identified a series of mining remains throughout the area (Figure 145) and an evaluation of aerial and LiDAR data indicated that further remains may have been present throughout Figure 146 shows the general areas that were visited based on the identification of archaeological features or areas with archaeological potential during the desktop review.. Features/points of interest inspected in the field are noted below with the prefix CC, meaning Coal Creek (Figure 147). Aside from the sites and features discussed below, it was determined that the potential for unrecorded archaeological sites in this project component is low based on the desktop review and survey.

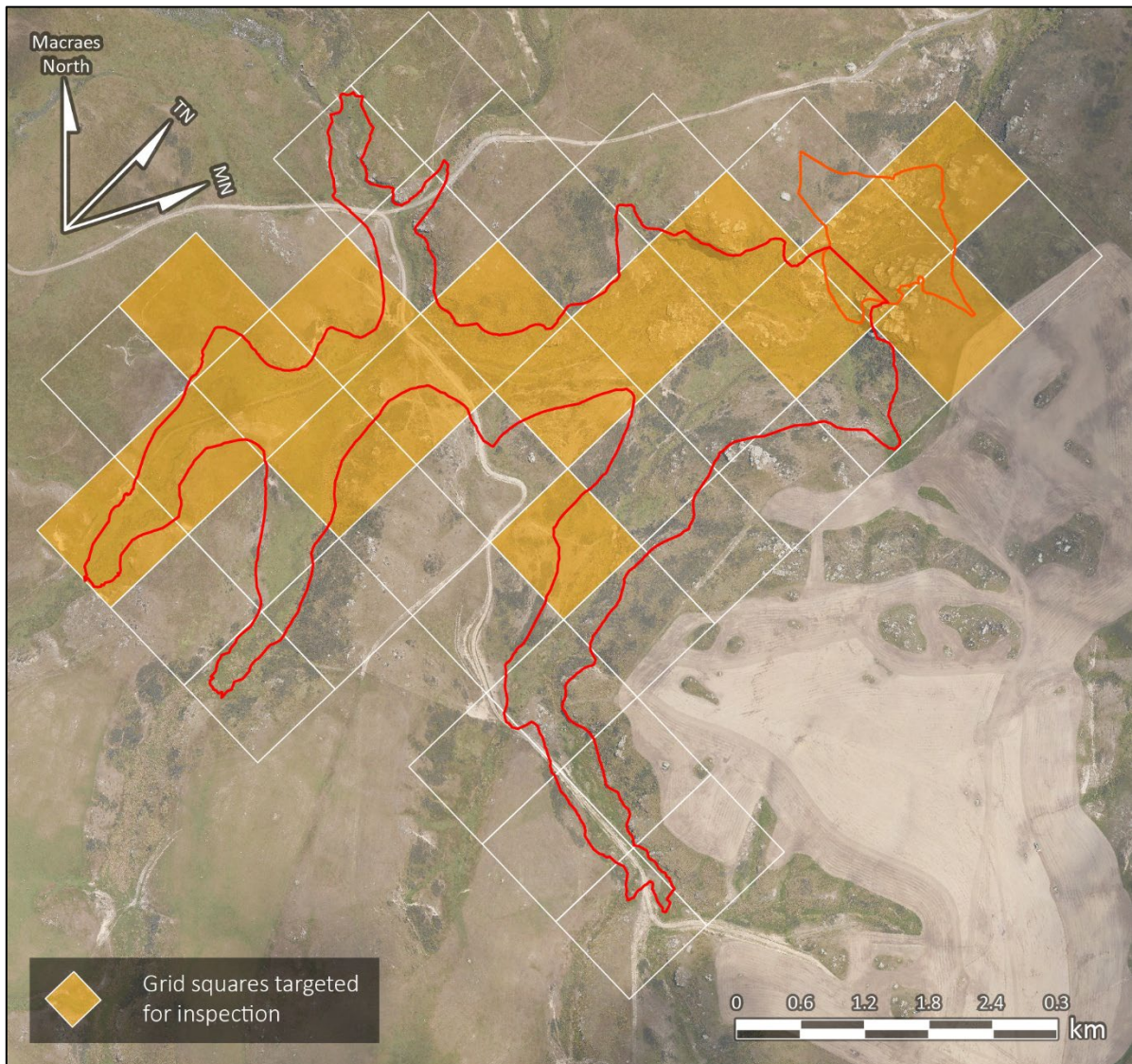


Figure 146. Areas identified for survey based on desktop review.

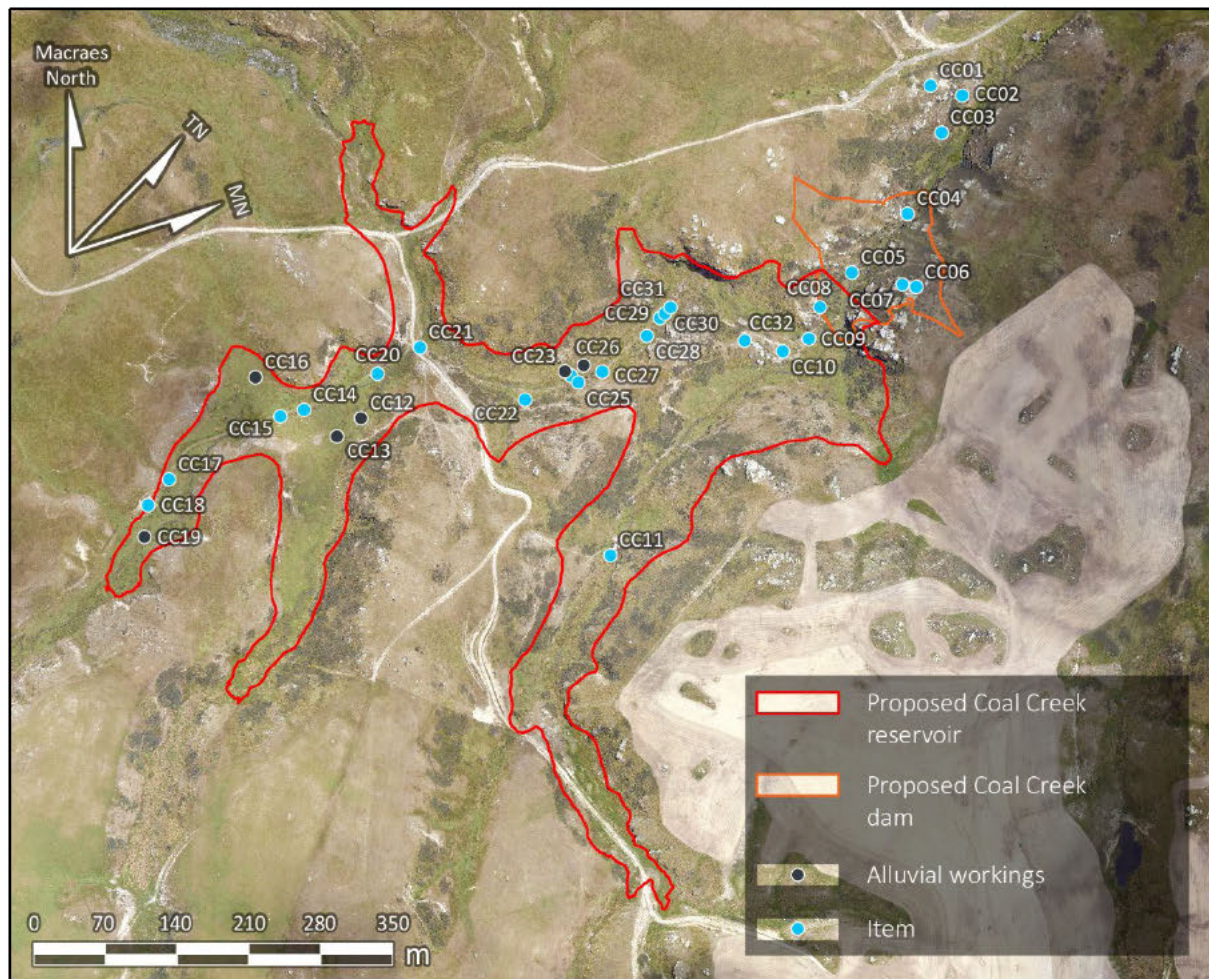


Figure 147. Overall survey area with specific feature markers shown (2025 OGNZL aerial photography).

10.3.1 Northern Adjacent Area

Immediately north of the proposed dam footprint (outside of the disturbance area) contains site I42/98, the former battery location associated with the New Zealand Gold and Tungsten Mine (Figure 148). Features noted on site included a series of revetments around the battery location (CC01, Figure 149), the cut for the stamper battery (CC02, Figure 150), and an overgrown water race adjacent to Coal Creek (CC03, Figure 151). The area was heavily overgrown with scrub, though some more obvious features were easily identifiable within the landscape.

Table 20. Items identified in the northern adjacent area.

Ref	Details
CC01	Large semi-circle revetment west of the former battery location (Figure 148).
CC02	Former stamper battery location consisting of a rectangular cut in the shist outcropping (Figure 148).
CC03	Water race running parallel to and west of/uphill from Coal Creek, leading towards the stamper battery location (CC02, Figure 148).

10.3.2 Dam Footprint

The footprint of the proposed dam structure primarily consists of a moderately deep gully with Coal Creek at its base (Figure 152). Five features were recorded, primarily consisting of races and revetments running along the western slope of the gully. Three recorded features consisted of sections of race supported by stone revetment

(CC04, Figure 154; CC05, Figure 155; and CC06, Figure 157-Figure 158) with an additional two sections of revetment noted and marked on the map but not otherwise recorded. The two other features recorded also consisted of revetment (Figure 156). Both appear to be part of one former single revetment that terminated at a cliff face overlooking the gully. Based on an analysis of LiDAR imagery it appears the revetment may have once fed a cross-gully flume. The overall area was heavily overgrown with scrub in some areas, making identification of some features very difficult. Revetment CC08 was nearly missed due to the volume of scrub growth present and it is possible that other similar features are present that were not identified during the survey.

