

Bendigo-Ophir Gold Project

An Archaeological and Heritage Management Plan

Prepared by New Zealand Heritage Properties Ltd

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Document Control

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1 Introduction

The proposed work for the Bendigo-Ophir Gold Project will modify archaeology, and as such Matakanui Gold Ltd (MGL) has applied for an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014. This Archaeological Management Plan (AMP) has been prepared by New Zealand Heritage Properties (NZHP) to outline the procedures to be followed with regard to archaeology. Any changes require the prior written agreement of Heritage New Zealand Pouhere Taonga.

This management plan is intended to be read in conjunction with the BOGP heritage assessment (Woods & Thorrold, 2025) as a tool to manage the effects on archaeology and heritage identified in that document.

2 Responsibilities of the Archaeologist

- Naomi Woods is the proposed person approved by Heritage New Zealand Pouhere Taonga for works under this authority.
- The role of the s45 approved person (or the archaeologist nominated on their behalf) is to ensure archaeological work undertaken for the authority meets current archaeological practice.
- The s45 approved person (or the archaeologist nominated on their behalf) is responsible for delivering all briefings to contractors.
- The archaeologist can, in conjunction with the site foreman, engineers and/or project manager(s), direct works in relation to archaeological sites/features. The archaeologist can stop works if they are impacting archaeological sites.
- The archaeologist is responsible for notifying Matakanui Gold Ltd if works are stopped on site, if kōiwi tangata are found, or if an archaeological site(s) is encountered.
- The archaeologist is responsible for notifying the Heritage New Zealand regional archaeologist, Aukaha, and the New Zealand Police if kōiwi tangata are found.

- The archaeologist is responsible for notifying the Heritage New Zealand archaeologist if any circumstances arise during the exercise of the authority where an archaeological site(s) encountered could provide significant information about the historical and cultural heritage of New Zealand (in relation to section 52(2) of the Heritage New Zealand Pouhere Taonga Act).

3 Contractor Responsibilities

- All contractors and subcontractors must comply with the conditions of the archaeological authority and follow this management plan, including the on-call protocol.
- The contractors must provide at least 2 working days notice of the requirement for an archaeologist to attend the site for the briefing (if it is to take place prior to the commencement of the project), and at least 5 working days notice for any areas that require monitoring.
- The archaeologist is to be notified when new ground is broken in a new area, even if the works do not require monitoring, including works start and works completion.
- All contractors and sub-contractors have a legal obligation to allow the archaeological recording required by the authority to take place. This may mean pausing works to allow archaeological investigation and recording.
- Vegetation removal around heritage sites must be undertaken using hand tools (e.g. brush cutter, line trimmer, loppers) and under the guidance of the archaeologist
- Earthworks within the archaeological site extents shown in Section 7 of the heritage assessment (Woods & Thorrold, 2025) and in the GIS Shapefile supplied by NZHP must be completed using a hydraulic excavator, using a flat edge bucket and excavate in shallow (100mm) scrapes to enable the identification of archaeology. If archaeology is encountered under the On-Call Protocol (OCP; see Page 8 for details), works must stop to allow for recording. Additionally, excavations must then utilise a hydraulic excavator until the archaeologist is satisfied the archaeology has been fully recorded. If ground conditions require a change in bucket (i.e., large cobbles or bedrock), this must be discussed with the approved archaeologist prior to changing.

4 On-Site Briefings

Archaeological briefings will be delivered to all contractors involved with vegetation clearance and/or earthworks on-site or via video conference. Briefings will be delivered by the s45 approved person (Naomi Woods), who based on their availability, may appoint a person to carry out the briefing on their behalf. A briefing register, detailing the name of the contractor, company, date of briefing, authority and person appointed to carry out the briefing, will be maintained by NZHP and MGL and made available to the client, main contractor, subcontractors, or HNZPT as requested subject to privacy.

