

Solar Beacons, Tiwai Peninsula

A Site Instruction for E46/169 and other sites as yet recorded

Report Prepared for South Port NZ Limited
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Solar Beacons, Tiwai Peninsula

A Site Instruction for Site E47/169, and other sites as yet recorded

Prepared by

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Project Details

Archaeological Site No.	E47/169, and other sites as yet recorded
Site Address	LINZ Parcel ID: 3218888 (Closed Road Block XIII Campbelltown Hundred), 3210216 (Pt Section 2 Blk XIII Campbelltown Hundred), 3251370 (Pt Section 4 Blk XIII Campbelltown Hundred).
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Document Control

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Cover Photo: LINZ 1959 Bluff Harbour [Map SO 6922]. Accessed via Prover

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Abbreviations

Abbreviation	Definition
HNZPT	Heritage New Zealand Pouhere Taonga
NZAA	New Zealand Archaeological Association
NZHP	New Zealand Heritage Properties Ltd.

Glossary

The following terms were sourced from the Kāi Tahu Ki Otago Natural Resources Management Plan (Kāi Tahu Ki Otago 2005) and Heritage New Zealand Pouhere Taonga (HNZPT 2014a).

Te Reo Māori	English
Karakia	Prayer, incantation
Kōiwi takata/ kōiwi tangata	Human remains
Mana whenua	Those who exercise customary authority or rakātirataka
Takata whenua/Tangata whenua	The iwi or hapū that holds mana whenua in a particular place
Taoka/Taonga	Treasured object
Tapu	Sacred
Tikaka/Tikanga	Lore, customary values and practices
Tūpuna/Tipuna	Ancestor

1 Introduction

This site instruction has been prepared to outline the archaeological procedures for the works associated with the earthworks to install solar power at two beacon project areas on Tiwai Peninsula (Closed Road Block XIII Campbelltown Hundred, Pt Section 2 Blk XIII Campbelltown Hundred and Pt Section 4 Blk XIII Campbelltown Hundred; Figure 1-1). An archaeological assessment of the potential effects of the project was undertaken by New Zealand Heritage Properties (NZHP), which found that the development has the potential to affect archaeological site E47/169 and other subsurface sites, (pre-1900 and post-1900) as yet unrecorded (McStay 2021). This site instruction provides guidance for the authority holder, contractors, and NZHP regarding the archaeological requirements for the site. Any changes to this site instruction will require prior written agreement of Heritage New Zealand Pouhere Taonga (HNZPT).



Figure 1-1 Map showing the two project areas, comprising Beacon 1 and Beacon 2.

1.1 A Summary of E47/169

At the Beacon 2 project area, the location of the recorded archaeological site E47/169, the concrete beacon structure, is observed to the west of the grassed access road and to the south of the project area (Figure 1-3). This location aligns with the historic beacon sites on early twentieth century maps and plans. The project area will be 5m or more away from this concrete structure and this Site Instruction provides procedures to avoid this known structure and situate the pole mounted solar set up here. The project area overlaps with the rectangular feature adjacent to the beacon on the 1904 map with annotations until 1935 (Figure 1-4). The project area is within a relatively cleared area which likely relates to twentieth century vegetation clearance but may also correspond with the earlier potentially fenced area on historic plan. Although the known beacon concrete feature will be avoided it may be possible that subsurface archaeological or other post-1900 historic resources associated with the marine beacon are within the project area.



Figure 1-2 Location of the beacon 2 project area in relation to the concrete beacon (E47/169).



Figure 1-3 Beacon site (E46/169), looking west with Beacon 2 project area to the rear right beside the power pole.



Figure 1-4 Extract of 1904 map, with additions to 1935, showing white beacon and possible fenced area (red outline) at the project area Beacon 2 (United States Hydrographic Office 1935).