Table 21. Items identified within dam footprint.

Ref	Details
CC04	Race or track supported by revetment (Figure 154).
CC05	Race or track supported by revetment (Figure 155).
CC06	Revetment at top of high schist outcropping (Figure 156).
CC07	Additional revetment in outcrop next to CC06.
CC08	Race or track supported by revetment (Figure 157-Figure 158)

10.3.3 Northern Arm of Reservoir

The landscape of the northern arm of the reservoir was somewhat more open immediately south of the dam location (Figure 159). Vegetation growth was less prominent, consisting of some low tussock and ankle high grass. Towards the south the landscape began to change, with a low central ridgeline that rose as it continued south. Features here consisted of more revetments and a water race. One portion of breached revetment (CC09) appeared to have once supported the tramway over Coal Creek, immediately south of the proposed dam (Figure 160-Figure 161). Directly south of this was a 2.2m tall revetment with a concave depression in the top facing northward (CC10), which likely once supported a flume (Figure 162). The remaining five features recorded consisted of a long water race (CC28, Figure 169), three sections of revetment supporting said race (CC29, Figure 164; CC30, Figure 165; and CC31, Figure 166) and a cut for the race through a section of schist bedrock (CC32, Figure 167). The broad gully branched towards the south into the south-east and south-west sections described below.

Table 22. Items identified in the northern arm area.

Ref	Details
CC09	Breached revetment with Coal Creek running through it (Figure 160-Figure 161).
CC10	Stone revetment with concave top (Figure 162).
CC28	Water race on slope above creek (Figure 163).
CC29	Section of revetment supporting race CC28 (Figure 164).
CC30	Section of revetment supporting race CC28 (Figure 165).
CC31	Section of revetment supporting race CC28 (Figure 166).
CC32	Section of race CC28 cut through schist bedrock (Figure 167).

10.3.4 South-East Arm of Reservoir

The south-east arm of the reservoir had more gradually sloped sides than the dam location to the north, with a broader and flatter base (Figure 170). Vegetation consisted of alternating areas of ankle high grass and dense tussock with intermittent scrub growth. The only feature identified here was a possible water race in the base of the gully (C11, Figure 31). Unfortunately, its alignment went through areas of the densest tussock growth so

its extent could not be confirmed. At the time of recording no water ran through the race depression despite there being a reasonable flow in Coal Creek indicating that the race was likely not a natural feature. Based on its north-south alignment it was possibly once used to feed additional waterflow into Coal Creek.

Table 23. Items identified in the south-east arm area.

Ref	Details
CC11	Water race (Figure 31).

10.3.5 South-West Arms of Reservoir

The South-west arm of the reservoir was the most extensive. In order to best illustrate the volume of features and locations examined the area was subdivided into four subsections being the northern, north-central, central, and southern section. As with other parts of the project area, the majority of features identified were revetments and water races with the addition of a series of pits and an earthen causeway related to the former tramway.

South-West Arm: Northern

Beginning at the northern end of the south-west reservoir branch the landscape narrows with moderately sloped sides and a relatively narrow base cut by Coal Creek. The landscape was relatively open with moderate scrub growth on the slopes of the gully and ankle height grass otherwise located throughout (Figure 172). On the east side of Coal Creek two features were identified, being revetments likely associated with the tramline (CC25, CC27, Figure 174-Figure 175). On the western side of Coal Creek there was the location of two concentrations of pits and mounds likely relating to gold mining (CC23, Figure 173; CC26, Figure 176). Also identified was a revetment with a concave surface which ran east to west on the west bank of Coal Creek (CC24, Figure 174-Figure 175) running perpendicular to the tram revetment CC25.

Table 24. Items identified in the northern subsection of the south-west arm area.

Ref	Details
CC23	A series of pits and mounds immediately below a large outcropping (Figure 173).
CC24	Concave topped revetment on the western side of Coal Creek running east to west (Figure 174-Figure 175).
CC25	Revetment likely associated with tramline on east side of Coal Creek running north-south (Figure 174-Figure 175).
CC26	Further pits and mounds located north of CC23-25 (Figure 176).
CC27	Revetment likely associated with tramline on east side of Coal Creek.

South-West Arm: North Central

The south-west branch broadened and briefly turned westward here as a smaller subbranch lead to the north-west, with a modern road running east to west through the area before narrowing again and continuing south (Figure 177). The upper slopes were covered with heavy scrub cover which decreased towards the bottom where light tussock cover, and ankle high grass was dominant. This made it difficult to identify any features on the upper slope. At the northern end of this section a long portion of revetment was identified, likely having once supported race CC28 described above (CC22, Figure 180). The modern roadway crosses Coal Creek and a modern culvert beneath the roadway appears to integrate part of an old causeway which would have originally allowed the tramline to bridge the creek (CC21, Figure 179). Further south of this a small section of revetment was identified as supporting a section of the tramline (CC20, Figure 178). The small north-west branch did not contain any identifiable archaeology.

Table 25 Items identified in the north central subsection of the south-west arm area.

Ref	Details
CC20	A small section of revetment along tramline (Figure 178).
CC21	Remains of a revetment repurposed for a modern road crossing over Coal Creek (Figure 179)
CC22	Long section of revetment on slope, likely supporting mildly eroded race (Figure 180)

South-West Arm: Central

The central section once again broadened as the reservoir area branched again to the east and west. Again, the slopes, especially to the east, were covered in heavy scrub growth obscuring any archaeology present. The central portion was broad and flat with Coal Creek located at the western side and heading down the south-west branch. The flat central area was moderately to sparsely vegetated with tussock while the remainder was ankle high grass. Two areas recorded by Teele as containing remains of workings were examined here. CC12 (Figure 182) was the northern most and consisted of an undulating landscape, possibly the eroded remains of pit sluicing though the features were not clearly discernible at time of recording. CC16 was located further to the south and west and was only lightly vegetated with low grass (Figure 186). Some small undulation was noted, possibly the results of eroded paddocking style workings. CC13 consisted of a single pit with adjacent spoil heap (Figure 183). CC14 and C15 indicate points along the tramline earthen mound causeway which runs north to south with CC15 specifically noting a point where the causeway has been breached and a cross section is visible (Figure 184, Figure 185).

Table 26. Items identified in the northern subsection of the south-west arm area.

Ref	Details
CC12	Area marked by Teele as containing workings, undulating landscape was noted, possibly the remains of pit working (Figure 182).
CC13	Pit and spoil heap (Figure 183)
CC14	Earthen mound causeway of tramline (Figure 184)
CC15	Visible cross section of causeway (Figure 185)
CC16	Area marked as containing workings by Teele, no features visible during survey (Figure 186)

South-West Arm: South

The southern portion of the south-west branch narrowed when compared to the areas immediately north, though it was moderately broad in some places. Overall, it was one of the most lightly vegetated areas of the survey with mostly grass and some sparse tussock centred around Coal Creek. Two features were identified, consisting of a small section of revetment supporting the tramline (CC17, Figure 188) and a cut through the hillside for the former tramline (CC18, Figure 189). A section noted by Teele as containing workings consisted of a series of low undulations, possibly the result of paddocking style gold working (CC19, Figure 190).

Table 27 Points of interest at the central portion of the south-west reservoir branch.

Ref	Details
CC17	Revetment supporting tramline (Figure 188).
CC18	Cut for tramline in slope (Figure 189).
CC19	Series of subtle mounds possibly representing the remains of paddocking type workings (Figure 190).



Figure 148. Map of features identified in area immediately north of the dam footprint (2025 OGNZL aerial photography).



Figure 149. Revetment (CC01), at far north near battery location, looking east.



Figure 150. Battery location (CC02), viewed from above, looking north.



Figure 151. Water race immediately north of proposed dam (CC03), looking south.



Figure 152. Features recorded in the proposed dam footprint; red dashed lines indicate revetments (2025 OGNZL aerial photography).



Figure 153. Race or track adjacent to schist outcrop (CC04).



Figure 154. Revetment on the western slope of the gully within the dam footprint (CC04), looking west.



Figure 155. Further revetment on west slope of gully (CC05).



Figure 156. Revetment identified at high elevation outcropping on eastern side of gorge (CC06, CC07), looks south.



Figure 157. Race with revetment located immediately to the right (CC08), looking north.



Figure 158. Heavily overgrown revetment immediately next to race (CC08), looking north.