5 Areas Where the s45 Approved Person Must Be Present

The areas where an archaeologist must be present are based on the presence of known archaeological sites and the risk of encountering those archaeological sites during the course of the project earthworks. As such, the s45 approved person (or person(s) appointed on their behalf), must be present for the following:

- Vegetation removal around all heritage sites prior to their recording.
- Recording of the stone huts (**G41/265, G41/266, G41/267, G41/273, G41/606**), the hut or house terraces (**G41/658, G41/785 and G41/786**), the dam (**G41/269**), revetted road (**G41/589**), culverts and revetments associated with site **G41/782**, archaeological features within sites **G41/256, G41/264, G41/277, G41/604, G41/605, G41/787, G41/788 and G41/789**, and the affected portion water races **G41/6, G41/584, G41/586 and G41/790**. Details of recording requirements for each site are outlined in Table 8-1.

- Excavations within the archaeological site extents as defined in Section 7 of the heritage assessment (Woods & Thorrold, 2025) and in the GIS Shapefile supplied by NZHP.
 - As required by this management plan, excavation of the previously recorded archaeological sites must be undertaken prior to any other works occurring in the vicinity of each site.
 - Excavations within the archaeological site extents should be undertaken until natural deposits are encountered and there is no further potential for archaeological remains to be present.
- Beyond the archaeological site extents works should operate under the on-call protocol (Appendix A);
 - Should the on-call protocol be triggered, variations may apply for areas the archaeologist is required to be present and the archaeologist will communicate variations to contractors.
 - The archaeologist may instruct the on-call protocol to be followed only until earthworks return to areas where the archaeologist must be present again (e.g., a new phase of earthworks starts, the excavator moves to a new area of the site, etc.).

6 Timeframes for Archaeological Work and Stand Down Periods

Anticipated timeframes for the archaeological work are as follows:

- Recording the stone huts (**G41/265, G41/266, G41/267, G41/273, G41/606**), stone-faced dam (**G41/269**), revetted road (**G41/589**), culverts and revetments associated with site **G41/782**, and the affected portions of water races **G41/6, G41/584, G41/586** and **G41/790** prior to modification – 2-3 weeks
- Recording archaeological features associated with sites **G41/256, G41/264, G41/277, G41/604, G41/605, G41/787, G41/788** and **G41/789** (gold workings), and **G41/658, G41/785** and **G41/786** (house/hut terraces), including water races, sluice faces, terraces, prospecting pits, earth dams, tailings and mullock piles prior to modification– 2-3 weeks
- Monitoring demolition of stone huts (**G41/265, G41/266, G41/267, G41/273, G41/606**), stone-faced dam (**G41/269**), revetted road (**G41/589**), culverts and revetments associated with site **G41/782**, affected portions of water races **G41/6, G41/584, G41/586** and **G41/790** and cross-sectioning sample of tailings/mullock piles within **G41/264** – 2-3 weeks
- Earthworks – the timeframes for monitoring earthworks are dependent on the progress of the topsoil scrape and density of archaeology.

Time must be allowed for the archaeologists to record archaeology. While NZHP aims to record the archaeology as efficiently as possible, there may be delays to earthworks and contractors must plan for such events. The archaeologist will discuss methods to reduce delays with the contractor and client.

7 Archaeology and Heritage to be Protected

The point(s) at which water races **G41/584** and **G41/586** enter the project area must be clearly marked with semi-permanent warratahs and bunting prior to works commencing. Annual inspections of each location must be undertaken by an archaeologist to ensure they remain clearly marked and no further damage has occurred.

A 5m buffer must be established around site **G41/4** (Rabbit's Hut) prior to works commencing. This must use semi-permanent fencing such as warratahs with bunting. Annual inspections of the hut must be undertaken by an archaeologist to ensure no damage has occurred and allow for identification of any required remedial work to maintain the hut.

No works are to occur, or topsoil stored, within the existing fenced enclosure for **G41/5**. Annual inspections of the stockyards must be undertaken by an archaeologist to ensure they remain in a stable condition.

Annual inspections of the portions of the Come-in-Time battery site (**G41/251**) that fall outside the project footprint must be undertaken to ensure the site condition remains stable.