1.2 A Summary of Potential Subsurface Unrecorded Sites

Historical research suggests that within Tiwai Peninsula and the project areas there is potential to encounter other unrecorded archaeological sites (pre-1900 and post-1900) such as midden/ovens; kōiwi; agricultural/pastoral sites, such as homesteads, outbuildings, fences, gardens, orchards, sheep dips; and transport/communication sites, such

as ara tawhito, early tracks, drainage and harbour board infrastructure such as marine beacons. In particular there are koiwi sites on Tiwai Point suggesting there is risk for further similar sites. A post was observed at the Beacon 1 project area during site survey (Figure 1-5 and Figure 1-6). The date of this post was not able to be determined but its location aligns well with the ‘remains of an old post and wire fence’ running north to south observed on a sketch map thought to date to the 1960s. Historical research suggests this fenced area, and therefore the project area, may be within the area occupied and associated with earlier potentially nineteenth century agricultural activities at Tiwai. No other fence posts to confirm alignments were observed near the project area.

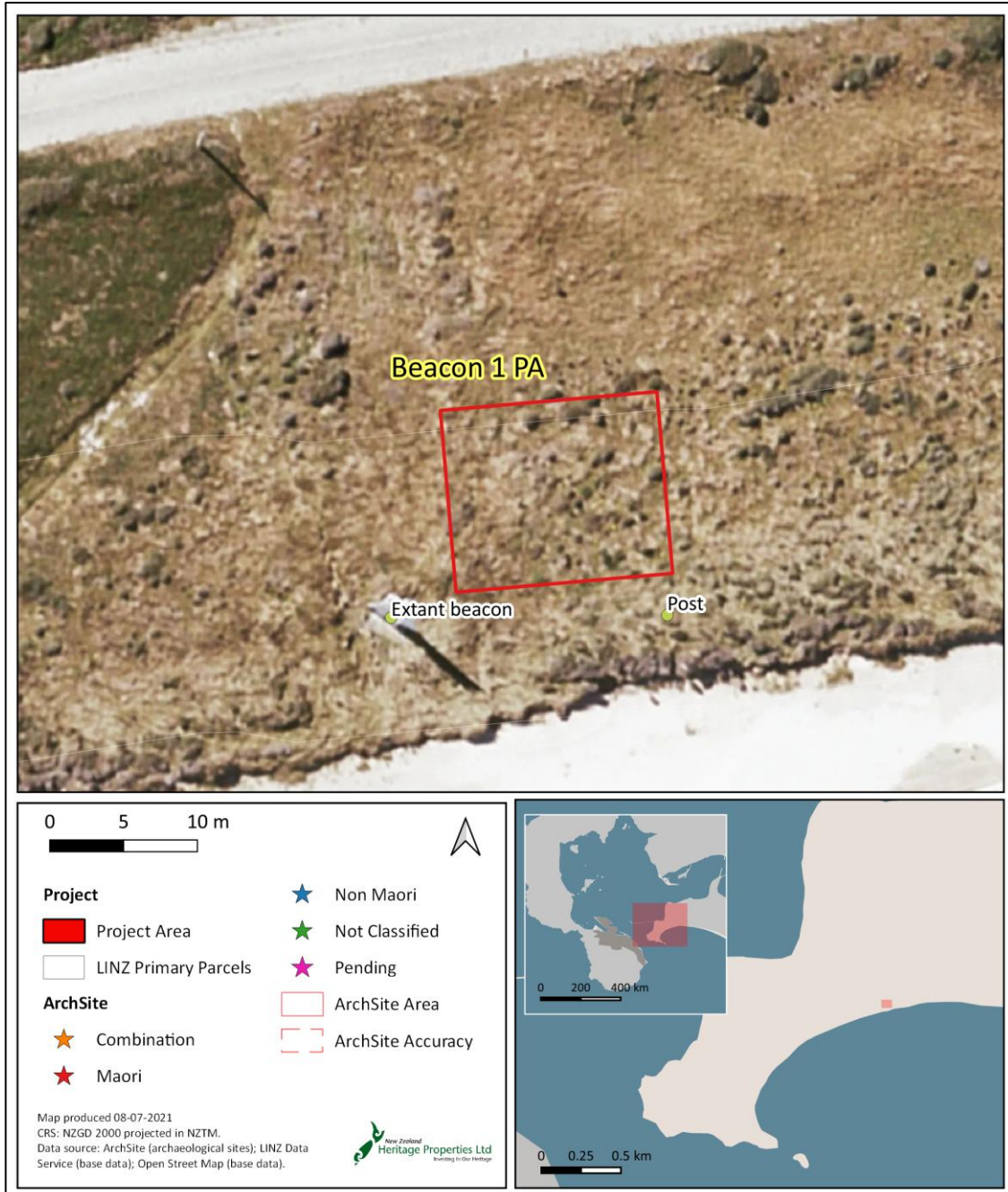


Figure 1-5 Survey plan of Beacon 1 project area with Points of Interest (POI) and post to be avoided shown by yellow dots.

