

APPENDIX 18

Archaeological Assessment of the Proposed
Ruakākā Energy Park – Site 1, 2 and 3

Ruakākā

31 July 2023

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Quality Information

Document: Archaeological Assessment of the Proposed Ruakākā Energy Park – Site 1, 2 and 3. Ruakākā.

Ref: 2022-130

Date: 31 June 2023

Prepared by: Jonathan Carpenter

Revision History

Revision	Revision Date	Details	Authorized Name
Client draft v0.1	25 July 2023		J. Carpenter
Client draft v0.2	31 July 2023		J. Carpenter

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File ref.:

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Contents

1.0 Introduction.....	7
1.1 The Heritage New Zealand Pouhere Taonga Act 2014	7
1.2 The Resource Management Act 1991.	8
2.0 Location	8
2.1 Site 1.....	8
2.2 Site 2 and 3.....	10
3.0 Proposal	10
4.0 Methodology	14
5.0 Background.....	14
5.1 Archaeological Context	14
5.2 Other Heritage Listings	23
5.3 Historic Background	25
5.4 Review of Historic Maps, Plans and Aerials	42
6.0 Site Visit	43
6.1 Site 1.....	43
6.2 Site 2.....	51
7.0 Significance Assessment.....	59
7.1 Assessment Criteria.....	59
7.2 Significance Assessment of Archaeological Sites.....	59
8.0 Assessment of Effects.....	60
8.1 Site 1.....	61
8.2 Site 2 and 3.....	61
9.0 Findings and Recommendations	65
10.0 Summary.....	66
11.0 References.....	67

Figures

Figure 1: Location of Site 1, 2 and 3.....	9
Figure 2: Site 1 solar farm concept.	11
Figure 3: Site 1 cut/fill.	11
Figure 4: Site 2 solar farm concept.	12
Figure 5: Site 2 cut/fill.	12
Figure 6: Site 3 solar farm concept.	13
Figure 7: Site 3 cut/fill.	13
Figure 8: Archaeological sites in the vicinity of Site 1 (ArchSite).....	16
Figure 9: Location map for site Q07/980 (circled red; Imperial site number N24/589) with Q07/330 also indicated (orange; imperial site number N24/283) and Site 1 (blue), from original site record form.	17
Figure 10: Sketch map of Q07/980 and soil stratigraphy, from original site record form.....	18
Figure 11: Sketch map of Q07/1004 showing features uncovered during vegetation clearance and trenching for gas pipeline, from original site record form.	19
Figure 12: Sketch of soil stratigraphy and archaeological features of Q07/1004, including archaeological layer covered by 2m of windblown sand.....	20
Figure 13: Location of Q07/1212 with Site 1 BESS location in blue, bottom of frame.	21
Figure 14: Q07/1212 site plan.....	22
Figure 15: Archaeological sites in the vicinity of Site 2 and 3 (ArchSite).....	23
Figure 16: Archaeological sites in the vicinity of the Ruakākā Energy Park, and existing land and built form.	24
Figure 17: Copy of the Takahiwae Block deed plan, showing Poupouwhenua session (Turton: 1877).	30
Figure 18: Plan of the Ruakākā Block purchase (Turton 1877).....	31
Figure 19: Detail from SO 40 (1854-1865) and approximate location of Site 2 and 3.....	32
Figure 20: Detail from Roll 16 (n.d.) showing Ruakākā and Pououwhenua Block boundary and approximate locations of Sites 1, 2 and 3.	33
Figure 21: DP 919 (1889) Subdivision of Bellevue Estate and Site 2 and 3.	34
Figure 22: DP 7732 (1912) and Site 2 and 3.....	35
Figure 23: SO 21083 (1920) showing subdivision of the Marsden Kauri Gum Reserve and Site 1, 2 and 3.	36
Figure 24: DP 15257 (1921) on the southern side of Site 2 and 3.	37
Figure 25: DP 16293 (1926) in including Site 2.	38
Figure 26: Marsden Kauri Gum Reserve, 1914 (Appendix to the Journal of the House of Representatives, 1914 Session I, C-12: 1535) and approximate location of Site 1, 2 and 3.....	39
Figure 27: Detail from Ferrar et. al.'s (1928) Ruakākā geological survey and approximate location of Site 1, 2 and 3.	39
Figure 28: Detail from SN 212 Run 412/38 (1942) showing Site 1.	40
Figure 29: Detail from aerial photo SN 212 413/43 (1950) showing Site 2 and Site 3.	41
Figure 30: Archaeological sites, early 20 th century landscape features and solar farm proposal at Site 1.	45
Figure 31: Q07/1501 midden, solar farm proposal and cut (brown contour) and fill (green contour).	46
Figure 32: Approximate extent of subsurface shell midden Q07/1501 (red shading), looking northeast (2023).....	47
Figure 33: Approximate extent of Q07/1501 (red shading), looking southeast (40cm scale, 2023).....	47
Figure 34: Northern test unit with pipi (40cm scale; 2023).	48
Figure 35: Southern test unit with pipi and tuatua (40cm scale, 2023).....	48
Figure 36: Q07/11165 midden, and Site 1 solar farm proposal and cut (brown contour) and fill (green contour).	49
Figure 37: Looking south over rank grass and weeds, eastern side of Site 1 (2020).	50

Figure 38: Looking west from centre of Site 1 over gently rolling pasture (2020).	50
Figure 39: Looking east towards Rama Road over the BESS site on Site 1 (1m scale,2022).....	51
Figure 40: Looking west over the BESS site while monitoring on Site 1 (2023).....	51
Figure 41: Archaeological sites, early 20 th century landscape features and solar farm proposal at Site 2 and 3.	53
Figure 42: Site 2, looking south towards Macathie Road/Port Marsden Highway intersection (2022).	54
Figure 43: Looking west along drain towards Port Marsden Highway (2022).	54
Figure 44: Typical soil profile in drain (1m scale) (2022).	55
Figure 45: Looking east from site 2 over Site 3 (2022).	55
Figure 46: Typical soil profile through consolidated Pleistocene sand dune (2022).	56
Figure 47: Looking south across Site 3, adjacent to Marsden Point Road (2022).....	56
Figure 48: Looking east along drain over drained flats to Marsden Point Road (2022).	57
Figure 49: Typical soil profile adjacent to Marsden Point Road (2022).	57
Figure 50: Fragmentary cockle shell and crockery fragments in eroded area adjacent to historic habitation (2022).....	58
Figure 51: Cockle shell and ceramic/crockery fragments (2022).	58
Figure 52: Site 1 cut/fill for monitoring (red polygons).	62
Figure 53: Site 2 cut/fill for monitoring (red polygons).	63
Figure 54: Site 3 cut/fill for monitoring (red polygons).	63
Figure 55: Q07/1501 with minimum 20m protection buffer.	64

Glossary

Classic	The later period of New Zealand settlement
Fire scoop	Fireplace used for various reasons (cooking, warming, etc.)
Hangi	An earth oven for cooking food
Midden	The remains of food refuse usually consisting of shells, and bone, but can also contain artefacts
Pa	A site fortified with earthworks and palisade defences
Pit	Rectangular excavated pit used to store crops by Maori
Radiocarbon	Method of absolute dating using known rates of decay of a carbon isotope
Terrace	A platform cut into the hill slope used for habitation
Wahi tapu	Sites of spiritual significance to Maori

1.0 Introduction

A. Guerin for Meridian Energy Ltd commissioned Geometria Ltd to undertake an archaeological assessment of their Ruakākā Energy Park project between Ruakākā and Marsden Point. The Ruakākā Energy Park project and these assessments covers three sites, and the assessment has been prepared in four stages.

A potential buyer of what is now Site 1 commissioned an archaeological assessment as part of their due diligence in 2020 (Carpenter 2020). In 2021, Meridian commissioned an assessment of Site 1 for the Battery Energy Storage System (BESS) which is now under construction at the intersection of Marsden Point Highway and Rama Road, and a potential solar farm adjacent to the BESS (Carpenter 2021). In 2022, Meridian commissioned an assessment of Sites 2 and 3, 1-2 kilometres southwest of Site 1 for an associated solar farm (Carpenter 2021).

For the sake of clarity and simplicity, this report combines the solar farm sites into a single assessment, informed by additional historic research, the results of initial monitoring at the BESS site under archaeological Authority 2023/039, and the recording of a new archaeological site on Site 1 which had been observed by Patuharakeke Kaitiaki in 2020.

Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) all archaeological sites are protected from any modification, damage or destruction except by the authority of Heritage New Zealand. Councils are required to consider historic heritage as a matter of significance under the Resource Management Act (1991)

This assessment uses archaeological techniques to assess archaeological values and does not seek to locate or identify wahi tapu or other places of cultural or spiritual significance to Maori. Such assessments may only be made by Tangata Whenua, who may be approached independently of this report for advice.

Likewise, such an assessment by Tangata Whenua does not constitute an archaeological assessment. Permission to undertake ground disturbing activity on and around archaeological sites and features may only be provided by Heritage New Zealand Pouhere Taonga, and may only be monitored or investigated by a qualified archaeologist approved through the archaeological authority process.

1.1 The Heritage New Zealand Pouhere Taonga Act 2014

Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) all archaeological sites are protected from any modification, damage or destruction except by the authority of Heritage New Zealand. Section 6 of the HNZPTA defines an archaeological site as:

" any place in New Zealand, including any building or structure (or part of a building or structure), that—

(i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and

(ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and

(b) includes a site for which a declaration is made under section 43(1)"

To be protected under the HNZPTA an archaeological site must have physical remains that pre-date 1900 and that can be investigated by scientific archaeological techniques. Sites from 1900 or post-1900 can be declared archaeological under section 43(1) of the Act.

If a development is likely to impact on an archaeological site, an authority to modify or destroy this site can be sought from the local Heritage New Zealand Pouhere Taonga office under section 44 of the Act. Where damage or destruction of archaeological sites is to occur Heritage New Zealand usually requires mitigation. Penalties for modifying a site without an authority include fines of up to \$300,000 for destruction of a site.

Most archaeological evidence consists of sub-surface remains and is often not visible on the ground. Indications of an archaeological site are often very subtle and hard to distinguish on the ground surface. Sub-surface excavations on a suspected archaeological site can only take place with an authority issued under Section 56 of the HNZPTA issued by the Heritage New Zealand.

1.2 The Resource Management Act 1991.

Archaeological sites and other historic heritage may also be considered under the Resource Management Act 1991 (RMA). The RMA establishes (under Part 2) in the Act's purpose (Section 5) the matters of national importance (Section 6), and other matters (Section 7) and all decisions by a Council are subject to these provisions. Sections 6e and 6f identify historic heritage (which includes archaeological sites) and Maori heritage as matters of national importance.

Councils have a responsibility to recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga (Section 6e). Councils also have the statutory responsibility to recognise and provide for the protection of historic heritage from inappropriate subdivision, use and development within the context of sustainable management (Section 6f). Responsibilities for managing adverse effects on heritage arise as part of policy and plan preparation and the resource consent processes.

2.0 Location

2.1 Site 1

Site 1 is located between the Bream Bay coastline and State Highway 15/Port Marsden Highway, Allis Bloy Road and Rama Road. The property lies between the Ruakākā Wastewater Treatment Plant, Northpower substation and Marsden Point Oil Refinery.

The property includes Lot 1, Lot 2 and Lot 3 DP 59354, and Lot 1, Lot 2 and Lot 3 DP 419151. The wider area comprises a Holocene dune field of parallel dunes and intervening low swales running south west to north east. All the lots are currently in grazed, short pasture or rank grass, except for Lot 3 DP 419151 which is in rank grass, weeds, regenerating native forest, and macrocarpas with the BESS project site at the northeast corner.

The property lies on an area of Holocene sand dunes and intervening wetland swales paralleling the Bream Bay shoreline.