No earthworks will be undertaken outside of the footprint shown in Figure 1 of the heritage assessment, and no topsoil will be stored within 10m of any previously recorded heritage site or those additional POI identified by NZHP. Sites **G41/270, G41/271, G41/272, G41/274, G41/275, G41/276, G41/585, G41/587** and **G41/588** are particularly close to the edge of the project area, and therefore their boundaries must be clearly marked with semi-permanent fencing such as waratahs with bunting. Annual condition assessments must be undertaken of each of these listed sites to ensure their condition remains stable.

Should any damage or significant change in condition be identified during the annual site inspections, HNZPT must be notified immediately and a course of action agreed upon between MGL, the s45 approved person, and HNZPT.

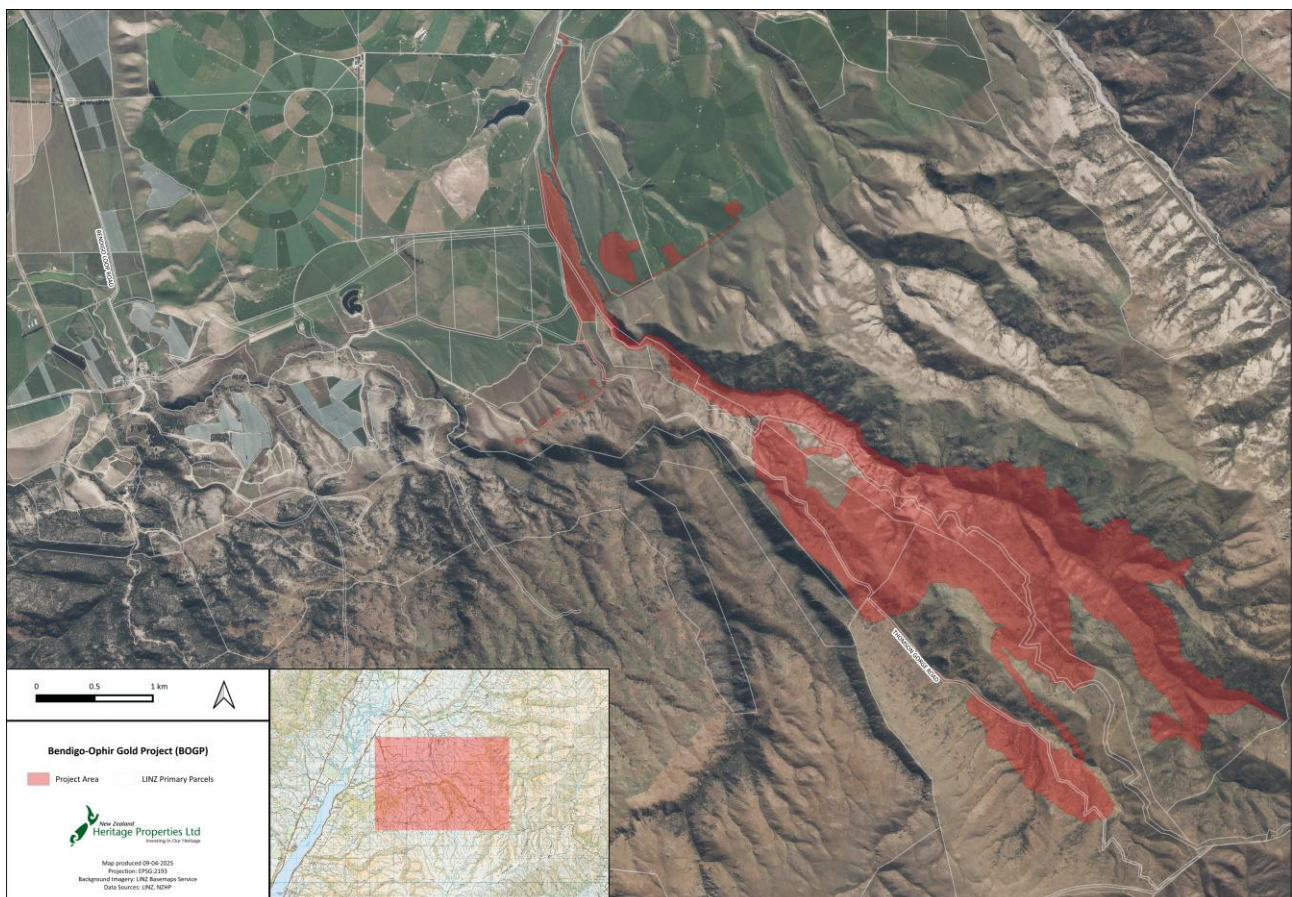


Figure 1. Footprint of the BOGP area.