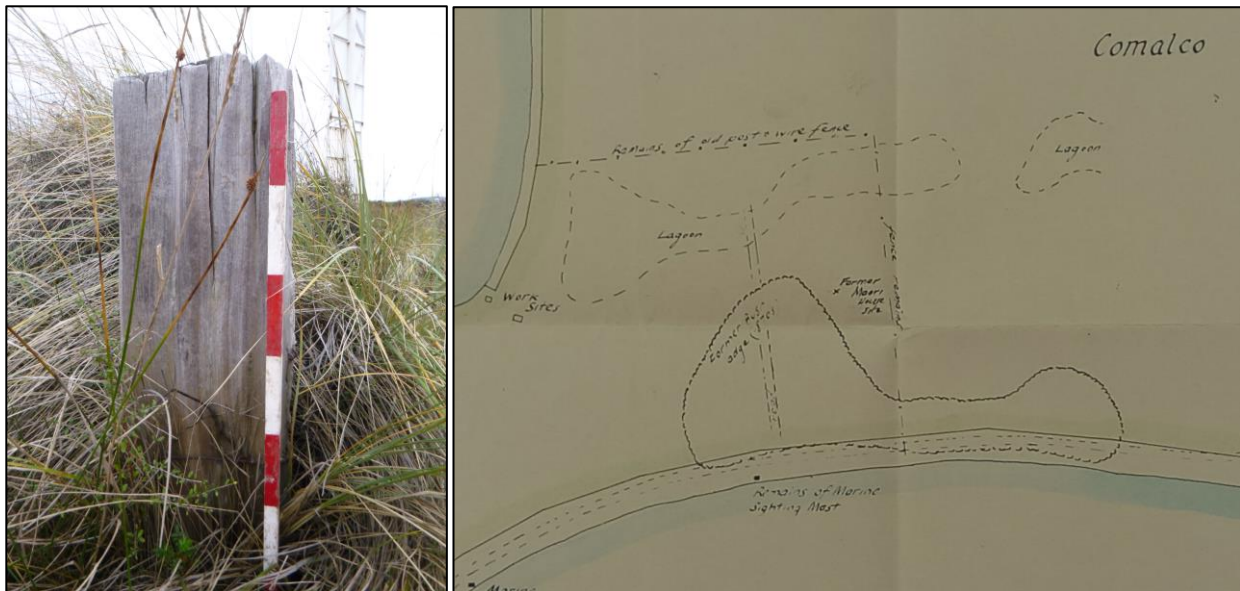


Figure 1-6 Left: fence post near Beacon 1 project area. Right: Extract of a printed copy of an original hand drawn plan showing Tiwai with Southland Harbour Board land, marine beacons, including ‘remains of marine sighting mast’, Comalco site, work sites, remains of old post and wire fence, former Maori house site, lagoon, former bush edge (1870s), and approximate location of haul road. Undated, thought to be 1960s (ADM n.d.).

2 Protection of Sites/Features

As a first principle, every practical effort should be made to avoid damage to any archaeological site, whether known, or discovered during any redevelopment of the site.

- Earthworks should be kept to a minimum to achieve the infrastructure requirements.
- Works should be planned to avoid known structures, such as concrete beacons and the post.
- Prior to on site works these features must be taped off with a buffer with high visibility materials to ensure they are avoided.
- If subsurface archaeological remains are encountered NZHP recommends that works must stop and consider how further adverse effects can be avoided or minimised through re-design (e.g., moving the pole location slightly).
- Protocols for the discovery of kōiwi and protecting all values are provided in Section 3.3 below.

3 Works to be Undertaken by an Archaeologist

NZHP considers there to be high potential of encountering subsurface archaeology. As such, **all earthworks require monitoring by an archaeologist**, which involves an archaeologist observing the project earthworks as they are undertaken. Earthworks include, but are not limited to

- scraping the site to remove debris, or vegetation clearance,
- contouring and stripping or excavation of broad areas,
- excavation of holes (e.g., postholes, piles)

Should the archaeologist identify suspected archaeology, they may request the earthworks to slow or be undertaken in a particular manner. The procedures utilised by the archaeologist are outlined in Section 3.1.