Figure 1: Location of Site 1, 2 and 3.

2.2 Site 2 and 3

Site 2 and 3 are located between Port Marsden Highway, Macathie Road and Marsden Point Road, between Ruakākā and Marsden Point.

Site 2 comprises (from west to east) Section 13 SO 322547, Lot 2 DP 348043 and Lot 1 DP 386730, totalling approximately 37 ha. Site 3 comprises (from north to south) Lot 1 DP 406479, Part Lot 1 DP 36288, Part Section 11 Block VII Ruakākā SD, and Part Section 1 Block VII Ruakākā SD, totalling approximately 56 ha.

The project area comprises level to low rolling pasture in a mix of grazed and rank grass across the two sites, with pockets of weeds, windbreak trees, and regenerating coastal 'scrub' forest.

Site 1 is on Holocene dune lands which parallel the Bream Bay coastline in a series of low, elongate dunes and intervening, often wet, swales. Site 2 and 3 comprise what was formerly a Holocene epoch wetland and dune lake on the low lying level ground, which was drained in the early to mid-20th century, while the intervening rolling ground in the centre and on the eastern side are consolidated Pleistocene sand dunes which run approximately parallel to the coastline.

3.0 Proposal

Meridian proposes establishing a solar farm across the three sites, in association with the BESS on Site 1 at Rama Road, under the Ruakākā Energy Project banner.

The project will require the removal of existing trees and structures across the properties, recontouring via extensive cut and fill earthworks, the establishment of services and roads including a 4m wide perimeter access road and 8m wide internal road network, power stations and the solar panel arrays themselves and associated ducting.

A wetland will be created on the eastern part of Site 1 and the southern part of Site 3 as offsetting for works elsewhere.

Site concept and cut/fill plans for Site 1, 2 and 3 are provided below.

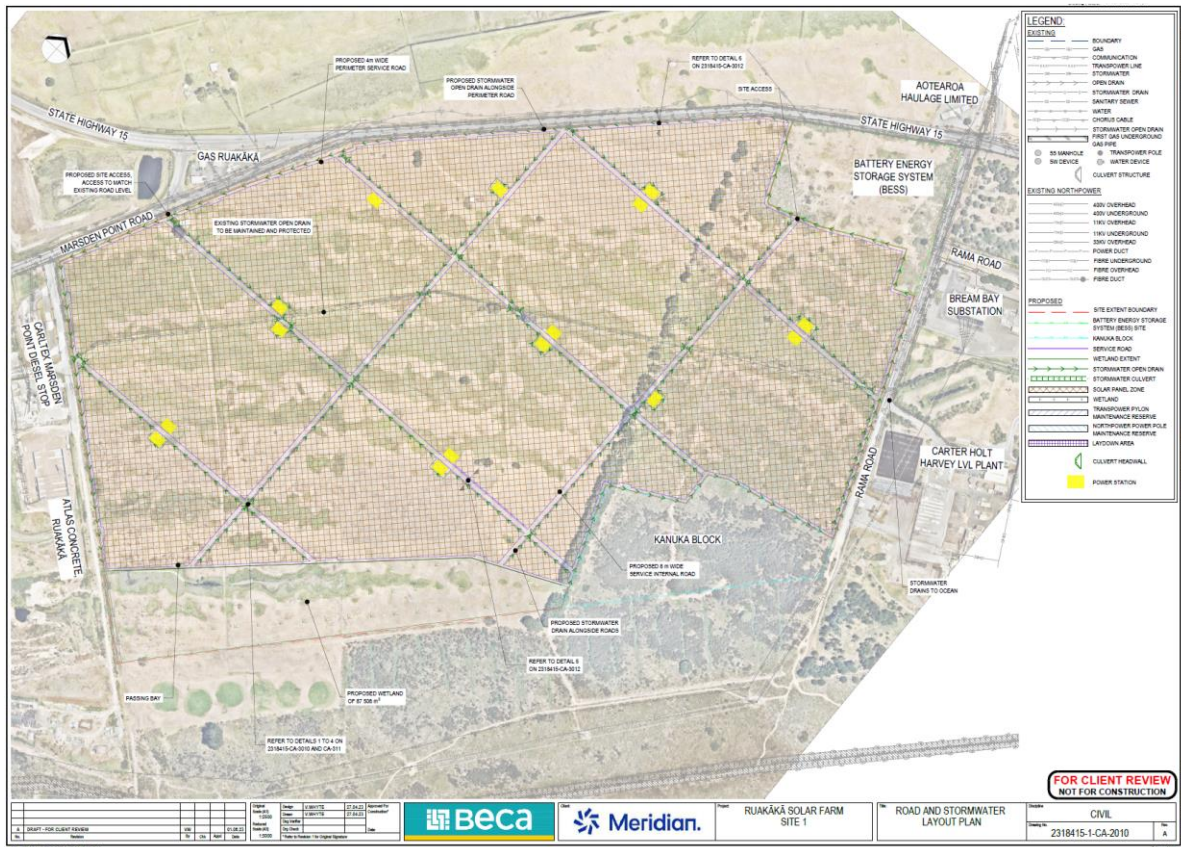


Figure 2: Site 1 solar farm concept.



Figure 3: Site 1 cut/fill.

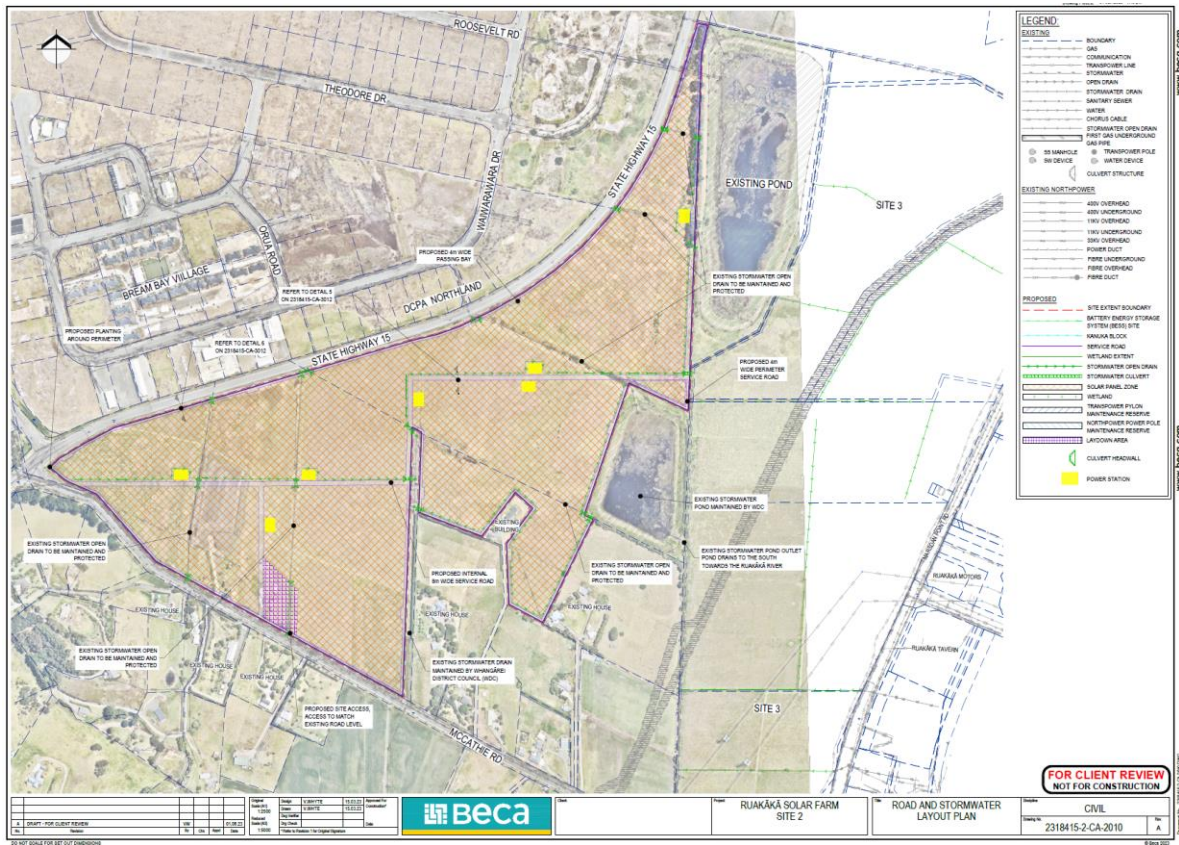


Figure 4: Site 2 solar farm concept.

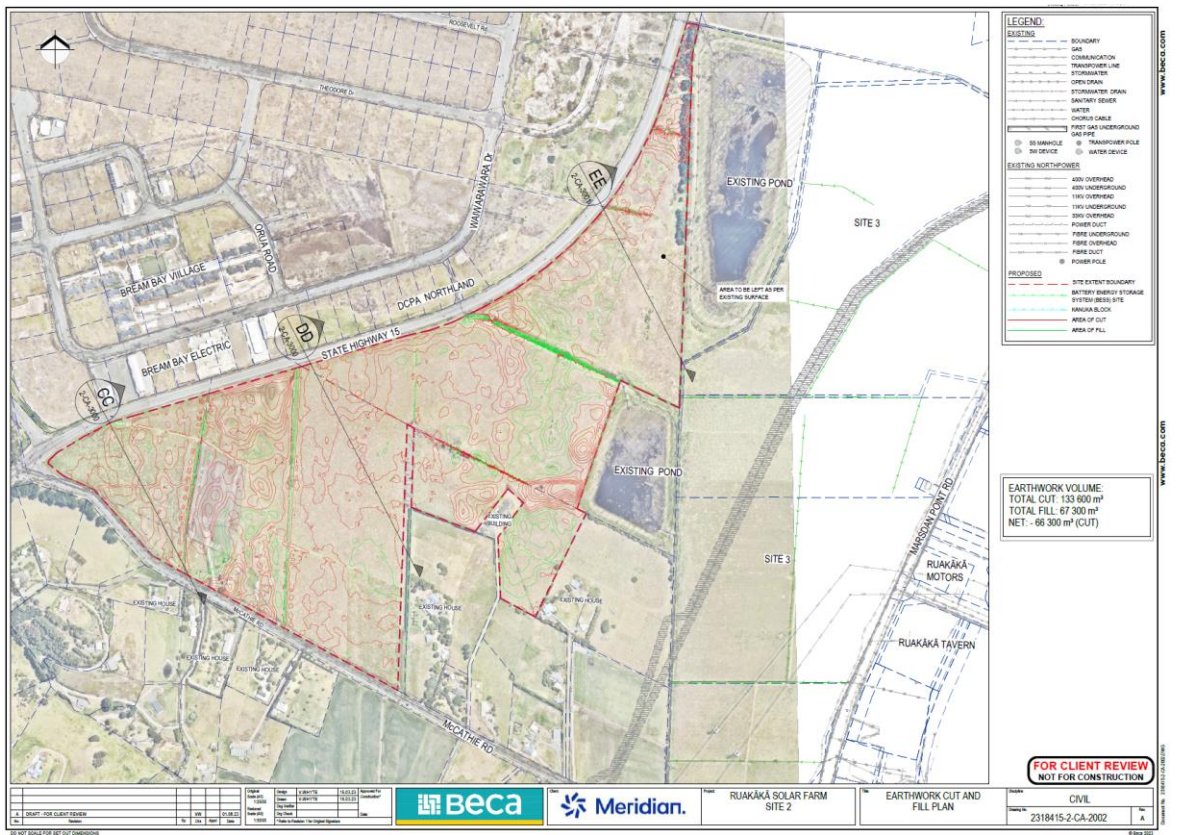


Figure 5: Site 2 cut/fill.