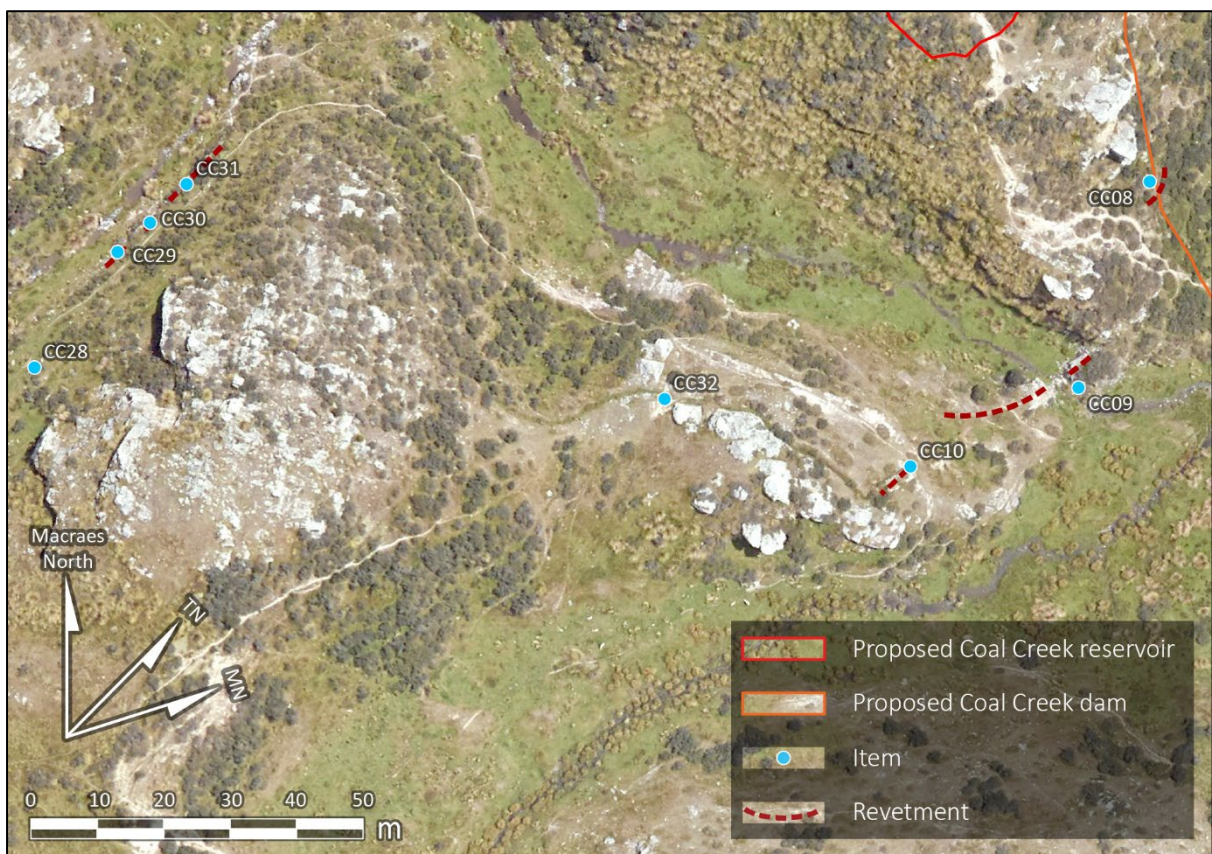


Figure 159. Northern arm of proposed reservoir (2025 OGNZL aerial photography).



Figure 160. Breached revetment (CC09), looking west.



Figure 161. Breached revetment, looking north (CC09).



Figure 162. Large revetment with notable curve in the top centre, possibly to accommodate a flume, looking south (CC10).



Figure 163. Race on slope above tramway (CC28), looks south.



Figure 164. Revetment on slope above tramline (CC29), looking east.



Figure 165. Small revetment above tramline (CC30), looking east.



Figure 166. Longer revetment (CC31) looks north-east.



Figure 167. A portion of the race cut through a shist outcropping (C32), looking south-west.



Figure 168. Same as Figure 167, looking south-east.



Figure 169. Same as Figure 167 and Figure 168 showing depth of cut, looking north-east.

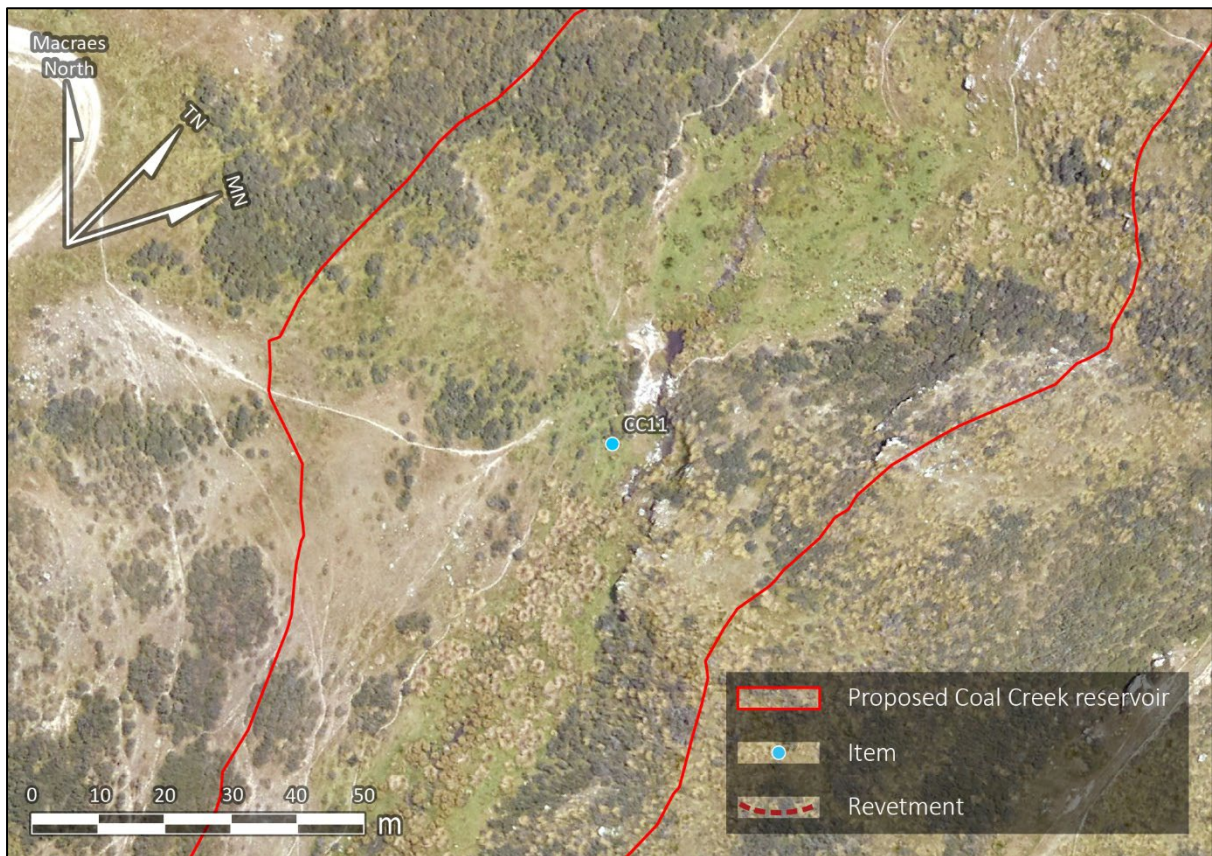


Figure 170. Sole potential feature identified in the south-east arm of proposed reservoir.



Figure 171. Remains of a water race running between scrub growth immediately to the right of Jennings, looking south (CC11).

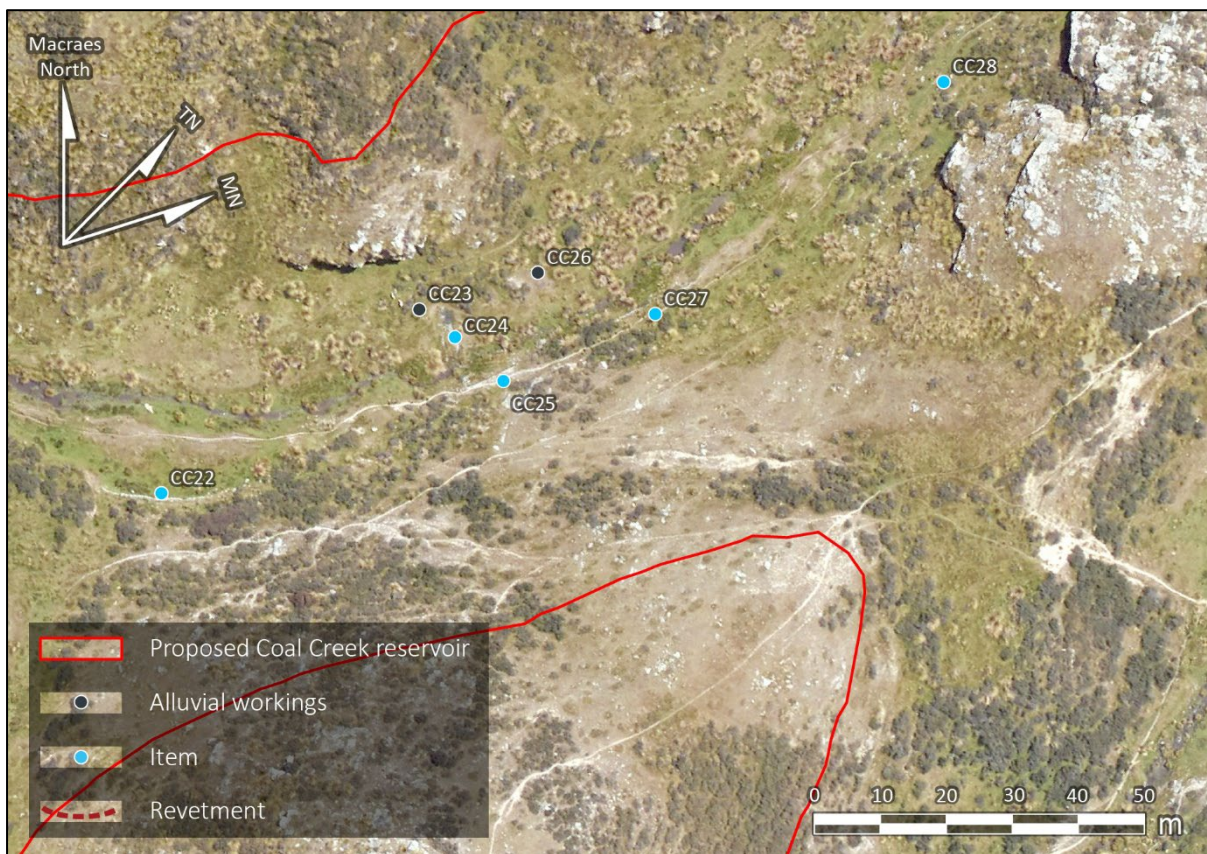


Figure 172. Features identified within northern portion of the south-west arm of the proposed reservoir.