8 Procedures for Archaeological Investigations

A summary of recording requirements for each site is presented in Table 8-1.

Any archaeological features or deposits encountered, including the stone huts (**G41/265, G41/266, G41/267, G41/273, G41/606**), the stone-faced dam (**G41/269**), affected parts of water races **G41/6, G41/584, G41/586** and **G41/790**, and all structures within **G41/256, G41/264, G41/277, G41/604** and **G41/605** must be recorded to current best practice, and any remains of structures recorded to a minimum Level II standard as defined in HNZPT's guide, *Investigation and Recording of Buildings and Standing Structures* (Heritage New Zealand Pouhere Taonga, 2018). Archaeological features and structures expected under this authority include earth dams, water races (earth, stone, timber), prospecting pits, tailings, mullock heaps, and building platforms.

Level II recording includes:

- Measured drawings of all principal interior and exterior elevations.
- Measured drawings of overall structure,
- Subfloor plans if any floor surfaces are encountered, including floor joists, bearers, wall footings or piles.
- Cross sections to show interaction of building elements and spaces (as necessary).
- Detailed written description of the structural elements.
- Detailed written description of the building's/structure's development over time (potentially including a stratigraphic matrix or matrices).
- Extensive photography.
- Selective sampling of historic fabric.

Water races **G41/6** and **G41/790** must be recorded to a Level III standard. This will include:

- Outline measured drawings or sketches
- Written annotation on measured drawings or sketches
- Written description of the affected portion(s) of the race
- Limited photography

The stone huts (**G41/265**, **G41/266**, **G41/267**, **G41/273**, **G41/606**) and the stone-faced dam (**G41/269**) will be photographed in sufficient detail to produce digital 3D models using photogrammetry. A GNSS unit will be used to map all archaeological features and structures within the project area to provide accurate spatial data.

Stone from the three stone huts and stone-faced dam will be retained on site for future reuse in landscaping. Stone from each structure will be kept in discrete lots and the provenance recorded.

Table 8-1. Summary of recording requirements for sites impacted by the Bendigo-Ophir Gold Project.

Site No.	Recording Requirements
G41/6	• Affected portions of race recorded to Level III standard prior to and during modification, as outlined in AMP • Shapefile to be produced showing extent of destroyed portions
G41/251	• Map of all features within project area using GNSS prior to modification • Photographic record of all identified features • Cross section of mine drive recorded • Topsoil cleared in stages under archaeological supervision • All archaeological/heritage features recorded • Any structures recorded to Level II standard
G41/256	• Map of site using GNSS prior to modification • Photographic record of all identified features • Vegetation cleared by hand under supervision by archaeologist • Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification • All archaeological/heritage features encountered during modification investigated and recorded
G41/264	• Map of all features within project area using GNSS prior to modification • Photographic record of all identified features • Drone survey of site • Topsoil cleared in stages under archaeological supervision • Representative sample of tailings/mullock piles sampled • All archaeological/heritage features recorded • Any structures recorded to Level II standard
G41/265	• Vegetation cleared by hand under supervision by archaeologist • Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry • Topsoil scrape undertaken around hut under supervision by archaeologist prior to deconstruction • Archaeological monitoring of deconstruction • All stone to be securely stored with provenance information for future re-use
G41/266	• Vegetation cleared by hand under supervision by archaeologist • Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry • Topsoil scrape undertaken around hut under supervision by archaeologist prior to deconstruction • Archaeological monitoring of deconstruction • All stone to be securely stored with provenance information for future re-use
G41/267	• Vegetation cleared by hand under supervision by archaeologist • Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry

Site No.	Recording Requirements
	- Topsoil scrape undertaken around hut under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction - All stone to be securely stored with provenance information for future re-use
G41/269	- Vegetation cleared by hand under supervision by archaeologist - Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry - Topsoil scrape undertaken around dam under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction - All stone to be securely stored with provenance information for future re-use
G41/273	- Vegetation cleared by hand under supervision by archaeologist - Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry - Topsoil scrape undertaken around hut under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction - All stone to be securely stored with provenance information for future re-use
G41/277	- Map of all features within project area using GNSS prior to modification - Photographic record of all identified features - Drone survey of site - Topsoil cleared in stages under archaeological supervision - Representative sample of tailings/mullock piles sampled - All archaeological/heritage features recorded - Any structures recorded to Level II standard
G41/584	- Vegetation cleared by hand under supervision by archaeologist - Affected portions of race recorded to Level II standard prior to modification, as outlined in AMP - Shapefile to be produced showing extent of destroyed portions
G41/586	- Vegetation cleared by hand under supervision by archaeologist - Affected portions of race recorded to Level II standard prior to modification, as outlined in AMP - Shapefile to be produced showing extent of destroyed portions
G41/589	- Vegetation cleared by hand under supervision by archaeologist - Structure (revetment) recorded to Level II standard, including sufficient photographs to undertake photogrammetry - Topsoil scrape undertaken around revetment under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction
G41/604	- Map of all features within project area using GNSS prior to modification - Photographic record of all identified features - Drone survey of site - Topsoil cleared in stages under archaeological supervision - All archaeological/heritage features recorded - Any structures recorded to Level II standard
G41/605	- Map of all features within project area using GNSS prior to modification - Photographic record of all identified features - Drone survey of site - Topsoil cleared in stages under archaeological supervision - All archaeological/heritage features recorded - Any structures recorded to Level II standard
G41/606	- Vegetation cleared by hand under supervision by archaeologist - Structure recorded to Level II standard, including sufficient photographs to undertake photogrammetry - Topsoil scrape undertaken around hut under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction - All stone to be securely stored with provenance information for future re-use
G41/658	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/782	- Vegetation around identified structures cleared by hand under supervision by archaeologist - Culverts and revetments recorded to Level II standard, including sufficient photographs to undertake photogrammetry - Topsoil scrape undertaken around structures under supervision by archaeologist prior to deconstruction - Archaeological monitoring of deconstruction - All stone to be securely stored with provenance information for future re-use
G41/783	- Vegetation cleared by hand under supervision by archaeologist - Affected portions of track recorded prior to modification - Cross section of track recorded - Shapefile to be produced showing extent of destroyed portions
G41/784	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/785	Map of site using GNSS prior to modification

Site No.	Recording Requirements
	- Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/786	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/787	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/788	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/789	- Map of site using GNSS prior to modification - Photographic record of all identified features - Vegetation cleared by hand under supervision by archaeologist - Topsoil scrape undertaken around terrace under supervision by archaeologist prior to modification - All archaeological/heritage features encountered during modification investigated and recorded
G41/790	- Vegetation cleared by hand under supervision by archaeologist - Affected portions of race recorded to Level III standard prior to modification, as outlined in AMP - Shapefile to be produced showing extent of destroyed portions