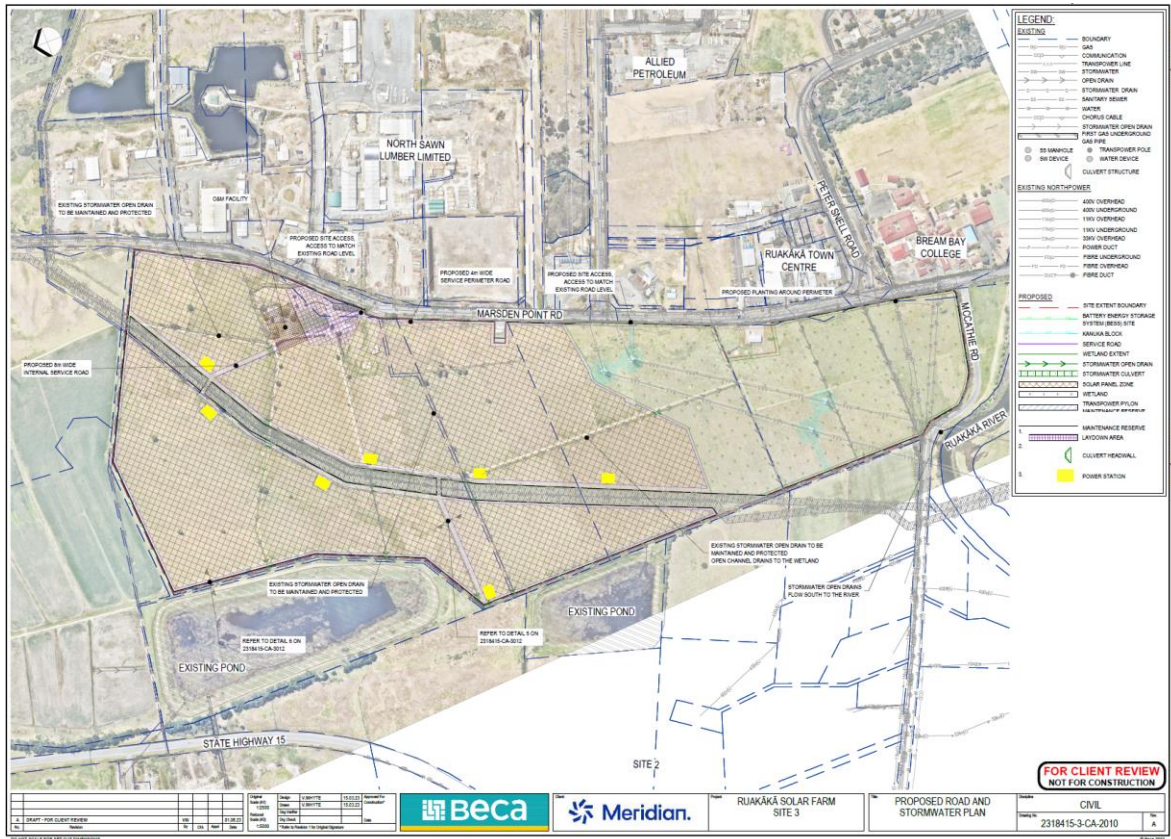


Figure 6: Site 3 solar farm concept.

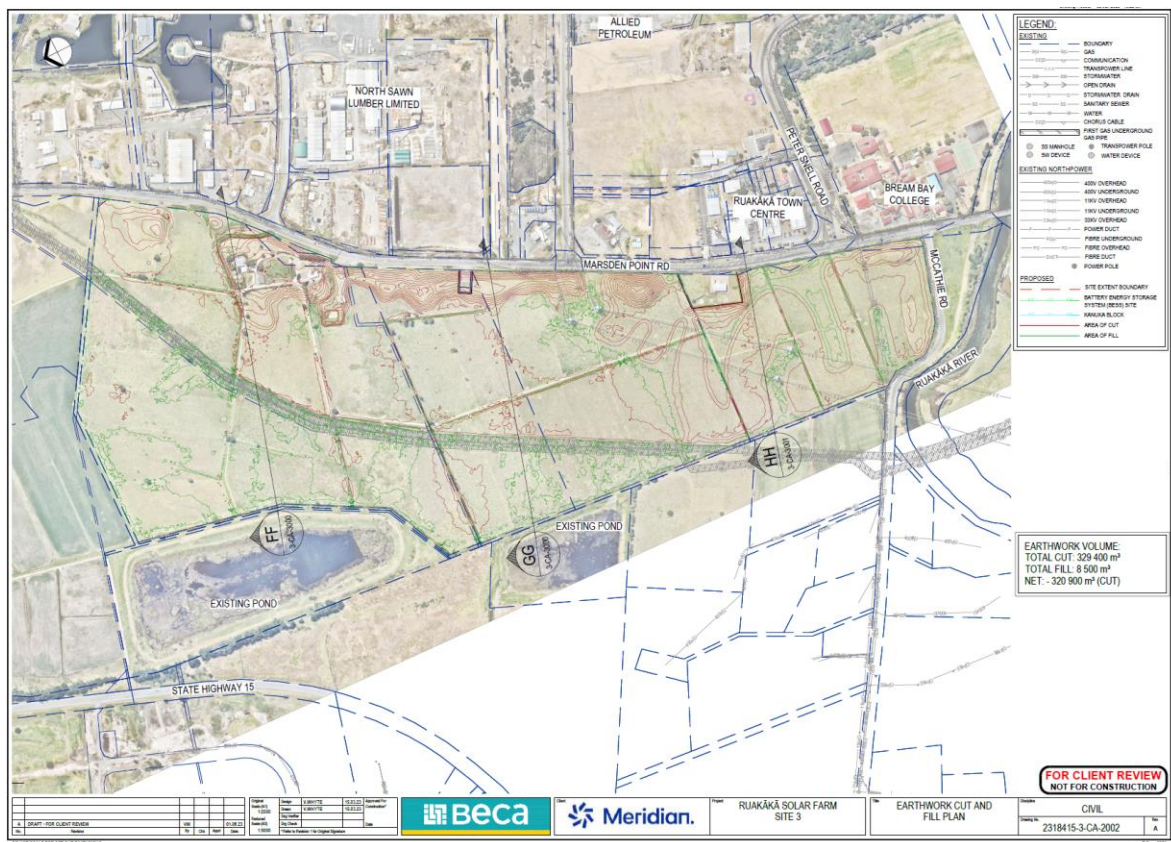


Figure 7: Site 3 cut/fill.

4.0 Methodology

The methods used to assess the presence and state of archaeological remains on the property included both a desktop review and field survey. The desktop survey involved an investigation of written records relating to the history of the property. These included regional archaeological publications and unpublished reports, New Zealand Archaeological Association Site Record Files (NZAA SRF) downloaded via the ArchSite website, and land plans held at Land Information New Zealand.

The field assessment of Site 1 was undertaken over several days in 2020, 2022, and 2023. Site 2 and Site 3 was undertaken over two days in November 2022. Eroded or exposed surfaces were inspected for the possible exposure of subsurface remains and limited probing and test pitting was undertaken.

5.0 Background

5.1 Archaeological Context

Archaeological sites in the Bream Bay area are concentrated near the southern shore of Whangarei Harbour around One Tree Point, Takahiwai and Blacksmiths Creek, in the Takahiwai hills and around the mouth and lower reaches of the Ruakākā River. Site density in these areas is particularly high, suggesting intensive use by Maori in prehistoric and protohistoric times. Sites away from the coast tend to be located on areas of old consolidated dunes, rather than the peaty inland swamps or coastal dune lands. The coast was used for fishing and gathering shellfish, while the river, wetlands and dune lakes would have been used for fishing, fowling and eeling, along with other ephemeral uses, which are usually difficult, if not impossible, to identify archaeologically. The sandy, well drained alluvial flats on the edge of the rivers and streams would have been used for gardening, with undefended settlements or kainga and pa sites in defensible areas nearby.

5.1.1 Site 1

There are six recorded archaeological sites in the vicinity of Site 1. All are midden and four are located near the southern boundary, with the fourth located on the other side of Port Marsden Highway opposite the BESS site (Figure 15; Table 1).

Q07/330 was a shell midden recorded by “Conelly” during the 1981 Project Employment Programme (PEP Scheme) archaeological reconnaissance survey of the area. Conelly recorded a 7 x 3m scatter of mostly cockle shell in a poor state of preservation on a track through the dunes, just behind the beach. No site plan, location map or photos are included with the site record form but the location is shown on the map accompanying the site record for Q07/980. It is several hundred metres south of the subject property and will not be affected.

Q07/980 was recorded by S. Bartlett in 1989, in advance of a proposal to build a new power station in the area. Bartlett’s survey covered what is now the western part of the property/proposed solar farm, and the area to the southeast. He recorded a midden consisting of shell, charcoal, and hangi stones over a 30 x 10m area at the bottom of a depression on the second dune inland from the beach, 30m east of the fenced pasture. This location placed it near the southwestern boundary of Site 1.

The site was revisited by Carpenter in 2012 for the proposed expansion of the Whangarei District Council wastewater treatment facility (Carpenter 2012). Nothing of the site was visible on the surface, which was covered in scrub, but the site was identified in a dune swale east of the pasture and west of a stand of pines by probing followed by spade test pitting. The test pitting revealed a 30cm thick layer of shell with six species represented, along with some fish bone and oven stones (Figure 10). The approximate centre of the site is at Easting 1733148 Northing 6030460 (NZTM), and it will not be affected by the proposal for Site 1.

Q07/1165 was identified by D. Harlow in 2002 on the Keith property immediately south of the Rama Road Block. A small area of eroded shell was noted on the edge of a vehicle track on the property. Subsequent probing suggested the site was 4 x 4m in size and a spade test pit indicated a 2cm thick layer of black, charcoal stained sand over 1-4cm of cockle shell with a small amount of fire-cracked hangi stone. The farm race was due to be improved to allow better access for sand mining on the Keith property and it was suggested that this would aid the preservation of the site.

The vicinity of Q07/1165 was revisited by Carpenter in 2012 but the site could not be relocated. It may extend into the southern corner of Site 1 in an area which may become part of the proposed solar farm development wetland.

Q07/1004 was recorded by S. Bartlett in 1993. It consisted of an 80m long intermittent exposure of subsurface midden revealed in trenching for the new natural gas pipeline and ground clearing of the access track along the alignment, adjacent to the existing oil pipeline. Features included a 5-15cm thick layer of charcoal-stained black sand containing deposits of shell midden and oven scoops. In one section, the archaeological material was overlain by 2.5m of windblown sand, itself capped by a more recent midden deposit (Figure 11-Figure 12). The site is located 200m south of the south east corner of the subject property and will not be affected.

Q07/1212 was recorded by C. Phillips in 2005, on the north side of Port Marsden Highway, opposite Site 1. She recorded a 24 x 14m subsurface midden, approximately 20cm below the current ground surface, on the basis of probing and test pits. The shell midden included fragments of whale and seal bone. The midden appears to have been located on the northern slope of an old dune system, between the crest of the dune and the swamp below. The presence of whale and seal bone might indicate a relatively early age for the site. The site is securely located and will not be affected.

Q07/1461 was recorded by J. Carpenter in 2020 in the course of the first assessment of what would become Site 1. It is located on the neighbouring parcel Lot 4 DP 419151. The site comprised a scatter of shell observed in a track through the vegetation, cut for the installation of a water pipe. Pipi shell and a single morning star shell was observed over a 2 x 1m area in weeds, with probing suggesting a subsurface deposit approximately twice that size. The midden appeared to have been superficially disturbed by the cutting of the track. The site is approximately 200m north east of the grid reference for Q07/1004, recorded by S. Bartlett and is consistent with the other midden recorded in the dunes in this area.

The centre of the feature is located at Easting 1733646 Northing 6031141 (NZTM). It will not be affected by the proposal for Site 1.