The number of archaeologists on site will be dependent on the number of areas that are being actively excavated and on the density of archaeological features and materials. It is anticipated that there will be a team of one

archaeologist working in each excavation area, and NZHP can provide additional archaeologists if warranted as to avoid delays to the schedule.

3.1 Timeframes for Archaeological Work and Stand Down Periods

NZHP will be available for all scheduled works that are notified within two working days. The timeframes for archaeological monitoring are dependent on the programme of works and on the density of subsurface archaeology. It is important that those contractors undertaking the earthworks are aware that the presence of archaeology on the site may mean that there are times in which work must stop or slow, and there may be stand down periods to allow time for an archaeologist to record material encountered. Every effort will be made to reduce stand down periods and ensure there is immediate clear communication about what work can continue elsewhere. NZHP will ensure appropriate staffing levels so that archaeology can be recorded, while earthworks continue.

Should archaeology be encountered without an archaeologist on site (see Section 6), the on-call protocols apply. NZHP will respond as soon as possible, and in most instances, an archaeologist can be on site in less than 2 hours.

3.1 Procedures for Archaeological Monitoring and Recording During Earthworks

All earthworks that have the potential to affect archaeology will be monitored by NZHP archaeologists. NZHP will record any archaeological evidence encountered during the site works in accordance with current archaeological practice. NZHP has developed standardised methods for archaeological recording to ensure that archaeological features, deposits, and materials are recorded systematically (Cropper 2018). In general, archaeological recording includes:

- Hand excavation to clean or define the archaeological feature or deposit
- Photography
- Completion of field forms
- Measured drawings
- The location is recorded using Global Navigation Satellite System (GNSS)
- Collection of artefacts

If any subsurface structures are encountered NZHP recommends recording the pre-1900 structure to a Level III standard, as outlined in *Investigation and Recording of Buildings and Standing Structures* (Heritage New Zealand Pouhere Taonga 2018), prior to an modification as required under the HNZPTA 2014.

The archaeological authority process also requires consideration of other values that may be affected by the proposed work within the culturally and historically significant landscape across Tiwai Peninsula. There is potential that cultural and other heritage values may be affected by the proposed works. NZHP recommends that if historic structures and sites, for example twentieth century infrastructure sites, associated with harbour board use, are encountered that South Port NZ consider taking a precautionary approach and managing other post-1900 heritage values following the same procedures as for the pre-1900 heritage values.

Contractors must allow the archaeologist sufficient time to undertake recording, and the archaeologist may require the contractor to excavate areas in a particular way to assist in the process.

3.2 Discovery of Māori Archaeology

Should Māori archaeological contexts or material be encountered during the work,

1. NZHP will immediately contact the HNZPT archaeologist, Te Ao Marama, Awarua Runaka, DoC and South Port NZ Limited. The advice of Te Ao Marama and Awarua Runaka will be sought regarding appropriate tikaka.

2. To allow for the appropriate handling of the feature/material, all work must stop within a **10m radius** (25m if the find includes kōiwi), and
3. Mana whenua will be provided sufficient time to perform appropriate rituals and customary practices, and archaeological recording will be undertaken.
4. Work can recommence once Te Ao Marama, Awarua Runaka, NZHP, DoC and HNZPT are satisfied. No Māori archaeological material must be removed without the approval by HNZPT or DoC.

3.3 Discovery of Kōiwi Tangata (human remains)

NZHP follows the guidelines on the discovery of kōiwi tangata (human remains) established by HNZPT (HNZPT 2014b) and the Te Wawata o Ngāi Tahu e pa ana ki Ngā Tāonga Kōiwi o Ngā Tūpuna (The Policy of Ngāi Tahu Concerning the Human Remains of our Ancestors) (amended September 2019). Should human remains be encountered,