Figure 173. Pits photographed below adjacent outcropping (CC23).



Figure 174. Concave topped revetment (CC24) heading perpendicular to revetment on opposite side of Coal Creek (CC25), looks east.



Figure 175. Photo of C24 and C25 showing collapsed portion of C24 revetment that once abutted CC25.



Figure 176. Pits and mounds (CC26) immediately north of CC24 and CC25.



Figure 177. Features identified within north-central portion of the south-west arm of the proposed reservoir (2025 OGNZL aerial photography).



Figure 178. Small portion of revetment along tram line (CC20), looks west.



Figure 179. Remains of stone revetment that once crossed the stream (CC21).

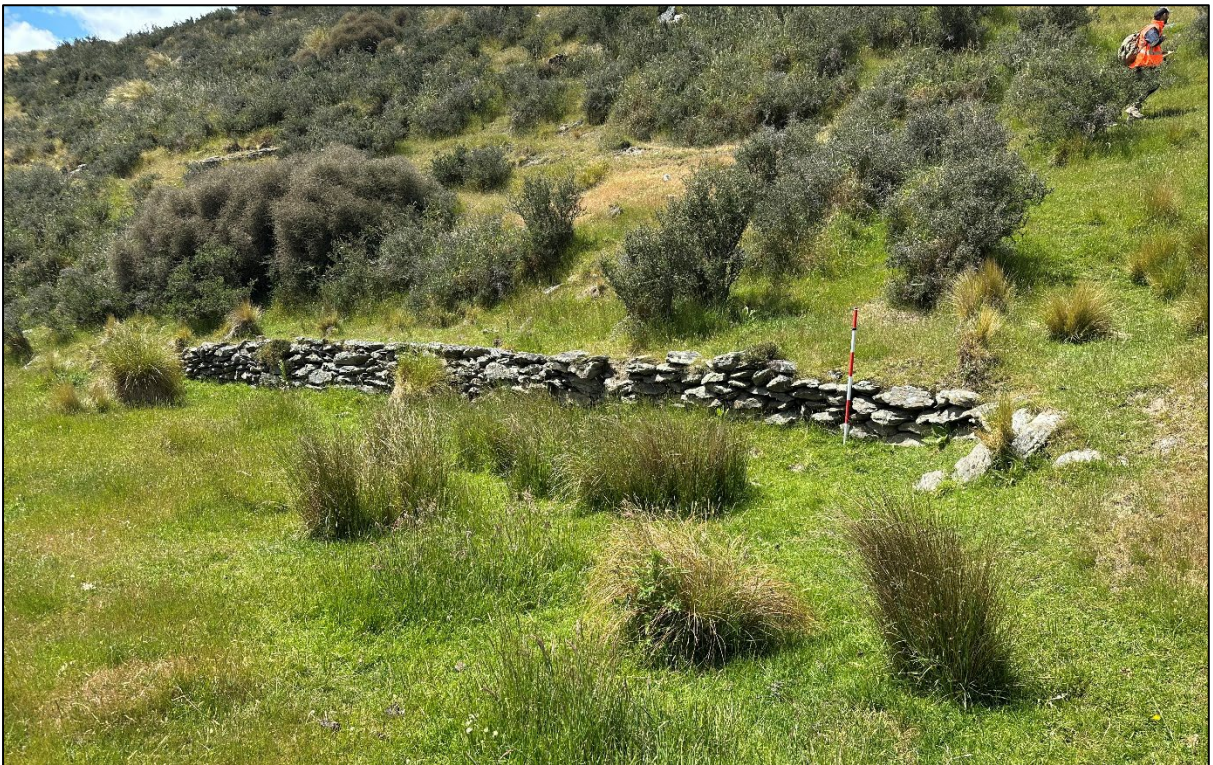


Figure 180. Revetment on slope opposite the tramway (CC22), looks east.

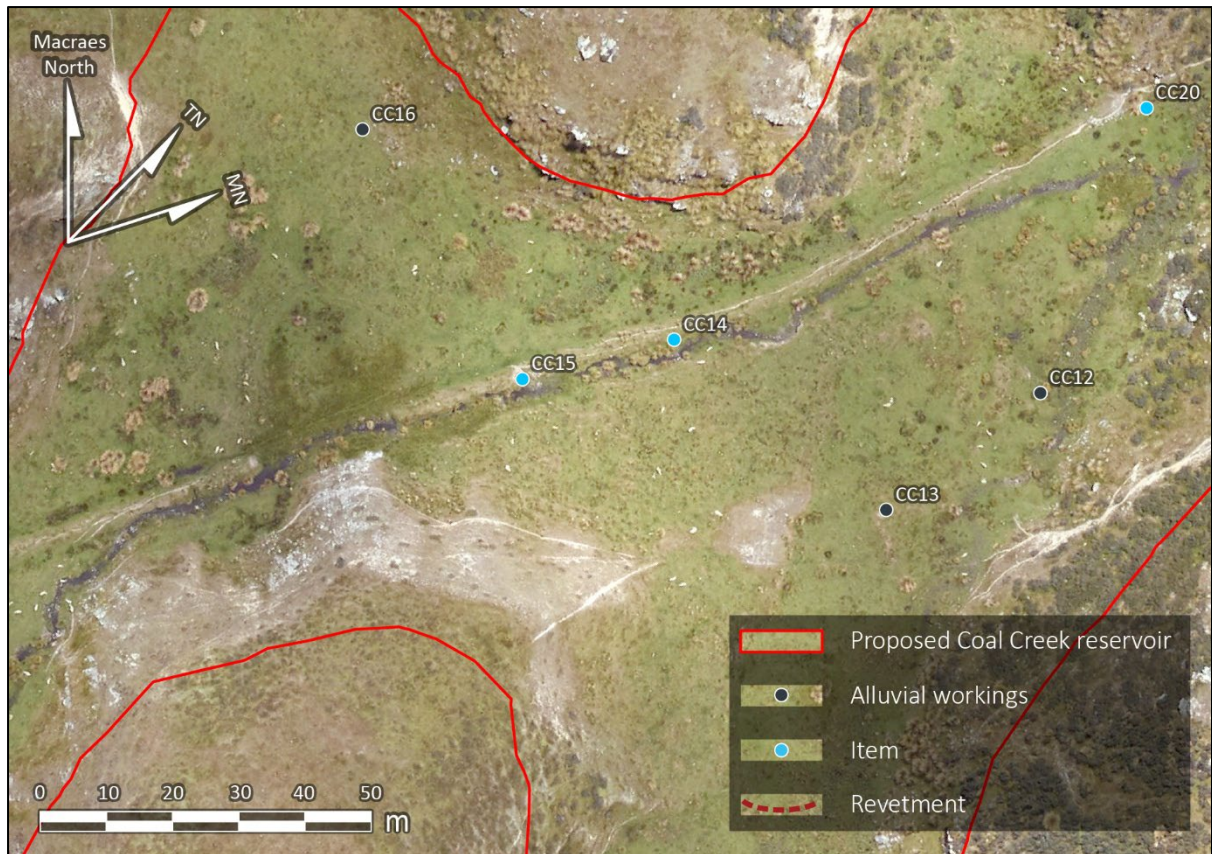


Figure 181. Features identified within the central portion of the south-west arm of the proposed reservoir (2025 OGNZL aerial photography).



Figure 182. Gently undulating landscape, looking west towards area of mining activity recorded by Teele (CC12).



Figure 183. Potential prospecting pit with adjacent spoil pile, looking south (CC13).



Figure 184. Earthen mound of the tram causeway running north to south (CC14), looking east.



Figure 185. Cross section of tram causeway (CC15), looking south.



Figure 186. Area recorded as containing workings by Teele (CC16), looking south.