On the basis of the site record forms, neither Q07/330, Q07/980, Q07/1004 or Q07/1461 are on Site 1 or will be affected. Q07/1165 is in the vicinity of the proposed cut/fill required for the new wetland in this area and may be affected if intact archaeological features are present in the area.

The presence of these sites suggests that other unrecorded archaeological sites may be present in the project area but would be difficult to pre-emptively locate in the project area, given the scrubby nature of much of the terrain and the recently mobile windblown sands that predominate beneath the vegetation and the possible depth of features up to 2m or more below the current ground surface (based on previous findings).

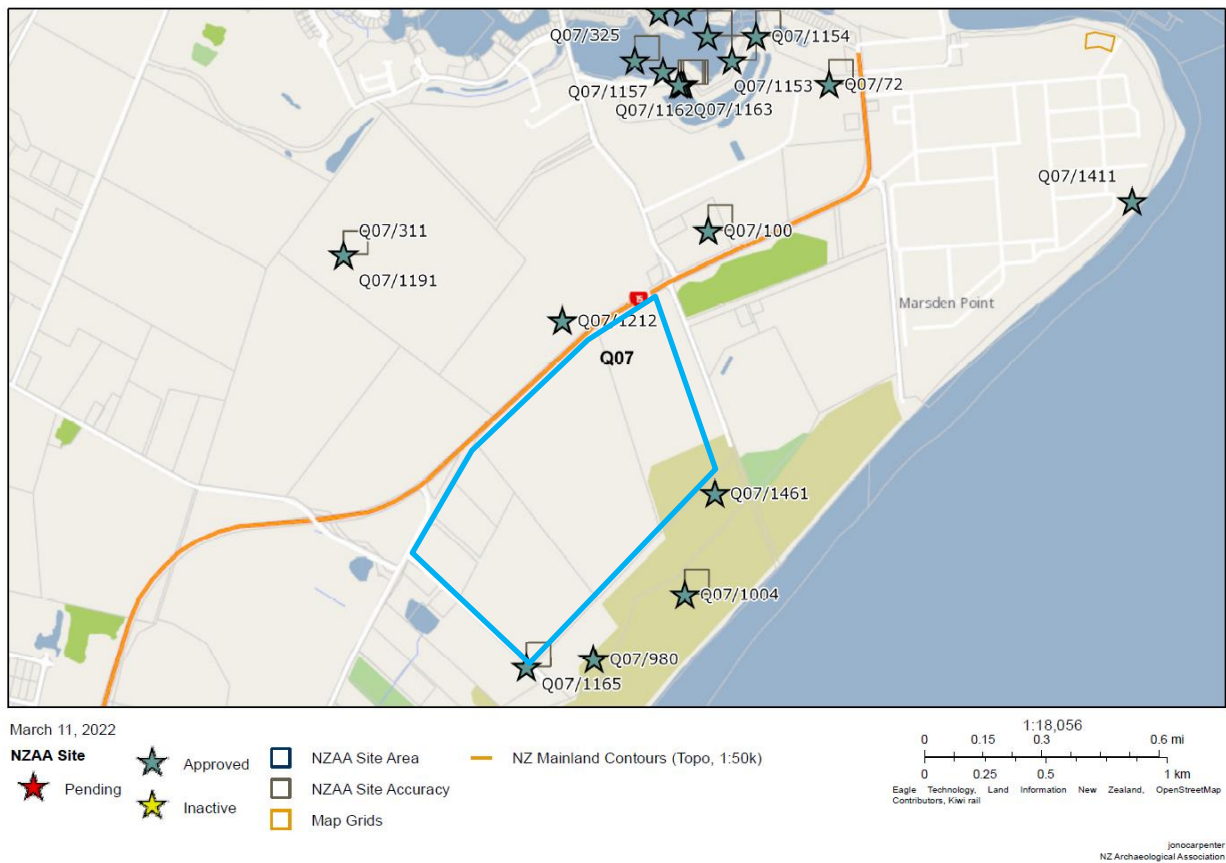


Figure 8: Archaeological sites in the vicinity of Site 1 (ArchSite).

Table 1: Recorded Archaeological sites on or within 100m of the project area.

Metric Site #	Imperial Site #	Easting (NZTM)	Northing (NZTM)	Site Type
Q07/980	N20/589	1733022	6030527	MIDDEN
Q07/1004	--	1733521	6030728	MIDDEN
Q07/1165	--	1732872	6030426	MIDDEN
Q07/1212	--			MIDDEN
Q07/1461	--	1733646	6031141	MIDDEN

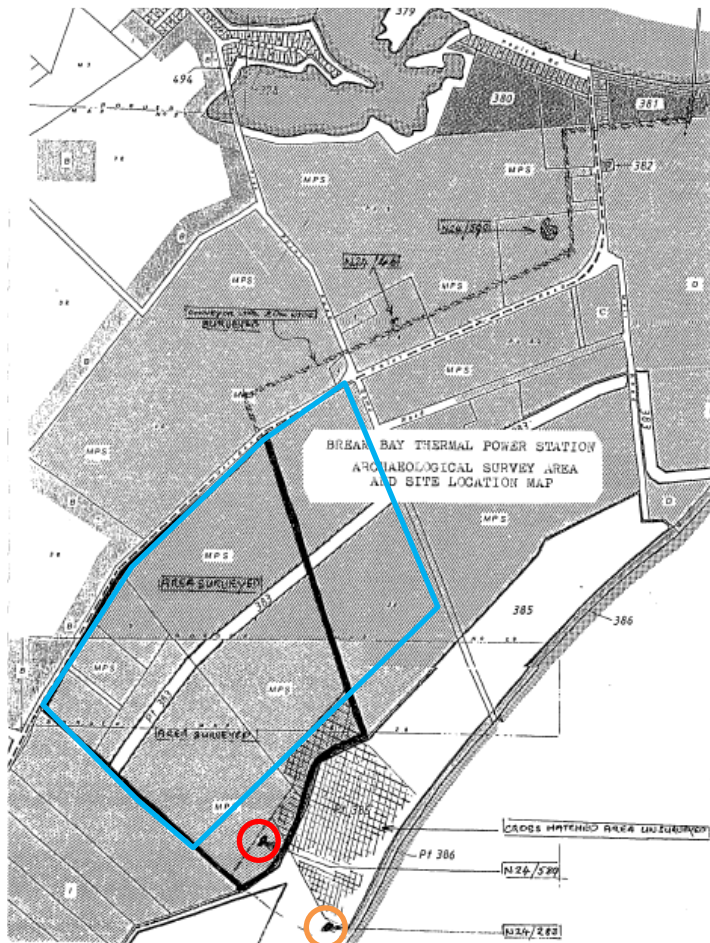


Figure 9: Location map for site Q07/980 (circled red; Imperial site number N24/589) with Q07/330 also indicated (orange; imperial site number N24/283) and Site 1 (blue), from original site record form.

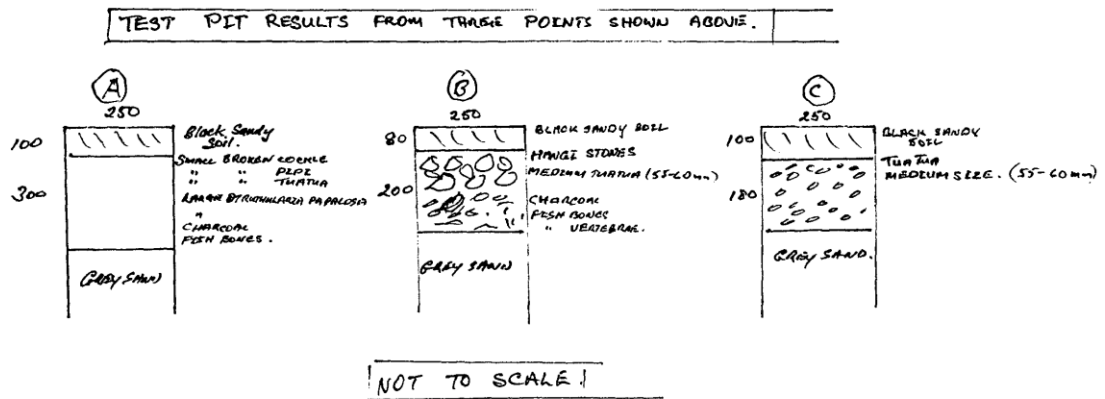
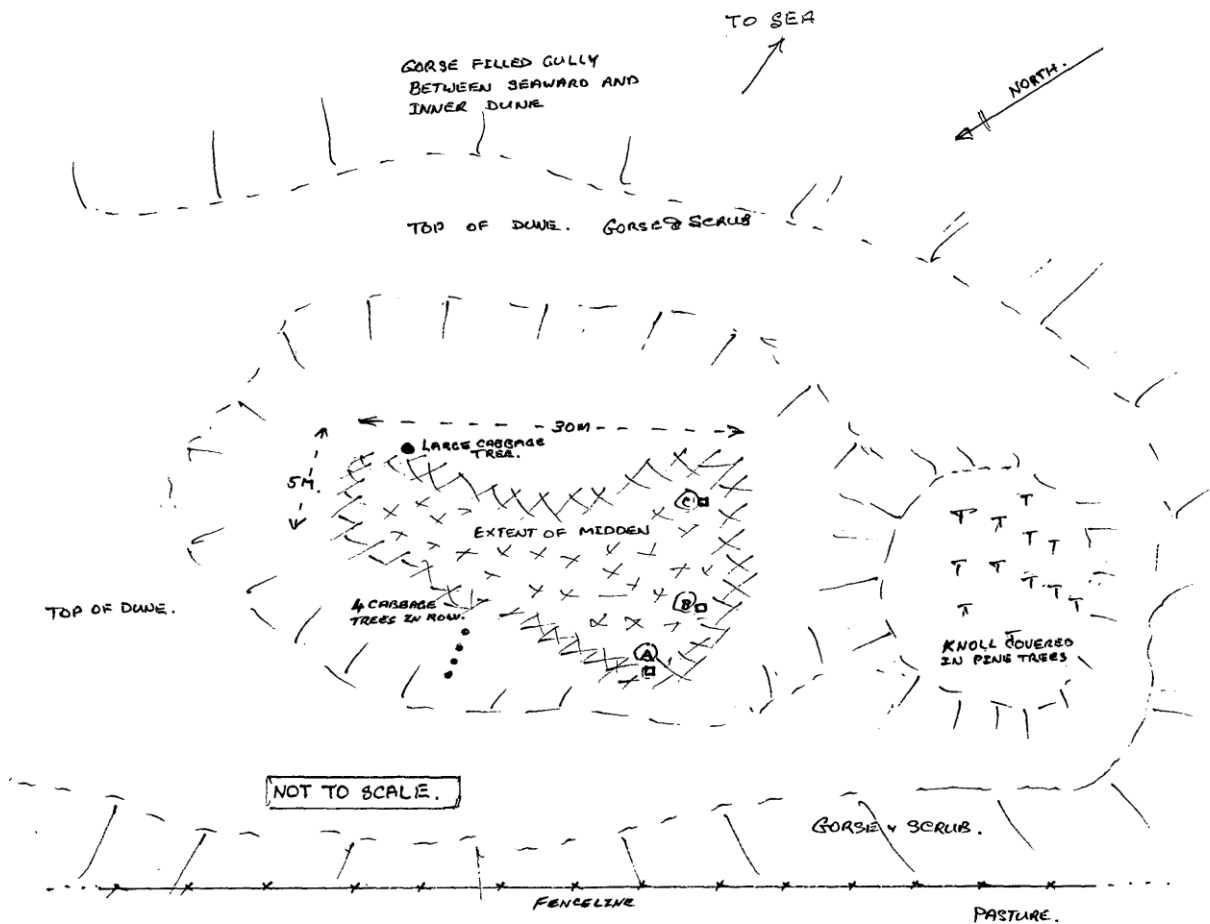
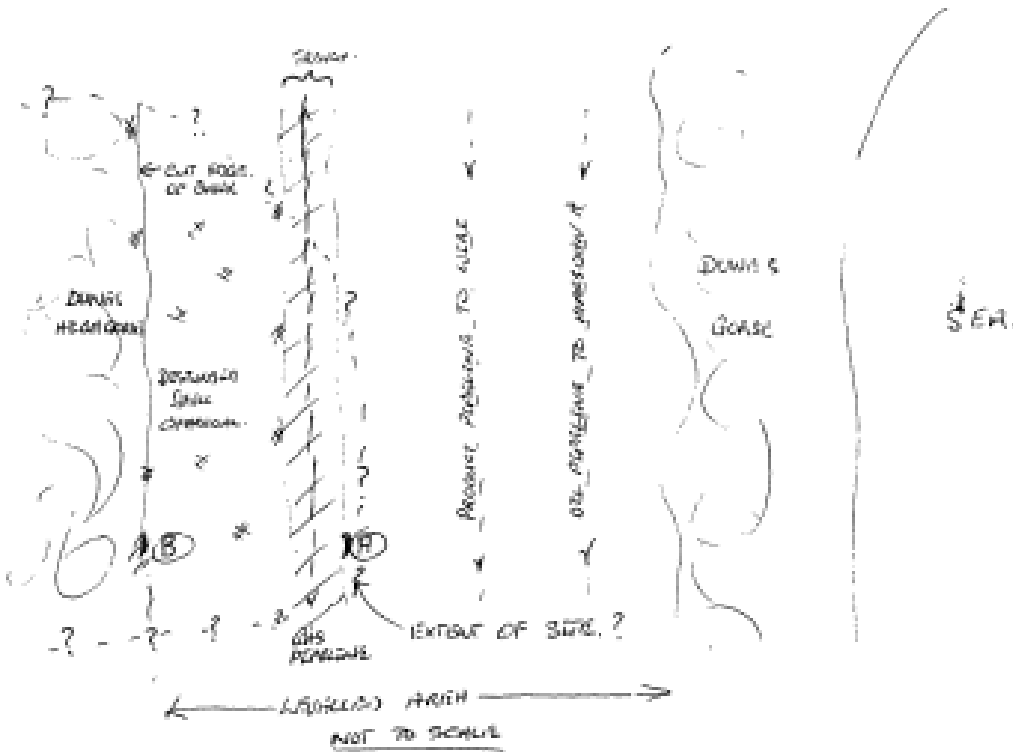
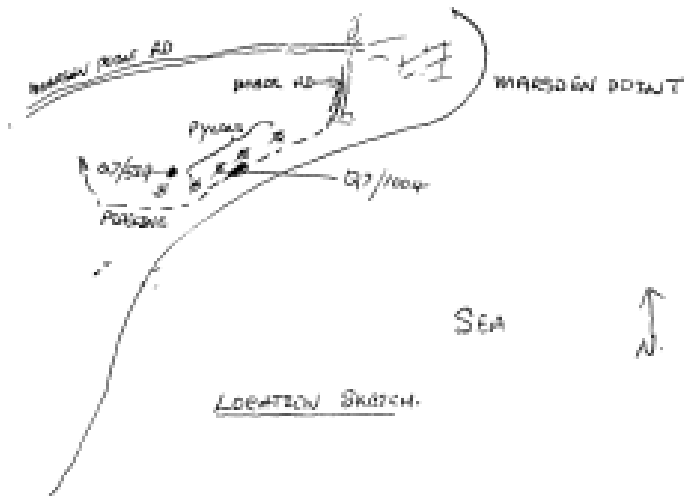