1. Due to the risk of kōiwi being encountered on Tiwai Peninsula, NZHP will have a bioarchaeologist on-call from the University of Otago during works.
2. The site must be secured to a **25m radius** to ensure that the remains are safe (cordon this off with tape or by some other measure).
3. All work on site should stop on site until karakia has been undertaken and advice received from manawhenua.
4. NZHP will assist the authority holder with contacting the appropriate parties (Te Ao Marama, Awarua Runaka, DoC and HNZPT).
5. Te Ao Marama and Awarua Runaka will arrange a site inspection by the appropriate manawhenua and their advisers, who will determine how the situation will be appropriately managed in accordance with tikaka Māori.
6. Manawhenua will be provided sufficient time to perform appropriate rituals and customary practices, and then archaeological recording will be undertaken. Consultation between Te Ao Marama, Awarua Runaka, HNZPT, DoC, NZHP, public health unit, and authority holder about the level of recording, removal protocols, and reburial.
7. Work can recommence once Te Ao Marama, Awarua Runaka, NZHP, DoC and HNZPT are satisfied.
8. The location of any kōiwi should be recorded with a buffer and any future development around that area avoided.

3.4 Management and Safekeeping of Artefacts

NZHP follows the HNZPT's guidelines for finding, handling, and depositing artefacts, *Guidelines for the Finding of Artefacts* (HNZPT 2019). All archaeological finds will be bagged, labelled, and transferred to the secure NZHP laboratory at our Dunedin office for specialist washing and analysis. As in accordance with the above guidelines. The ownership of artefacts is outlined in HNZPT's guidelines (2019); the ownership of non-Māori artefacts is with the landowner (DoC), taonga tūturu will be notified, registered with the Ministry for Culture and Heritage and deposited accordingly, and other Māori material will be offered to Te Ao Marama and Awarua Runaka.

4 Contractor Briefing

Prior to the commencement of work, an archaeological site briefing outlining the requirements of this site instruction is required to be delivered all contractors undertaking work that may affect archaeology. Earthworks include but are not limited to scraping the site to remove debris, or vegetation clearance; contouring and stripping or excavation of broad areas; and excavation of holes (e.g., postholes, piles). The briefing will outline:

- the history of the site and its archaeological potential,
- the role of the archaeologist and requirements for archaeological involvement
- the conditions of the archaeological authority and the details of this site instruction, including when an archaeologist must be on site;

- what sort of archaeological features could be expected and what they might look like;
- what to do if they find a possible archaeological site and the archaeologist is not on site; and
- the process required to record and investigate these archaeological deposits should any be discovered.

A register will be maintained of contractors who have had a briefing. A hard copy of the formal briefing will be given to all those who attend it and a hard copy will be kept on site along with the site instruction and archaeological authority.

5 Roles and Responsibilities

The following section considers the roles and responsibilities for key personnel involved in the project, including the authority holder, contractors, and archaeologist. This section considers related aspects from the guidelines on developing management plans (HNZPT n.d.).

5.1 Responsibilities of the Authority Holder (South Port NZ Limited)

The role of the authority holder is to ensure that the conditions of the archaeological authority are met. Specific requirements include:

1. Notifies HNZPT, DoC and NZHP of the commencement and completion of works.
2. Notifies manawhenua of the commencement of works.
3. **Notifies NZHP of the commencement of earthworks.**
4. Ensures that all contractors and subcontractors are aware of and comply with the conditions of the archaeological authority. NZHP recommends that any tender documents include reference to the requirements of the archaeological authority.
5. Organises the contractor briefings with NZHP to ensure that **all contractors working on the site have had an archaeological briefing.**
6. Ensures that relevant documentation is kept on site, including
 - a. The site instruction
 - b. Archaeological authority
 - c. The on-call protocol flowchart should be posted on a wall within the site office.

5.2 Responsibilities of the Contractor

Whilst the authority holder will be ultimately liable for ensuring that the conditions of the archaeological authority are adhered to, contractors are also liable if they destroy or modify a site they know, or are reasonably expected to know, is an archaeological site. Specific requirements for contractors include:

1. Undergoes an archaeological briefing. All contractors working on site must have undergone a briefing to ensure they understand the archaeological requirements of the site. All contractors who have been briefed must sign the briefing register.
2. Allows for time delays to enable archaeological recording. Given that works may be stopped for a time to allow archaeologists to record archaeological material, it may be a good idea to have a contingency plan in place for where work could be carried on elsewhere.
3. Follows the on-call procedures outlined in Section 6 if suspected archaeological material is encountered when the archaeologist is not on site.
4. Provides clear communication throughout the project regarding any works that may affect archaeology, including all earthworks.