9 Contact Details

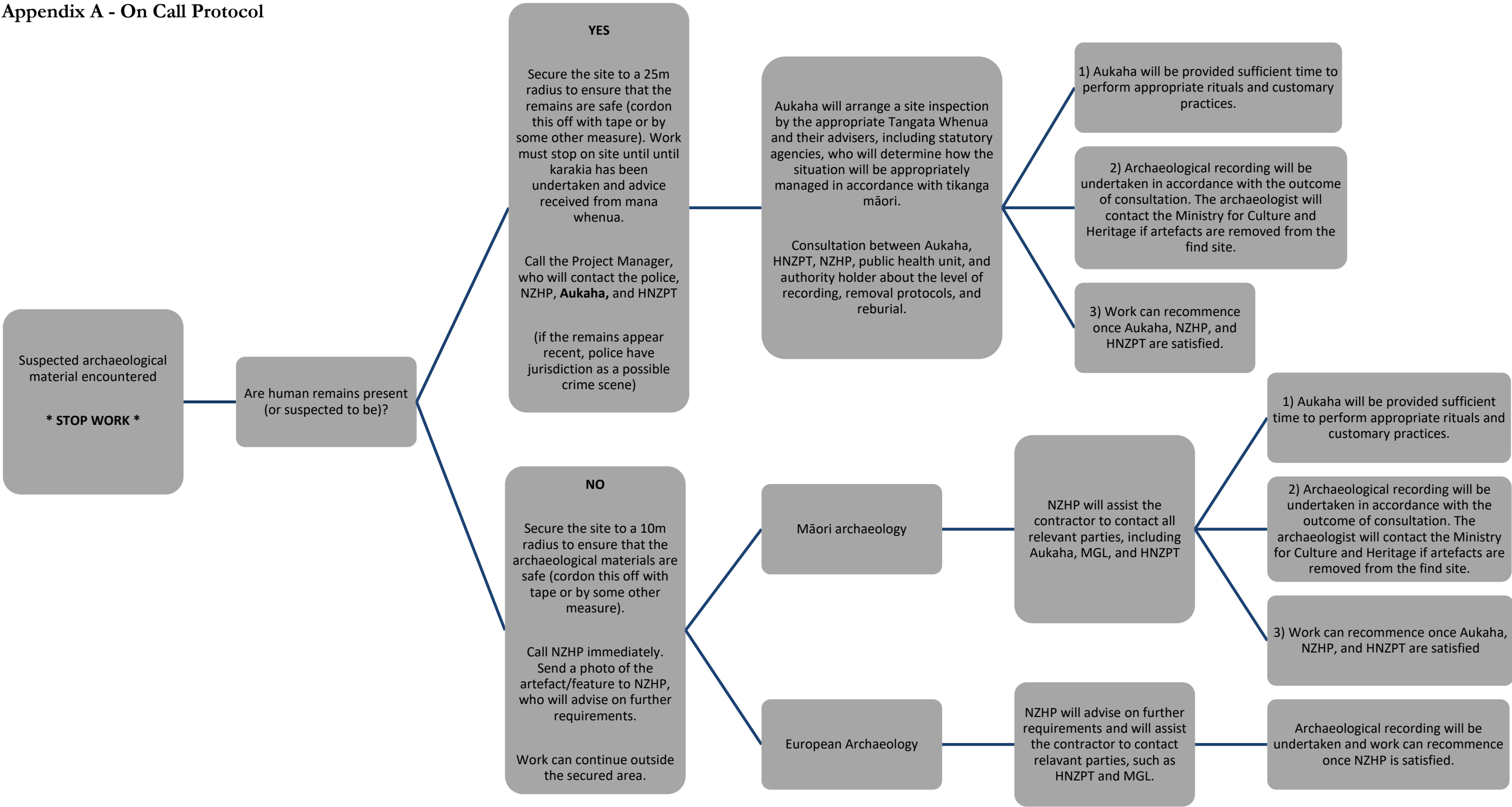
Client	Matakanui Gold Ltd Cheryl Low Environment Manager	Mobile: [REDACTED] [REDACTED]
S45 Approved Person	New Zealand Heritage Properties Ltd Dr Naomi Woods Principal Archaeologist	Mobile: [REDACTED] [REDACTED]
Heritage New Zealand Pouhere Taonga	Jasmine Weston Archaeologist Poutairangahia Otago/Southland	Mobile: [REDACTED] [REDACTED]
Takata Whenua	Aukaha Main Office	Phone: [REDACTED] [REDACTED]
Police (should koiwi be encountered)	Cromwell Police Station	Phone: [REDACTED]

10 References

Heritage New Zealand Pouhere Taonga. (2018). *Investigation and Recording of Buildings and Standing Structures*. Wellington: Heritage New Zealand Pouhere Taonga.

Woods, N., & Thorrold, C. (2025). *The Bendigo-Ophir Gold Project: A Heritage Assessment*. New Zealand Heritage Properties Ltd.

Appendix A - On Call Protocol



Appendix B – Archaeological Site Extents