Figure 10: Sketch map of Q07/980 and soil stratigraphy, from original site record form.

SITE LOCATION & DESCRIPTION

Q7/1004



- A. HANGI SCOOP PROFILES IN TRENCH
- B. HANGI STONES AND PIT STILLS IN BANK

Figure 11: Sketch map of Q07/1004 showing features uncovered during vegetation clearance and trenching for gas pipeline, from original site record form.

Q7/1004.

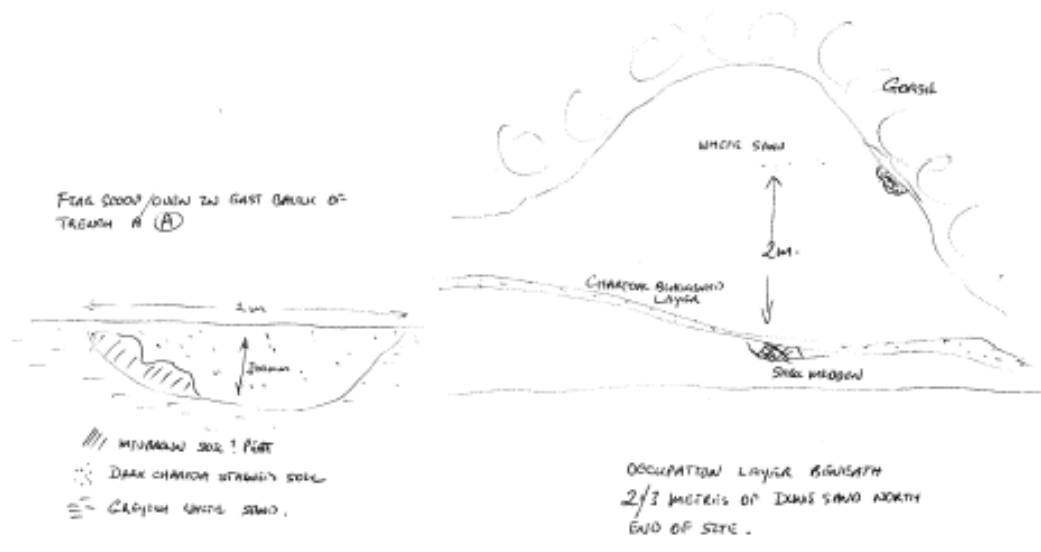


Figure 12: Sketch of soil stratigraphy and archaeological features of Q07/1004, including archaeological layer covered by 2m of windblown sand.

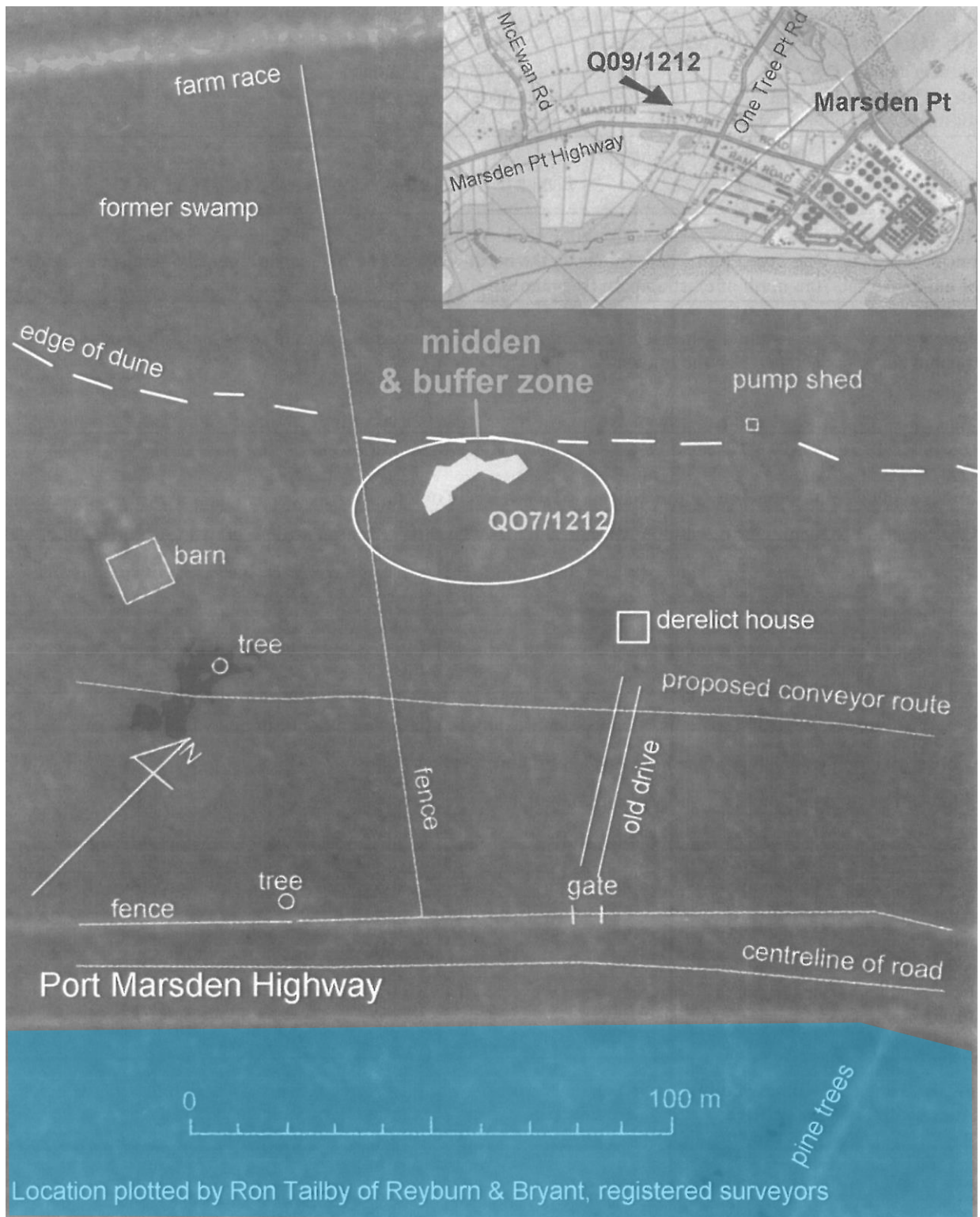


Figure 13: Location of Q07/1212 with Site 1 BESS location in blue, bottom of frame.

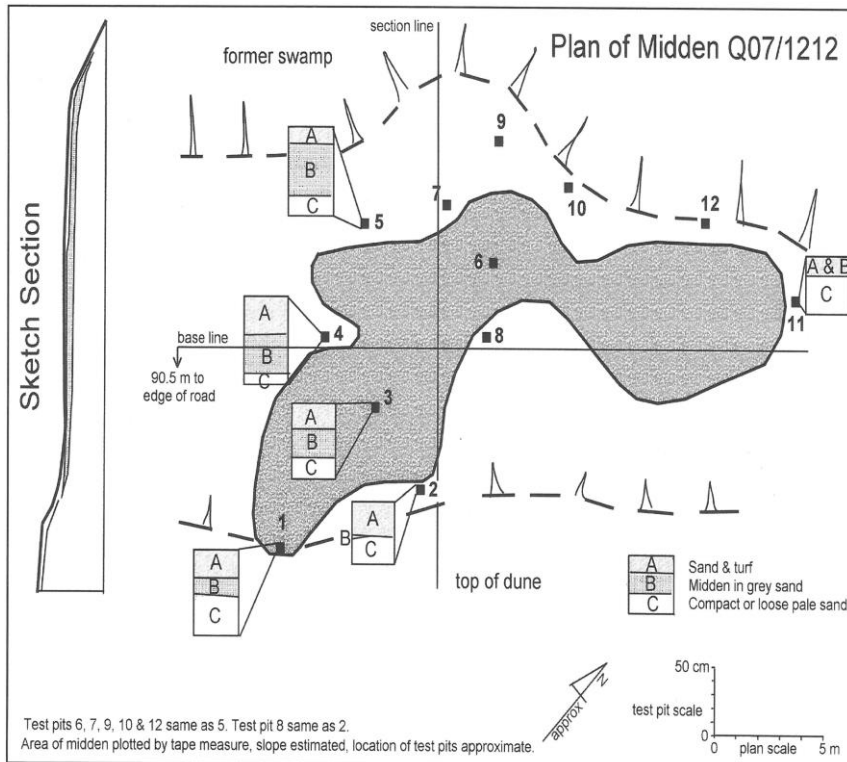


Figure 14: Q07/1212 site plan.