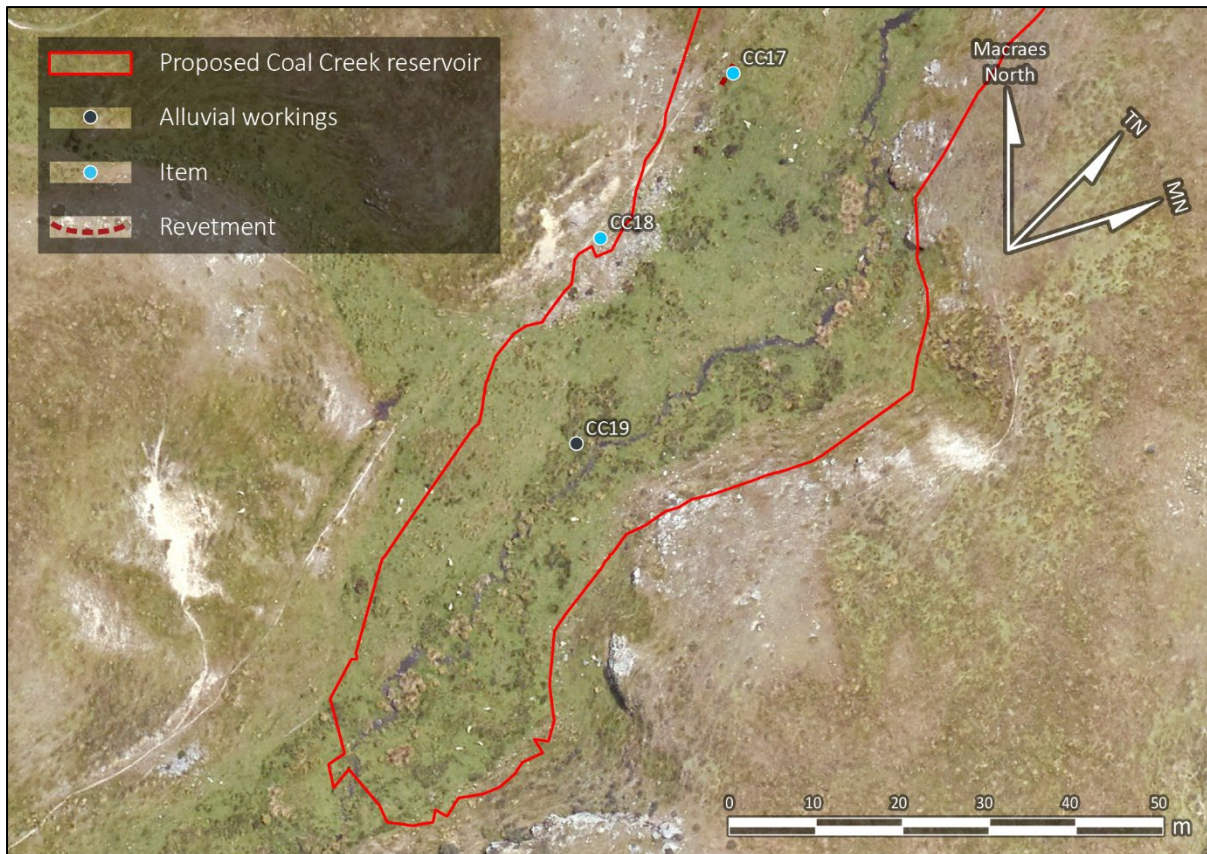


Figure 187. Features identified within the southern portion of the south-west portion of the proposed reservoir (2025 OGNZL aerial photography).



Figure 188. Revetment on slope of the hill associated with tramway (CC17), looks west.



Figure 189. Cutting from hillside for the tramway (CC18), looking south.



Figure 190. Area marked as mining area on Teele's survey map (CC19), looks west.

10.4 Archaeological Values

The archaeological values of the sites in the project area, and relevant adjacent sites, are assessed in the tables below.

Table 28. Assessment of archaeological values for Coal Creek Workings (I42/221).

Site	Value	Assessment
I42/221 (Coal Creek Alluvial Workings)	Condition	The remains of paddocking style gold workings would have never been distinct but have been further impacted by erosion and vegetation. Any other remains would be related subsurface. Assessment – Poor and Below Ground
	Rarity/Uniqueness	19 th century gold mining remains of this nature are common in New Zealand and the Dunedin District. Assessment – Low
	Contextual value	Coal Creek was the site of one of North Otago's earliest gold rush locations with miners present from 1862 onwards. It is notable as one of a suite of areas worked by the first wave of miners. Additionally, it is related to the later sites I42/97 and I42/98 as representative of an evolving mining history at the specific locale from alluvial to hard-rock processing. Assessment – Moderate
	Information potential	The remains of paddocking style workings leave little to be studied and while there may be some subsurface deposits present it is unlikely that any discrete features will be present which would add significantly to our understanding of pre-1900 mining activities in New Zealand. Assessment – Low
	Amenity value	The remains of the paddocking works are essentially invisible unless someone knows what to look for, being represented by a series of low mounds obscured by vegetation. Assessment – Low
	Cultural associations	The Coal Creek workings are primarily associated with 19 th century Pākehā occupation. Assessment – Pākehā

Table 29. Assessment of archaeological values for the (I42/214).

Site	Value	Assessment
I42/98 and I42/97 (New Zealand Gold and Tungsten Mine and Battery)	Condition	Many of the associated revetments are still in reasonably good condition, as is the earthen causeway which once supported the tramline. The plant from I42/98 has been historically removed but the associated cut and revetment are both in good condition. Assessment – Fair
	Rarity/Uniqueness	Early 20 th century goldmining sites are common in New Zealand and the Waitaki District; however, together these sites include a

Site	Value	Assessment
		reasonably intact suite of features characteristic of hard rock mining (mine workings, battery site, water races, etc.) Assessment – Moderate
	Contextual value	The sites are associated with I42/221, being continuations of the early alluvial workings captured by that site. I42/97 and I42/98 are also associated with the wider mining landscape that defines the history of the region. The New Zealand Gold and Tungsten Mine and Battery has high contextual value as a collection of infrastructural features relating to the 19 th and early 20 th century mining of Macraes Flat. Assessment – High
	Information potential	Some information about water management and construction techniques involved in the formation of multiple races, revetments and the batteries could add to the body of knowledge surrounding such operations in early 20 th century New Zealand. Assessment – Moderate
	Amenity value	While some of the revetments are impressive for their size and locations the overall inaccessibility of the area and vegetation growth limit this value. Assessment – Moderate
	Cultural associations	The site is primarily associated with 20 th century Pākehā occupation. Assessment – Pākehā

10.5 Other Heritage Values

The project area sits within an Archaeological Alert Layer mapped as part of the DCC 2GP.

Other heritage values are considered in a separate heritage assessment prepared for Resource Consent purposes.

10.6 Effects of the Proposed Works

Any archaeological evidence within the project area will be destroyed by the proposed dam construction and flooding. While flooding may not immediately affect some archaeological features, subsequent siltation and water movement is expected to effectively destroy all archaeology within the reservoir footprint.

The revetted water races, tramway, and other features are interpreted as being associated with the post-1900 battery at I42/98 and can be considered an element of that site. This race will be largely destroyed by dam construction but the core battery features will remain unaffected.

Site I42/97 (New Zealand Gold and Tungsten Mine) will not be affected.

Effects on values for the project component, considering the recommendations proposed below, are summarised in Table 30.

Table 30. Summary of Coal Creek Dam and Reservoir effects.

Site Number	Site Name/Description	Site Type	Effect	Notes
I42/97	NZ Gold and Tungsten	Mining – gold	None	
I42/98	NZ Gold and Tungsten Battery	Mining – gold	Modified	Post-1900 site with high to moderate archaeological values. Project works will destroy some of the revetted infrastructure associated with the battery up coal creek, but the core battery site will remain unaffected. The proposed archaeological investigations will realise the moderate information potential. The contextual value will be degraded and the other values will remain unchanged.
I42/221	Coal Creek Alluvial Workings	Mining – gold	Destroyed	Site has moderate to low archaeological values. An archaeological authority has previously been issued for the destruction of this site (2017/430). The proposed archaeological investigations will realise the low information potential. The other values will be lost.

10.7 Alternative Options

At the time of seeking resource consent for the Coal Creek Reservoir a number of potential dam site options were considered, however the alternative options either were unsuitable for dam construction or could not provide the flow augmentation required. The proposed reservoir volume (and associated dam size) is required to ensure sufficient waterway flow for ecological purposes and changes are not considered feasible. A Resource Consent and Archaeological Authority have previously been issued for the proposed work.

10.8 Recommendations

- An Archaeological Authority is required for the proposed works. The authority should provide for the destruction of the Coal Creek workings (I42/221). The authority should have a duration of 35 years, to align with MP4 timelines and the potential for the dam to be constructed following mine closure if required to manage sufficient waterway flow.
- An archaeological management plan prepared to support this authority should specify:
 - The detailed mapping and recording of the features relating to I42/221 within the project area prior to works proceeding.

- Alongside the recording of site I42/221, the detailed mapping and recording of the features relating to I42/97 and I42/98, and other post-1900 features in the project area, as a dimension of the earlier site's archaeological context.
- Areas around the archaeological features making up the core of the New Zealand Gold and Tungsten Battery site (I42/98) to be demarcated and protected on the ground using physical barriers (plastic mesh safety fencing, or similar) to avoid any accidental disturbance during project works.
- A regular maintenance regime for the physical barriers at the site, to ensure they remain visible and effective throughout the project duration.
- An on call-protocol for managing the discovery of any archaeological material as part of the proposed work that was not accounted for during the specified archaeological recording.

Proposed archaeological authority conditions and an archaeological management plan incorporating these recommendations for the Coal Creek Dam and Reservoir is included as Appendix D1 and D2.

11 Camp Creek Dam and Reservoir

11.1 Proposed Works and Project Area

11.1.1 Camp Creek Dam

The proposed Camp Creek Dam and Reservoir constitute a portion of the MP4 project's proposed water quality management methods, specifically taking on the role of water storage and flow augmentation if required.

The dam will sit across Camp Creek approximately 800m to the south-east of Horse Flat Road (Figure 13-Figure 192). The proposed structure consists of an embankment with an approximate height of 29 m behind which approximately 1.4 billion litres of water can be stored when at full capacity, with a reservoir footprint of approximately 13.7 ha. This reservoir will flood most of the gully between the dam and Horse Flat Road.

A Resource Consent for this project component is already in place, having been issued as part of Macraes Phase 3.²¹⁰

²¹⁰ WDC 201.2011.35.