- a. The archaeologist must be alerted to all earthworks on site (e.g., the digger moves to a new area of the site, new work types start, etc.).
- b. Please note that earthworks include, but are not limited to scraping the site to remove debris, or vegetation clearance; contouring and stripping or excavation of broad areas; excavation of holes (e.g., postholes, piles) etc.
- c. Should the main point of contact change (e.g., a new contractor takes over the site or the project manager goes on annual leave), NZHP must be alerted prior to the change to ensure that a contractor briefing is given, and that the new point of contact understands their specific responsibilities and the requirements of the archaeological authority.

5.3 Responsibilities of the Archaeologist

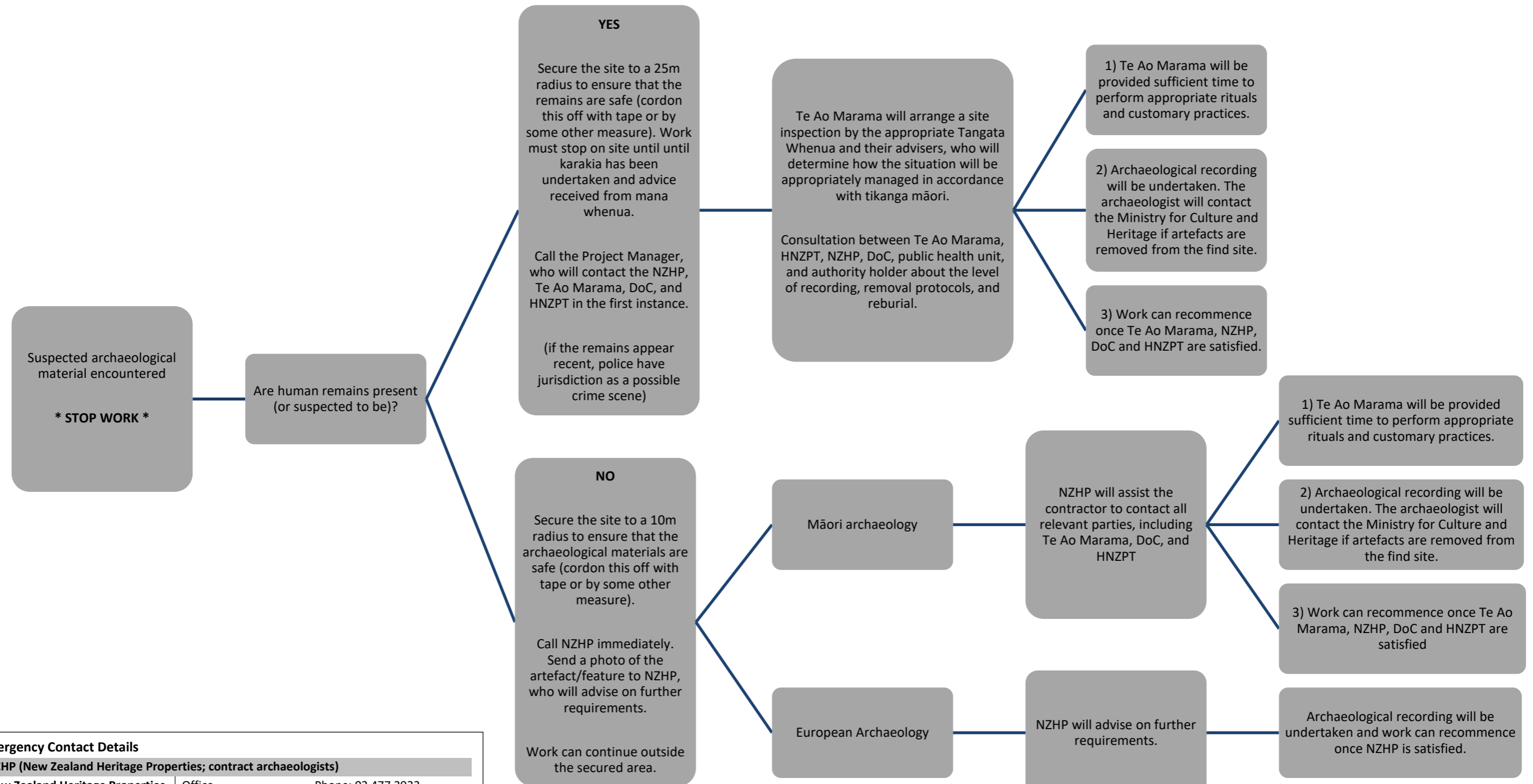
The archaeological authority requires that a s45 approved archaeologist be nominated to oversee the project, and for this project, this will be Amy McStay. The role of the s45 archaeologists (or the archaeologist nominated on their behalf) includes:

1. Delivers the contractor briefing and keeps an attendance record of all contractors who have received a briefing.
2. **Alerts HNZPT and DoC to the commencement of site works.**
3. Alerts a bioarchaeologist to be on-call from the University of Otago.
4. **Monitors all earthworks and records the archaeological layers, features, and materials** in accordance with conditions of the authority.
 - a. Provide update to the authority holder for any discoveries that may slow down works
 - b. Follows the procedures established in this site instruction, including archaeological recording, discovery of Māori archaeology and discovery of kōiwi (human remains)
 - c. Provide clear communication to relevant parties where there is a variation of archaeological involvement
 - d. Response time
 - i. NZHP staff will be available for all work where the two working days notice is provided
 - ii. For unexpected discoveries notified through on-call procedures – NZHP staff will be available to visit site within 4 hours; however, in most instances an archaeologist can be on site within 2 hours.

6 On-Call Protocols and Procedures

Should any suspected archaeological material be encountered when an archaeologist is not on site, the protocols defined in the following flow chart shall be followed.

On Call Protocol



Emergency Contact Details		
NZHP (New Zealand Heritage Properties; contract archaeologists)		
New Zealand Heritage Properties Office		Phone: 03 477 3933
Amy McStay S45 Approved Archaeologist		Mobile: 021 2513763
Heritage New Zealand Pouhere Taonga		
Nikole Wills Archaeologist	Poutairangahia	
Otago/Southland		Phone: 027 240 8715
Tangata Whenua		
Te Ao Marama Office		(03) 9311242
Department of Conservation		
Matthew Schmidt Senior Heritage Advisor		0273610044

7 Contact Details

In the event of an emergency, contact details are provided below. These contact details will also be available in the contractor briefing and OCP flowchart.

South Port NZ Limited	Andrew Hill Site Engineer ahill@southport.co.nz	Phone: 0277 745 677
S45 Approved Archaeologist	New Zealand Heritage Properties - Office Amy McStay Principal Archaeologist; s45 Approved Archaeologist amy@heritageproperties.co.nz	Phone: 03 477 3933 Mobile: 0212513763
Department of Conservation	Brent Affleck Senior Ranger Heritage and Visitors Keri Tuna Supervisor Heritage & Visitors Matthew Schmidt Senior Heritage Advisor Kaitohu Matua Taonga Tuku Iho	Mobile: 0272452015 Mobile: 0274083420 Mobile: 0273610044
Heritage New Zealand Pouhere Taonga	Nikole Wills Archaeologist Poutairangahia Otago/Southland nwills@heritage.org.nz	Mobile: 027 240 8715
Tangata Whenua	Te Ao Marama Office office@tami.maori.nz Te Ao Marama Dean Whaanga dean@tami.maori.nz Awarua Runaka Gail Thompson Gail.Thompson@awaruaRunaka.iwi.nz	Phone: 03 9311242 Mobile: 021 247 9166 Phone: 03 212 8652

8 Post-Fieldwork Requirements

The archaeological authority will identify the post-fieldwork requirements, which are likely to include:

1. Analysis of all archaeological materials. Archaeological material will be managed and stored in accordance with NZHP's Artefact Management Plan (Woods 2020) and with HNZPT's *Guidelines for the Finding of Artefacts* (HNZPT, 2019).
2. The completion of a final report documenting the results of archaeological monitoring, and artefact analysis within 12 months from the conclusion of archaeological fieldwork will be a condition of the archaeological authority.
3. The site record form for E47/169 will need to be updated on ArchSite following the completion of the final report. New sites will need to be recorded for any newly discovered sites.

9 References

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