5.1.2 Site 2 and 3

There are three recorded archaeological sites in the vicinity of Site 2 and 3, between 120 and 350 m from the nearest boundary. There is one pa site, one storage pit site, and one is midden (Figure 15).

The nearest site is Q07/309, a single storage pit on the hill south of Site 2 and Macathie Road. The site was recorded in 1981 by G. Nevin who recorded a pit on the southeastern arm of the hill at approximately 60m above sea level. It was 6 x 3 x 0.7m in size, stock trampled and in poor condition. When revisited for the NZAA site upgrade project in 2006, it was recorded as likely being destroyed but another terrace or pit was recorded below the original location.

Site Q07/310 is a midden also recorded by Nevin in 1981. She described a 24m long, 30cm thick exposure of midden in the drain on the eastern side of One Tree Point Road, approximately 100m north of the intersection with what is now the Port Marsden highway. The midden consisted of cockle and tuatua. Twenty-five metres south was another, four metre long and 15 cm thick exposure of cockle. When the site was revisited in 2006 and 8m long exposure was re-recorded and appeared to extend under the road to the west, and under the pasture to the east.

This area was subsequently developed for the Marsden City project but there is no indication an archaeological Authority was sought, or any of the midden investigated as part of that project.

Q07/94 is a Pa site on the hill south of the southern end of Site 3 and the Ruakākā River. The site has been all but destroyed by earthworks for the WDC water reservoir and pine plantation, although scattered midden is present within the pines, and terraces may still be present under the trees.

On the basis of the site record forms, neither Q07/94, 309, or 310 are within Site 2 or 3 or will be affected by the project. They do suggest that prehistoric Maori occupation was occurring in the immediate vicinity of the project area, and that other unrecorded archaeological sites may be present.

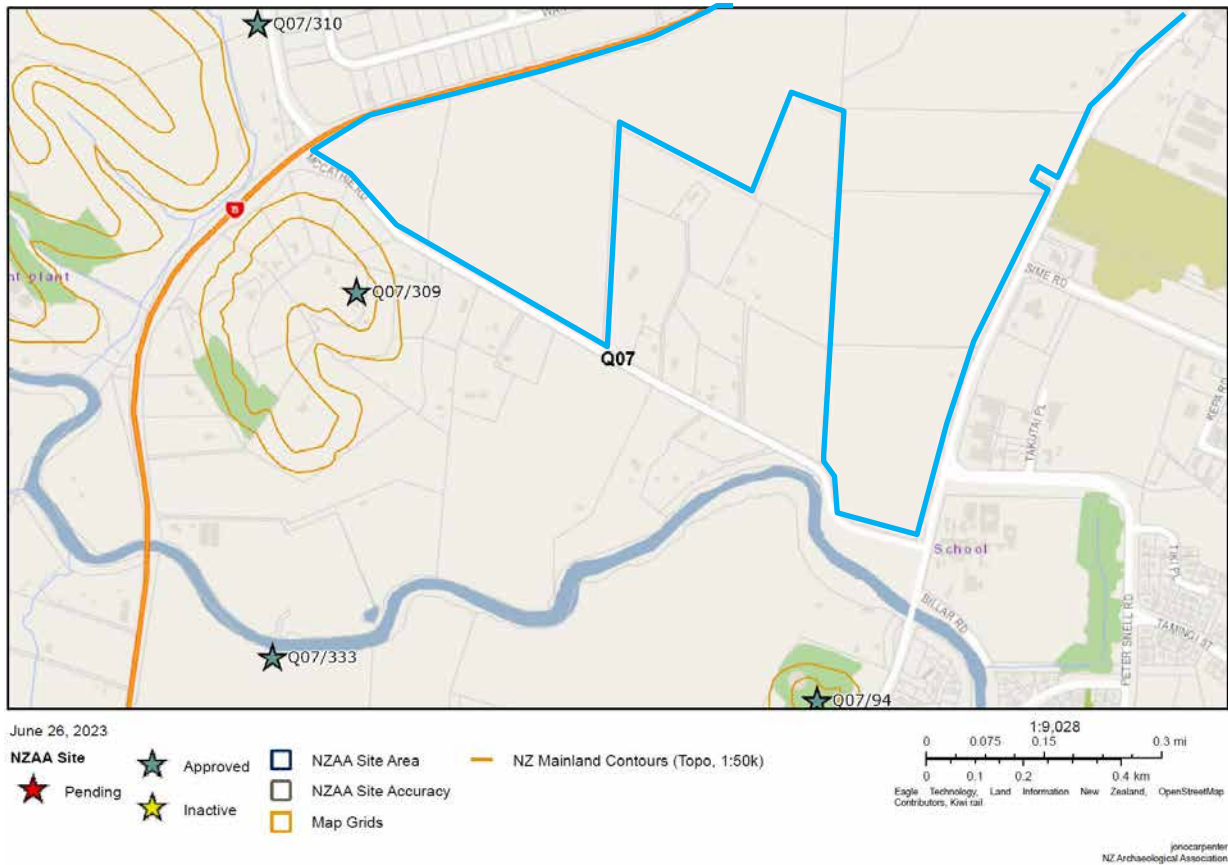


Figure 15: Archaeological sites in the vicinity of Site 2 and 3 (ArchSite).

5.2 Other Heritage Listings

The Whangarei District Plan schedules of Sites of Significance to Maori, Heritage Buildings, Sites and Objects, Heritage Trees and the Heritage New Zealand Pouhere Taonga List of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu areas were consulted to determine whether there were any scheduled or registered historic places on or in the vicinity of Sites 1, 2 and 3.

There are no scheduled or listed historic places or sites of significance to Maori/Wahi Tapu on the WDC Schedules or Heritage New Zealand Pouhere Taonga List in the vicinity of Site 1, 2 and 3.



Figure 16: Archaeological sites in the vicinity of the Ruakākā Energy Park, and existing land and built form.

5.3 Historic Background

5.3.1 Traditional and Early History

In November 1769, Captain Cook described the land between Cape Rodney and Bream Head as “low and wooden in tufts, and between the Sea and the firm land are white sand banks, we saw no inhabitants”. However, during the night, fires were seen inland (cited in Salmond 1991: 213). As far as Cook was concerned, the most notable event was the netting of 100 bream (tarakihi), after which the main headlands and bay were named. In 1815, Nicholas passed along the coast and described the land in a similar way. “The land [behind Bream Bay] is low, with some detached forests of pine [possibly kahikatea], and in many parts large white sand-banks” (Nicholas 1817: 418).

In the late eighteenth and early nineteenth centuries a series of battles and war campaigns resulted in the area being frequently abandoned (Gates 2002: 22-25). This disturbance was exacerbated by the acquisition of muskets and an imbalance of firepower, and coincided with the decrease in Maori population between Whangarei and Auckland, particularly after the battle of Te-Ika-a-Ranganui at Kaiwaka in 1826. The Maori population was greatly reduced or displaced and consequently, many traditions were lost.

Patuharakeke are the Tangata Whenua of the area and are affiliated with Ngapuhi, Ngati Whatua and Ngati Wai. In the later part of the nineteenth century the area they occupied was reduced to particular settlements such as Takahiwai and others around Whangarei Harbour, as land sales to European settlers increased.

By 1840, many of the tribal wars had reduced in intensity as muskets became more evenly distributed and the balance of firepower was equalised. Trading with the newly developing Pakeha centres in the Bay of Islands and Auckland saw many Maori engaged in the cultivation of crops and the manufacture of other goods for trade. Immediately prior to the signing of the Treaty of Waitangi, European speculators and settlers bought land.

Sites 1, 2 and 3 lie within an area known as Ruakākā which was purchased by the British Resident James Busby in December 1839 from the northern chief Pomare, often associated with Otuihu in the southeast Bay of Islands. The block extended from Whangarei Harbour to Kaiwaka and inland to the Tangihua Ranges. Although estimated at 25,000 acres, the actual area described in the deed of sale amounted to some 70,000 acres and included Poupouwhenua, which includes the land known as Marsden Point to the southern end of the old dune lake by the northern arm of the Ruakākā River and west to what is now One Tree Point.

The Busby purchases, which also included extensive lands in Whangarei and the Bay of Islands, would go on to be investigated by the Land Commissions established after the Treaty of Waitangi in 1840 to investigate pre-Treaty land sales. Although not recorded on file, a hearing of the Commission took place and several witnesses provided testimony that acknowledged and supported the Busby claim. Nevertheless on 14 June 1842, Commissioners Richmond and Godfrey reported on the claim (Berghan 2006):

“...as the claimant James Busby instead of complying with the request of the Commissioners “to bring some of the numerous Natives Sellers of the land before them for examination according to the rules adopted by the Commissioners in all their investigations” has in a letter addressed to them dated the 17 May 1842 peremptorily declined making any further attempt to prove the integrity of his purchase. the Commissioners, therefore do not recommend any grant of the above described land to be made to the claimant, nor any compensation for his outlay.”

The sale was disallowed. Busby's original claim was reviewed again following the Native Lands Act of 1857 and Busby would continue to be in dispute with the Crown about multiple purchases between Auckland and the Bay of Islands, into the 1870s. Takahiwai (part only) to the west and Ruakākā to the south were repurchased by the Crown in 1854, but of Poupouwhenua had already been ceded to the Crown in the 1845 by Chief Mate and others as recompense for a muru undertaken on European sawyers by the Chief Parihoru in Matakana. Mate and Te Pirihi Koukou were also accused of taking part on the raid on a number of settlers at Matakana who had occupied land originally purchased by Thomas Millon and John Skelton and subsequently upheld to the tune of 1200 acres by the first Land Commission. Mate was subsequently absolved, but apparently instigated the Poupouwhenua session to the Crown.

Parihoru had ancestral connections to the Matakana area through Kawerau a Maki, Ngatirongo and Ngai Manuhiri and disputed the sales in the area undertaken by Ngati Paoa, however he had mostly lived in Whangarei with his Te Parawhau family in the years preceding the raid on the Europeans at Matakana. There is very little documentation about the supposed cession of the land, it being referred to in the Takihiwae (Takahiwai) Block deed as being surrendered to the Crown by Mate. Mate was apparently the instigator of the cession of Poupouwhenua in recompense, as recorded in correspondence between George Clarke and his son Henry Clarke who at the time held the title of Chief Protector and Sub-protector of the Aborigines, and also involving Mr Meurant as interpreter in the investigation, and noted by the Rev. James Buller in his writings. But otherwise there seems to be no official accounting of the matter, and the block was never surveyed or a deed recorded, apart from a subsequent extinguishment of Maori claims to a smaller 200 acre block at Poupouwhenua, known as Rauiri, whereas Poupouwhenua proper was more like 5000 acres (Berghan, 2006: Gudex, 2013; Rigby 1998, Rigby 2015: 7).

Some 8000 acres of the Ruakākā Block to the south was bought in 1865 by Thomas Henry, who developed much of it as a farm known as Belle Vue. A sketch map of the farm in 1880 reproduced in Richards (1984: 20) shows only the Marsden Point to Waipu Road (the present line of Marsden Point Rd) and a store somewhere in the vicinity of the Ruakākā Campground.

To the north, Poupouwhenua with its patchwork of older and more recent dunes under scrubby manuka, divided by finger-like waterways and peaty wetlands did not present a prime opportunity for European endeavour and settlement there lagged into the 1870s. In 1859 it was deemed inferior land not worth surveying (Auckland Examiner, 24 August 1859). Marsden Point itself was taken for a Town Reserve and was subsequently surveyed into a series of streets. Although this town did not develop, the Point became an area where goods were off-loaded to be transported to the inland settlements on the southern side of the harbour (Richards 1984).