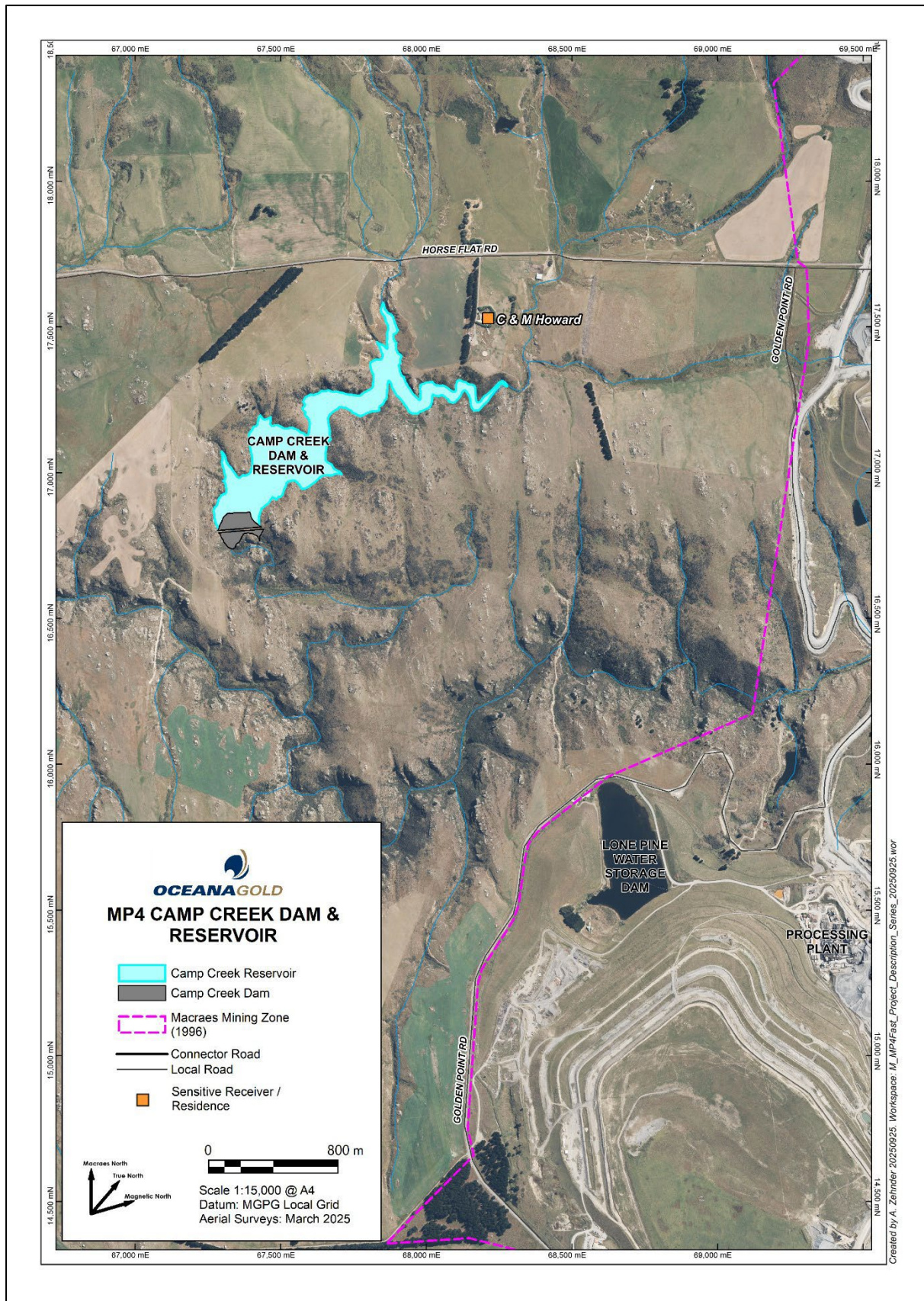


Figure 191. Camp Creek Dam and Reservoir.²¹¹

²¹¹ OGNZL.

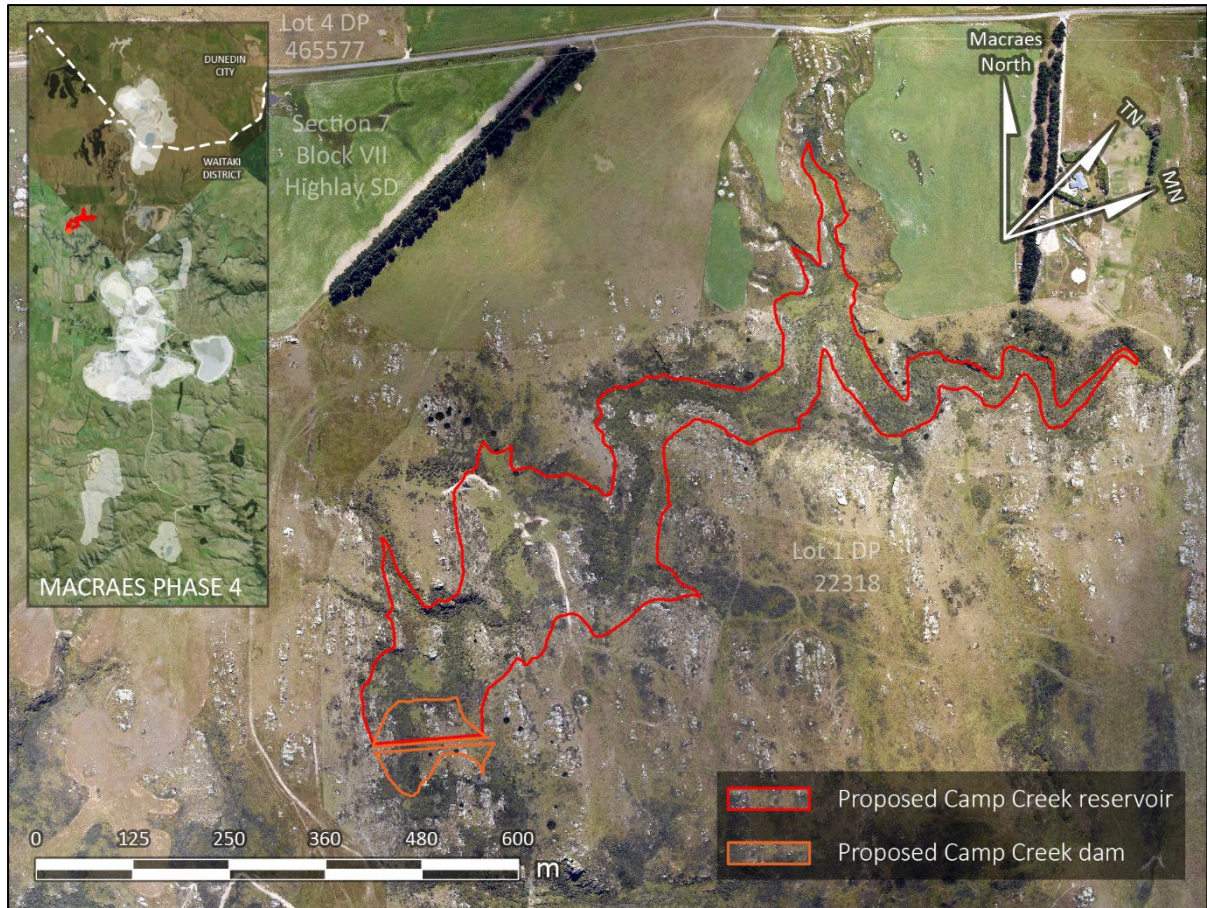


Figure 192. Detail of Camp Creek Dam and Reservoir and its relationship to the wider operation (2025 OGNZL aerial photography).

11.2 Research Results

11.2.1 Historic Record

A review of historic newspapers and survey plans has not revealed any information regarding past occupation at camp creek. No mining claims or areas of early alluvial mining associated with the project area are shown on survey maps,²¹² though an early communication route did cross camp creek.²¹³ Articles in the 1890s record some flood damage and repairs to Horse Flat Road where it crosses the creek, but no mention of mining along the creek was identified.²¹⁴

Mining records, however, provide at least some references to alluvial workings at Camp Creek by the 1880s. Archives New Zealand holds eight applications under the Mining Act for races, dams, and claims at Camp Creek, Horse flat from a group of mainly miners.²¹⁵ Unfortunately, the precise locations of these features/areas is not clear.

Historic aerial photographs show how the environs of the project area evolved over the latter years of the 20th century and into the 2000s (Figure 193).

11.2.2 Previous Archaeological Work

An archaeological survey of Camp Creek was carried out in late 2010 by Cathryn Barr and Ben Shaw, on behalf of Opus (now WSP), as part of the Macraes Phase 3 project.²¹⁶ Their survey identified ten archaeological sites within the upper Camp Creek area to the immediate south-east of horse flat road (Figure 21 and Table 31). The Opus survey informed the extent of the proposed dam, with the reservoir positioned to avoid the large complex of alluvial workings and hut remains that comprise site I42/157, as well as the Horse Flat Road stone culvert (I42/154) and a stone hut ruin, colloquially known as 'Harry's Hut' (I42/153; Figure 194). Three segments of water race are recorded as separate sites in the Opus survey (I42/148, I42/149, I42/151), though it is likely that all three features are part of a single larger race running along the north-east arm of the proposed reservoir.

²¹² SO 620, 629, 4565, and 4534.

²¹³ See SO 620.

²¹⁴ "Wahimo County Council." Otago Daily Times, 19 May 1892, Page 4.

<https://paperspast.natlib.govt.nz/newspapers/ODT18920519.2.42>

²¹⁵ Archives New Zealand, R24695051, R24695043, R24695102, R24695251, R24695252, R24695398, R24695514, R24695528.

²¹⁶ Barr, *Archaeological Survey – Macraes Phase III*.

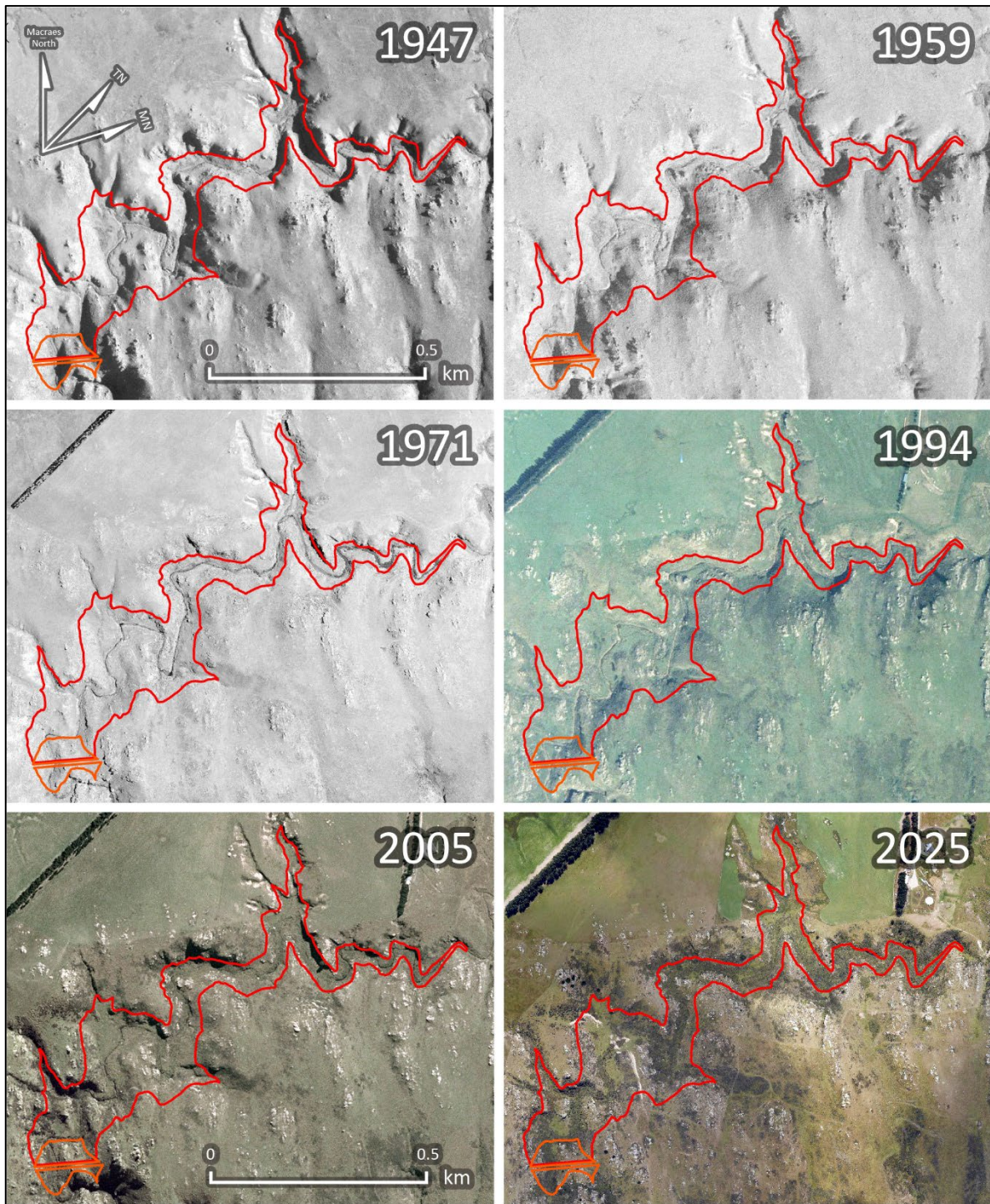


Figure 193. Historical aerial photographs showing the project area over time.²¹⁷

²¹⁷ Retrolens.



Figure 194. Harry's Hut (I42/153) as it appeared in 2010.²¹⁸

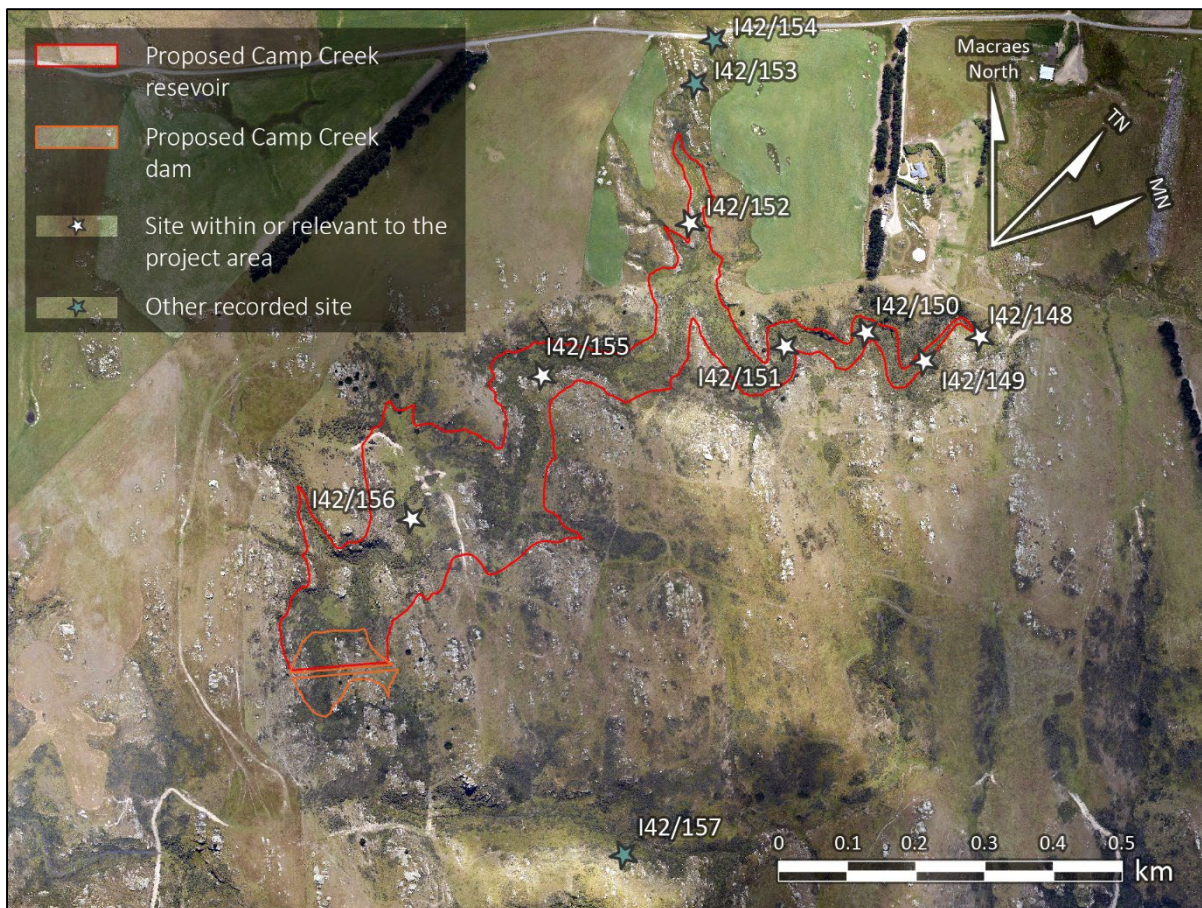


Figure 195. Recorded archaeological sites and extents of relevant past surveys (2025 OGNZL aerial photography).

²¹⁸ WSP.

Table 31. Table of recorded archaeological sites in the vicinity of the site.

Site Number	Site Name	Site Type	Details	Archaeological Authorities	Site Condition
I42/148	N/A	Mining – gold	Water race and prospecting pits.	N/A	Fair
I42/149	N/A	Mining – gold	Water race.	N/A	Fair
I42/150	N/A	Mining – gold	Prospecting pit.	N/A	Fair
I42/151	N/A	Mining – gold	Water race.	N/A	Poor
I42/152	N/A	Mining – gold	Pit. Other possible gold workings also in area.	N/A	Poor
I42/153	Harry's Hut	Historic – domestic	Stone hut.	N/A	Fair
I42/154	N/A	Transport/ communication	Stone culvert.	N/A	Fair
I42/155	N/A	Mining – gold	Water race and workings.	N/A	Poor
I42/156	N/A	Mining – gold	Water race, workings, and stone hut.	N/A	Fair
I42/157	N/A	Mining – gold	Mining workings	N/A	Good

11.3 Survey

A survey of the project area was undertaken by Jeremy Moyle and Renée Sadlier on 22 April 2026. The general areas where archaeological features, or areas with archaeological potential, were identified in the desktop review and visited for survey are shown in Figure 196.



Figure 196. Areas identified for survey based on desktop review (2025 OGNZL aerial photography).

11.3.1 Camp Creek Dam and Reservoir

During the survey it became apparent that the water race recorded at different locations as/as part of sites I42/148, I42/149, I42/151, I42/155, and I42/156 is probably the same feature running along the true left bank of the creek (Figure 197-Figure 198). This race was not able to be found again at I42/149, I42/151,²¹⁹ and I42/155 as additional spinescent vegetation growth in the 16 years since the 2010 survey had made these sites inaccessible (Figure 199). The race segment recorded as I42/151 appears to be incorrectly located on ArchSite when a comparison is made to its location as plotted in figures in the 2010 survey report. A previously unrecorded section of race was identified at the bend in the river to the south-east of I42/152 (Figure 200). Where observed, the race was approximately 500mm wide.