In 1877 the settlers of Waipu secured construction of eight miles of road from Waipu to Marsden Point (New Zealand Herald, 25 August 1877), and construction of a wharf from which to ship their produce. Tenders for the wharf were let in April 1878 by the Wangarei County Council with the winning bid to Darroch and Co. of Freemans Bay (New Zealand Herald, 4 April 1878, 18 May 1878), and the wharf was built in November 1879 at a cost of £689 (New Zealand Herald, 7 November 1878).

However even the provision of a road and wharf to open up the land did not do much to spur development. In 1879, the Waste Land Board offered 3286 acres at Poupouwhenua was offered for a 14 year depasturing lease at a rate of £25 per annum to be paid yearly in advance but there were no takers across several offers at that rate (Auckland Star, 15 January 1879). However in June 1879 John Munro, one of the Nova Scotian settlers at Waipu, took the lease at a reduced rate of £12 per annum (Auckland Star, 23 June 1879). The month before however, a strong easterly gale and high tide had destroyed the wharf (New Zealand Herald, 8 May 1879). There were multiple, related John Munros associated with the Waipu settlement, John Munro Senior who had died several years before, his son who became postmaster at Marsden Point, and a nephew of John Senior, a contractor at Kamo. Presumably it is the son in this instance.

5.3.2 The Marsden Kauri Gum Reserve

The remaining Crown land in the area was leased or sold over the years or remained Crown waste land and this includes Site 1, 2 and 3. The 1887 electoral roll lists 69 voters in the Ruakākā area, 36 of whom were gum diggers. Gumdigging was one of the principal late nineteenth century and early twentieth century occupations in the area. The activity was focussed inland on areas between Marsden Point, One Tree Point and Ruakākā, a landscape of swamp and old consolidated sand dunes where great kauri forests had once grown.

The Crown land was subdivided into Kauri Gum Reserves following the passing of the Kauri Gum Industry Act of 1898. The Marsden Kauri Gum Reserve (MKGR) covered some 2338 acres and Sites 1, 2 and 3 were all within originally Crown waste lands that were incorporated into the reserve.

The Kauri Gum Industry Act of 1898 allowed for the kauri gum reserves on suitable Crown land. These gum reserve areas covered around 100,000 hectares from the Waikato-Coromandel north but largely north of Auckland, and were exclusively for the use of British subjects (including Māori). A licensing system was also introduced and the regulations were partly aimed at restricting “Austrian” diggers, largely Croatians from the Dalmatian coast which at the time was part of the Austro-Hungarian Empire. As a result, Dalmatians shifted their focus, and many made arrangements with private landowners, paying a rental for the right to dig gum.

A Crown Royal Commission of Inquiry in 1893 and 1898 was the precursor to the Act, and had produced two Kauri Gum Industry Reports (Appendix to the Journals of the House of Representatives, 1898 Session I, H-12). The 1898 Inquiry visited 30 places, held 40 meetings and heard from 193 witnesses across the gumfields and in local centres. The Inquiry noted that by in large and similar to the state of the goldfields, the easiest gum had long been worked out in most places, leading to intense competition for smaller and smaller pieces that required more and more work to find. The price of gum was subsequently as high as it had ever been, and despite the ever-decreasing availability the annual output had more or less been the same for 20 years. Until the Act came into force, a licence fee of 5s a pound had been payable to the Crown for digging on Crown land, to be collected by the local Councils. But almost no Council was doing so, due to the costs of administration (AJHR 1898 Session I, H-12: 1-2).

In 1909 the Northland Age reported that the Auckland Gumdiggers Union had met, and amongst other business had noted that aliens were working the MKGR and that this would be reported to the Gum Ranger (Northland Age, 10 May 1909). In 1911 the Union reported that V. G. Sergeant and A. Bevins had written to the Whangarei County Council asking for support to lift the reservation. The Union elected to communicate with the Council that the MKGR was a very valuable one, albeit one which could only be worked in summer (Northern Advocate, 27 September 1911).

In 1912, the County Engineer W. M. Fraser, who was responsible for much of the Council capital works programme at the turn of the century including the central Whangarei reclamations, reported to the Council that there was a viable route for a local railway from the Waipu River to One Tree Point, a distance of 11 miles, at a cost of £27,000. Half could be paid by a government grant and the rest by a loan to be paid off by royalties from the MKGR if they were vested in council, and general traffic. The railway would be two and half foot narrow gauge operated by the Council as the government did not bother with narrow gauge projects, with two locomotives, three wagons and one carriage priced in as a start. There would be station facilities at Ruakākā as well as One Tree Point and Waipu and the line would run through the MKGR. Fraser suggested the sandy, gum-poor eastern part of the reserve could be vested in the Council, subdivided into 50-100 acre lots and profitably leased for orcharding and chicken farming and return £200 a year (Northern Advocate, 19 and 22 April 1912).

A month later, the monthly County Council meeting noted that the Waipu Gumdiggers Association had taken umbrage at the idea the gum reserve was not valuable enough to be retained in toto. Mr S. M.

Gaumon wrote that small fortunes had been made in a short period by small numbers of diggers on the MKGR, and that while respecting Fraser's expertise as an engineer, remarked he "knew nothing absolutely whatsoever about gum lands." Fraser, offended by the tone of the Association's letter noted that he himself had spent five years digging gum and probably knew more about gumdigging than he did about railways. He suggested the Association was little more than three or four men that tried to get the government to listen to them. The Councillors elected to reply to the diggers noting the Council would, as always, look out for their interests (Northern Advocate, 11 May 1912). Suffice to say and despite Mr Fraser's many other successful projects, the Waipu-One Tree Point railway did not eventuate.

The 1914 Kauri Gum Industry Commission of Inquiry visited lower Ruakākā on the 18th of May and heard from a number of witnesses. Robert Hamilton Black, a local gum digger, testified that the best gum on the reserve was near the southern boundary, but the part to the east near the road was poor. Gum could generally be found on the reserve between six inches and seven to eight feet deep across the reserve. He couldn't say how many men had been working the reserve the previous summer.

Another gum digger, Harry Owen, had dug all over the reserve and agreed with Black, saying he had never found gum towards the sandhills or east of the lake. Iras Hoggard had also dug on the MKGR and had seen 12 other diggers camped on the reserve, making 12-16s a day on a good day, with an average weekly wage of £2 and 10s to £3, less stores. The cost of living was about 10s a week.

In contrast James Donaldson Steedman, Crown Lands Ranger, stationed at Whangarei reported that he had visited the reserves in the area and made three special inspections of the Marsden and Waipu reserves. He had never seen any gum-diggers in that locality and stated there was very little digging done at Marsden Point, He did not think that there would be any injustice to the diggers if the reservation were taken off those areas and the land was worth about £3 an acre.

Ultimately it was resolved, on the motion of Mr. Greville, seconded by Mr. Stafford, that the Marsden, Ruakākā No. 3, Uretiti, and Pohoenui Reserves be retained for gum digging purposes.

In 1921, the County Council advocated for removing the reservation and opening up the MKGR for settlement, served by a road to and wharf from One Tree Point. Chairman W. Jones state it was a matter of great importance that the land be opened up as soon as possible, and the Council voted to make representations to the Minister responsible (Northern Advocate, 11 November 1921). Mr R. P Greville, Commissioner of Crown Lands responded a few eeks later, stating that great consideration had been given to opening up the MKGR for settlement in previous years and that part of the area still contained sufficient gum to warrant retaining the reservation. Part of the MKGR had already been cut up into sections but the Land Board would not open it for settlement until local roads had been completed and a terminal for shipping established at One Tree Point (Northern Advocate, 9 December 1921).

A deputation of settlers met the Minister for Crown Lands the Hon. D. H. Guthrie at Takahiwai in March 1922. The parties were introduced by Council Chair Jones, who noted the reasons given for delaying opening up the MKGR for settlement and, in opposition to the deputation, stated that he agreed with them. It was also noted that the government had received a signed memorial from the gumdiggers in opposition to lifting the reservation, and that there were competing interests at play (Northern Advocate, 30 March 1922).

The issue of raising the reservation remained unresolved eight years later. In 1930 local settlers from the Ruakākā Ratepayers Association asked the local MP A. J. Murdoch to request that the Minister for Lands G. W. Forbes visit the MKGR and have the block opened for settlement. This was on the basis that the remaining land in the MKGR was as good as the other six sections in the area that the Department was currently putting up for the ballot, and which were oversubscribed. It was thought that the Department was probably waiting for the final metaling of the One Tree Point Road before opening up the last of the Marsden Kauri Gum Reserve (Northern Advocate, 22 February 1930, Auckland Star, 24 February 1930).

Pakeha gumdiggers and farmers cleared the land by fire, as demonstrated by the sudden increase in charcoal in the pollen cores for the area. In this last period, the forest species declined, apart from pohutukawa and possibly totara, introduced pine appeared, and there was an increase in the number of grasses along with other herbs. At the beginning of the twentieth century the dune ridges were under manuka and fern, and part of the coastal dunes had no vegetation because they were shifting sands. The swamps contained flax, raupo and wiwi.

Houses and stores were set up in the area and 'Gumtown' sprang up along both sides of Marsden Point Road (Richards 1984: 28-9). The gum holes sometimes extended 12 or 15 feet deep. When the blocks were worked out they were converted to farms. By 1927, and approximately 17 dwellings were located on the high ground above the Ruakākā River mouth according to a map in Richards (1984: 38), mainly between the road and the edge of the escarpment. Another 20 houses were strung out along the highway to the west. By this time the general pattern of settlement along Marsden Point Road was in place, with lots stretching between the road and cliffs above the river.

A settlers association was established at One Tree Point in the early twentieth century to advocate for roads and other services, and the opening up of Crown land in the area for settlement. By the 1920's Government agents and ministers had come under considerable pressure to support the expansion of farming at One Tree Point, and several overtures were made in the years before 1929 for the government to withdraw land from the reserves, subdivide and sell, or lease the land and make it available for farming. However the government was reticent due to the poor nature of the land for many years.

Of the area, a correspondent to the Northern Advocate in 1918 wrote that the land between Marsden Point and the Ruakākā Valley was "...dreary, dismal and disappointing" with the one bright spot being the lake, at that time covering about 80 acres. The lake is described then as eight to ten feet deep, with the western shoreline is up against sandstone for ten chains, with a clear sandy bottom and a fringe of reeds affords a "...clean bottom for those who like to wade". Because of the poor aspect of the surrounding countryside, at the time it lay "... lonely and forgotten except for the few natives who periodically go eeling amongst its bullrushes". The correspondent reports that the lake level never changes as there is no in or outflow, and the lake had been unchanged for fifty years until 1915 when the local Acclimatisation Society released more than a thousand perch and five thousand rainbow trout into the waterbody, with another five thousand released at the time of writing (Northern Advocate, 28 March 1918).

That same year, landowner Thomas Colthart was reported to have brought a sieve grip tractor with a swamp plough with a 20-24 inch furrow onto his land between the lake and Bellevue hill in order to start ploughing the 5-600 acres of flats between the lake and the high ground (Northern Advocate, 2 November 1918).

In 1922 the Government proposed opening the Marsden gum reserve lands for settlement, with some opposition by locals who wanted to see the road built through the reserve first (Northern Advocate, 30 March 1922). By 1924, the ingress of windblown sand across the dunes from the coast was interfering with the lake levels by damming minor outfalls. The road between Ruakākā and Waipu was at risk of going underwater and seventeen settlers signed a letter to the Whangarei County Council asking for a solution (Northern Advocate, 10 May 1924). In this period the lake was reportedly a good place to shoot grey ducks and black swans (Northern Advocate, 5 June 1925). The road itself was not fully formed and metalled until the mid-1930s, with the bridge over the river built in the same period.