Prospecting pits were inspected at I42/152 (one pit; Figure 201) and I42/148 (two pits). These were all approximately 2m wide and 800mm deep. The pit recorded as I42/150 was not accessible because of vegetation growth.

Site I42/156 was the most substantial collection of mining features inspected during the survey (Figure 202). It consisted of the aforementioned water race (with branches to probable sluiced areas; Figure 203), prospecting pits (Figure 204), and a variety of sluicings. This latter feature type included both areas with steep escarpments adjacent to the creek (Figure 205) and an intermittent water course to the north-west of the site, as well as areas of low undulating ground interpreted as trampled and eroded sluicing/paddock areas (Figure 206). The hut remains recorded in the 2010 survey was not identified in the field, but a re-examination of LiDAR data following fieldwork revealed a rectangular feature indicating its likely position (Figure 202). A possible small dam was also

²¹⁹ A re-examination of the previous survey data following fieldwork suggested that the ArchSite location is incorrect, with the actual water race segment approximately 50m to the north-east.

located up a gully to the north of the site (Figure 207). The overall character of the site – small race, limited area of workings, no evidence of more permanent stacked stone features – suggested it represented a reasonably small and short duration ground sluicing operation carried out by two-to-three individuals. The age of these features is unclear, but they likely date to either the 1870s when ground sluicing became more commonplace in the area or the 1880s when there is historic evidence for mining in Camp Creek.

Harry's Hut (I42/153) and the stone culvert under Horse Flat Road (I42/154) sit beyond the project area, but were visited *en route* to the survey sites. The mortared stonework of Harry's hut was in fair condition but being used for shelter by stock and manure is building up in the interior (Figure 208). The mining complex recorded as I42/157 sits downstream of the project area and was not visited as part of the survey.

No new sites were identified.

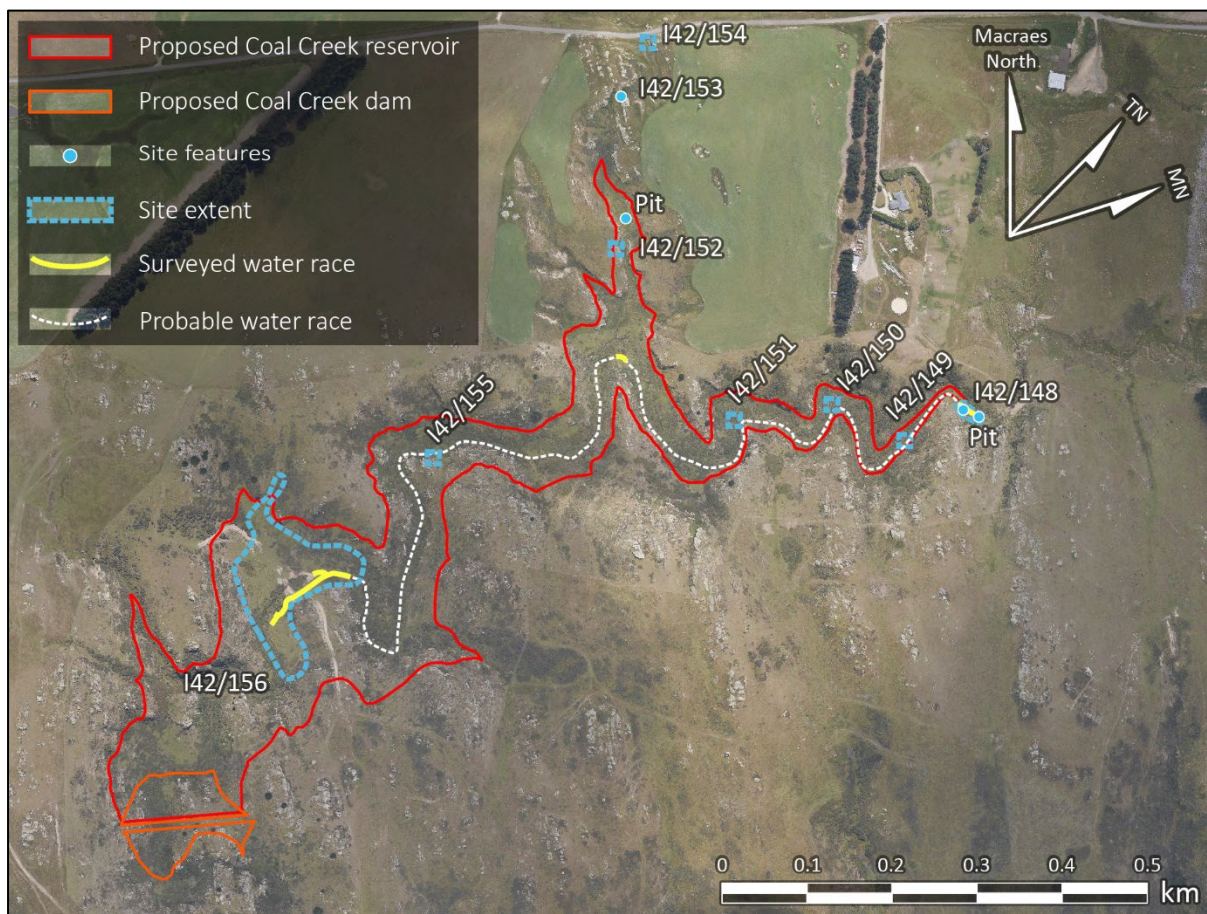


Figure 197. Camp Creek Sites and survey features (2025 OGNZL aerial photography).



Figure 198. Prospecting pit and water race segment at I42/148, looking north-east.



Figure 199. Inaccessible vegetation near the recorded location of I42/151, looking west.



Figure 200. Previously unidentified water race segment south-east of I42/152, looking west.



Figure 201. Prospecting pit at site I42/152, looking north-west.

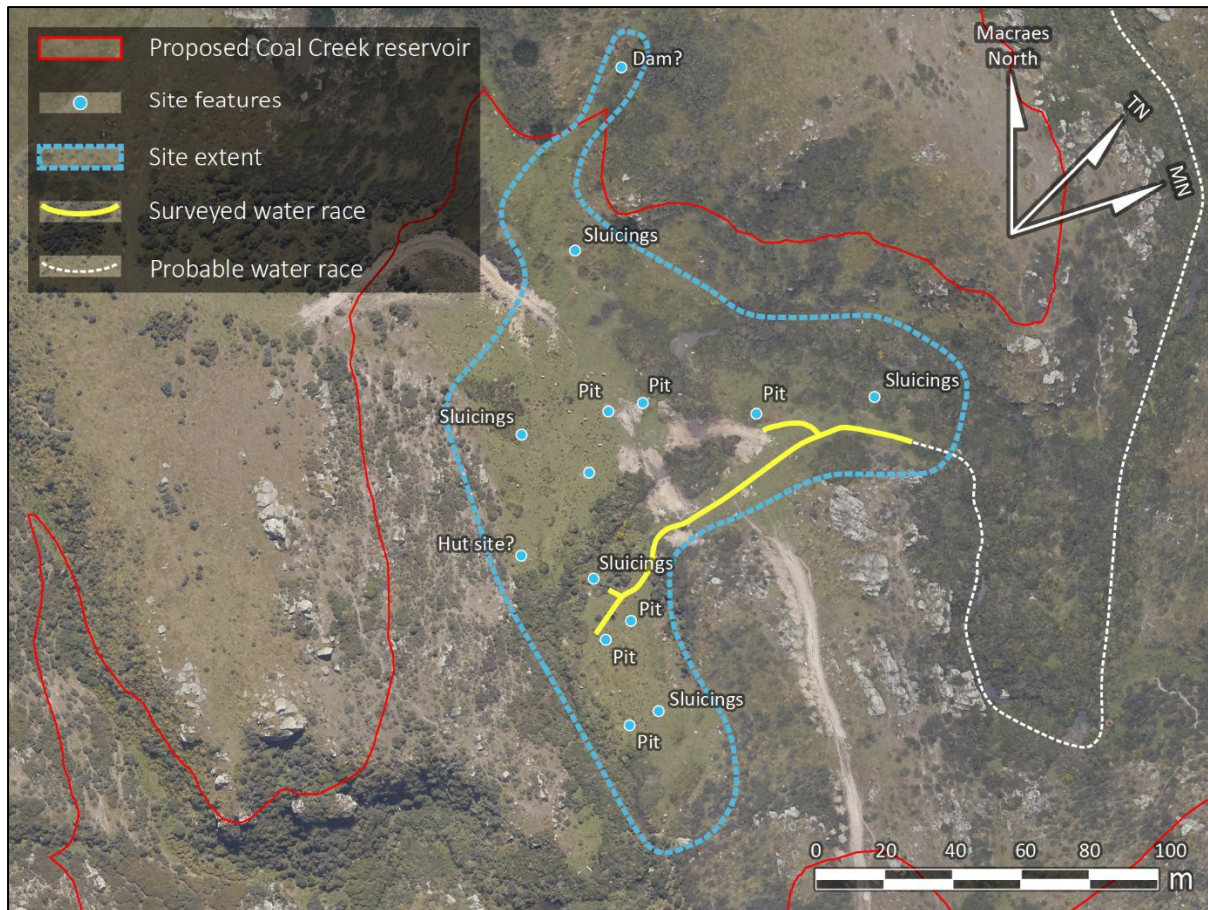


Figure 202. Features making up I42/156 (2025 OGNZL aerial photography).



Figure 203. Water race within I42/156, looking west.