WHANGAREI DISTRICT

TAKAHIWAE BLOCK

7 July 1854

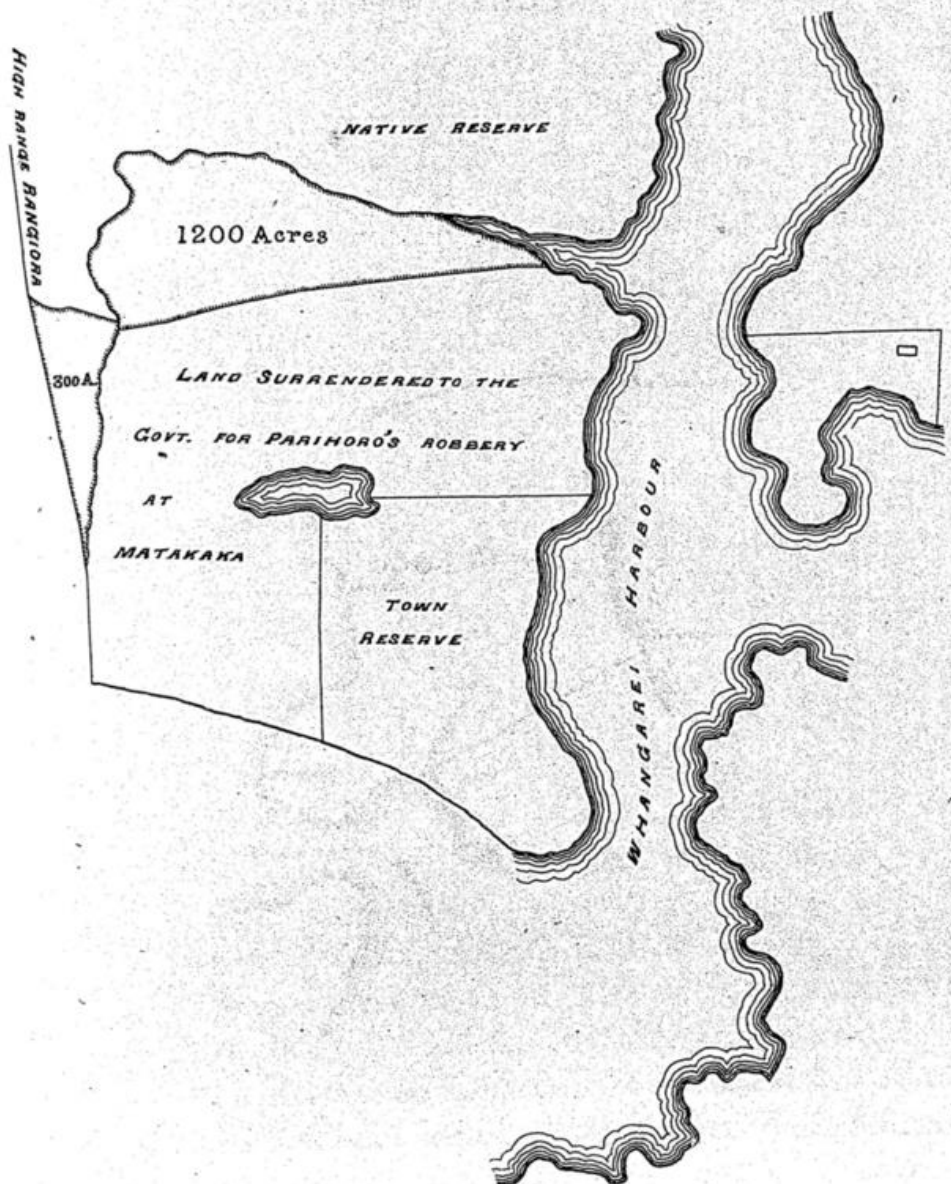


Figure 17: Copy of the Takahiwae Block deed plan, showing Poupouwhenua session (Turton: 1877).

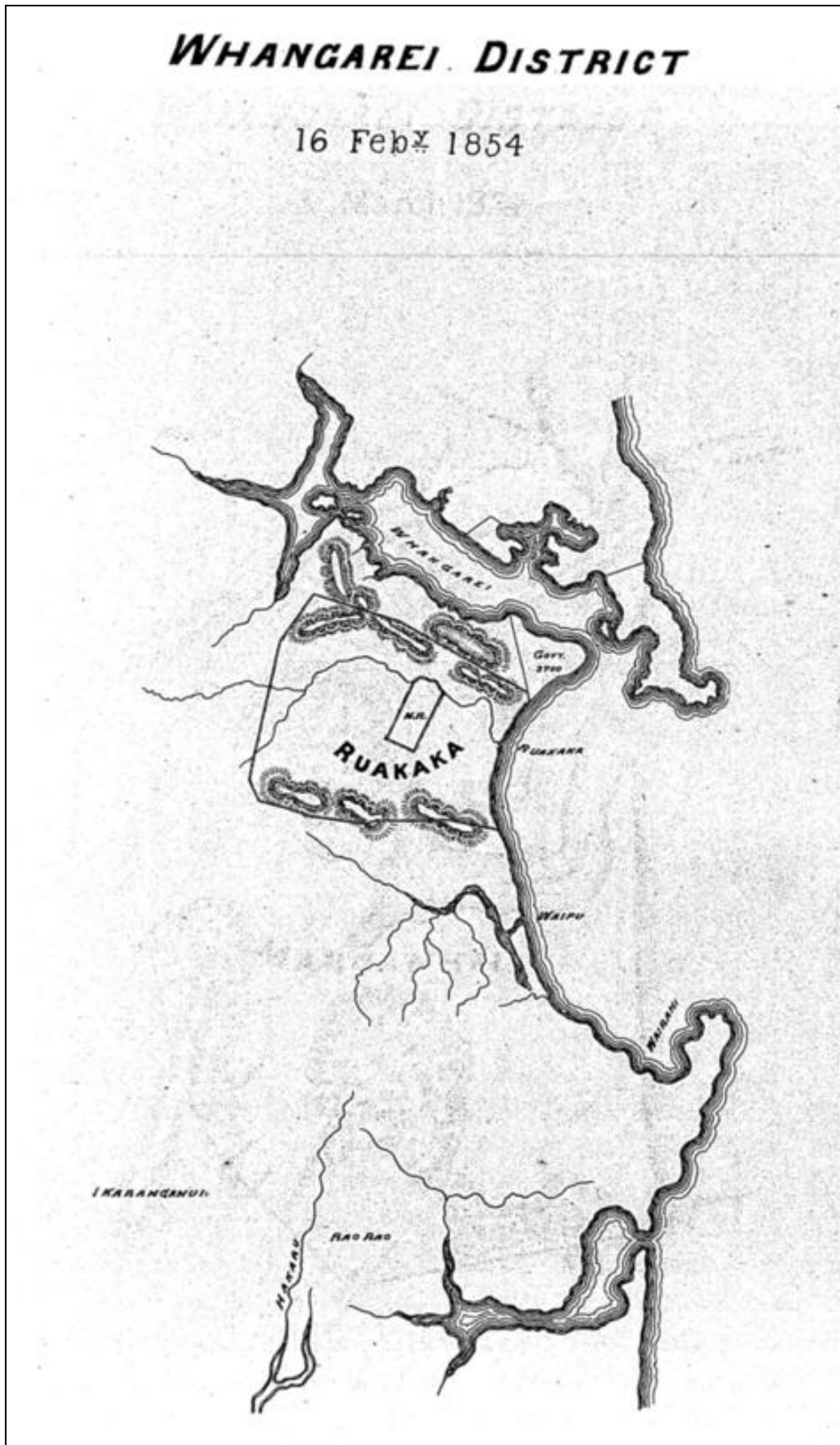


Figure 18: Plan of the Ruakākā Block purchase (Turton 1877).

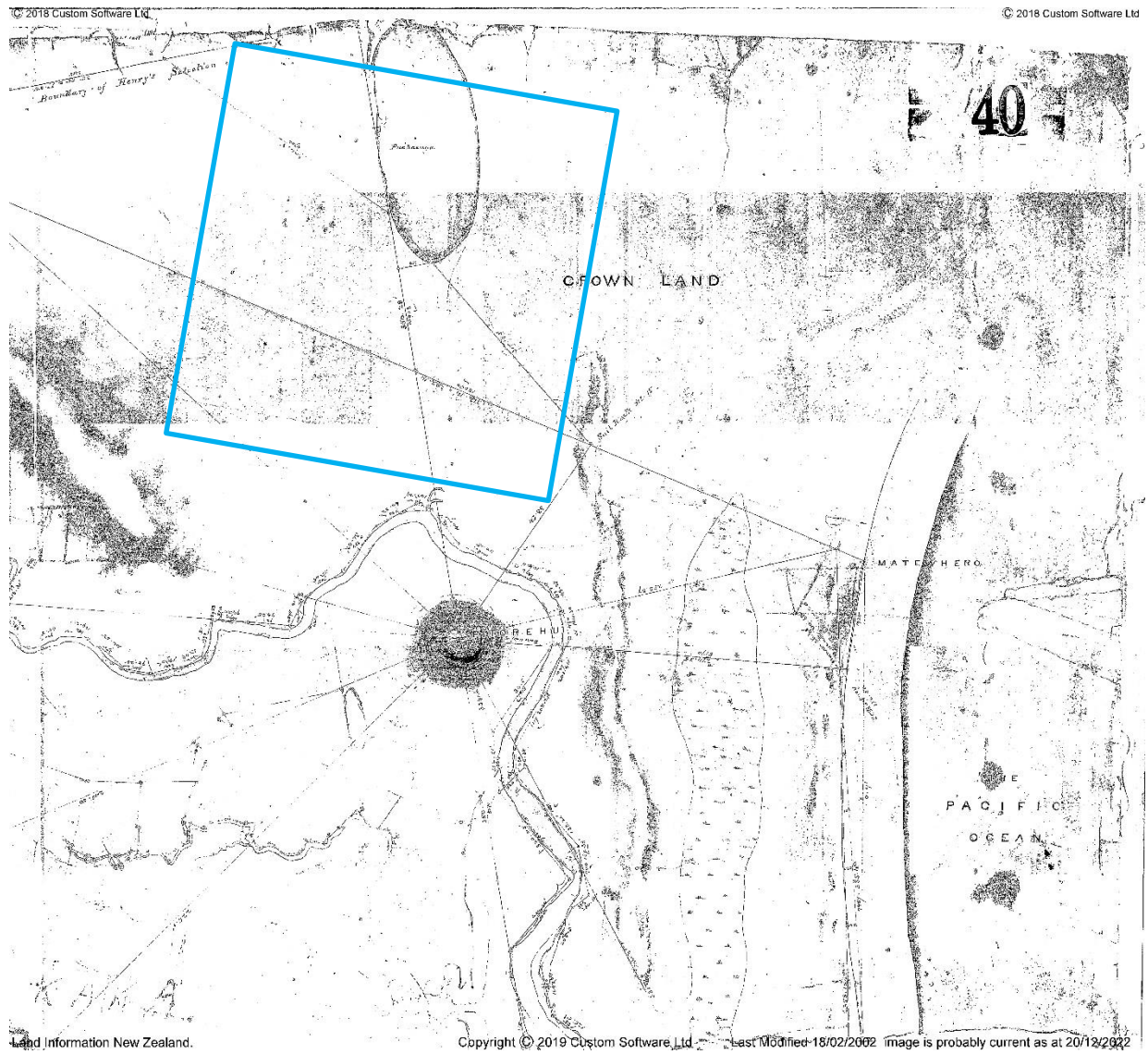


Figure 19: Detail from SO 40 (1854-1865) and approximate location of Site 2 and 3.



Figure 20: Detail from Roll 16 (n.d.) showing Ruakākā and Pououwhenua Block boundary and approximate locations of Sites 1, 2 and 3.



Figure 21: DP 919 (1889) Subdivision of Bellevue Estate and Site 2 and 3.

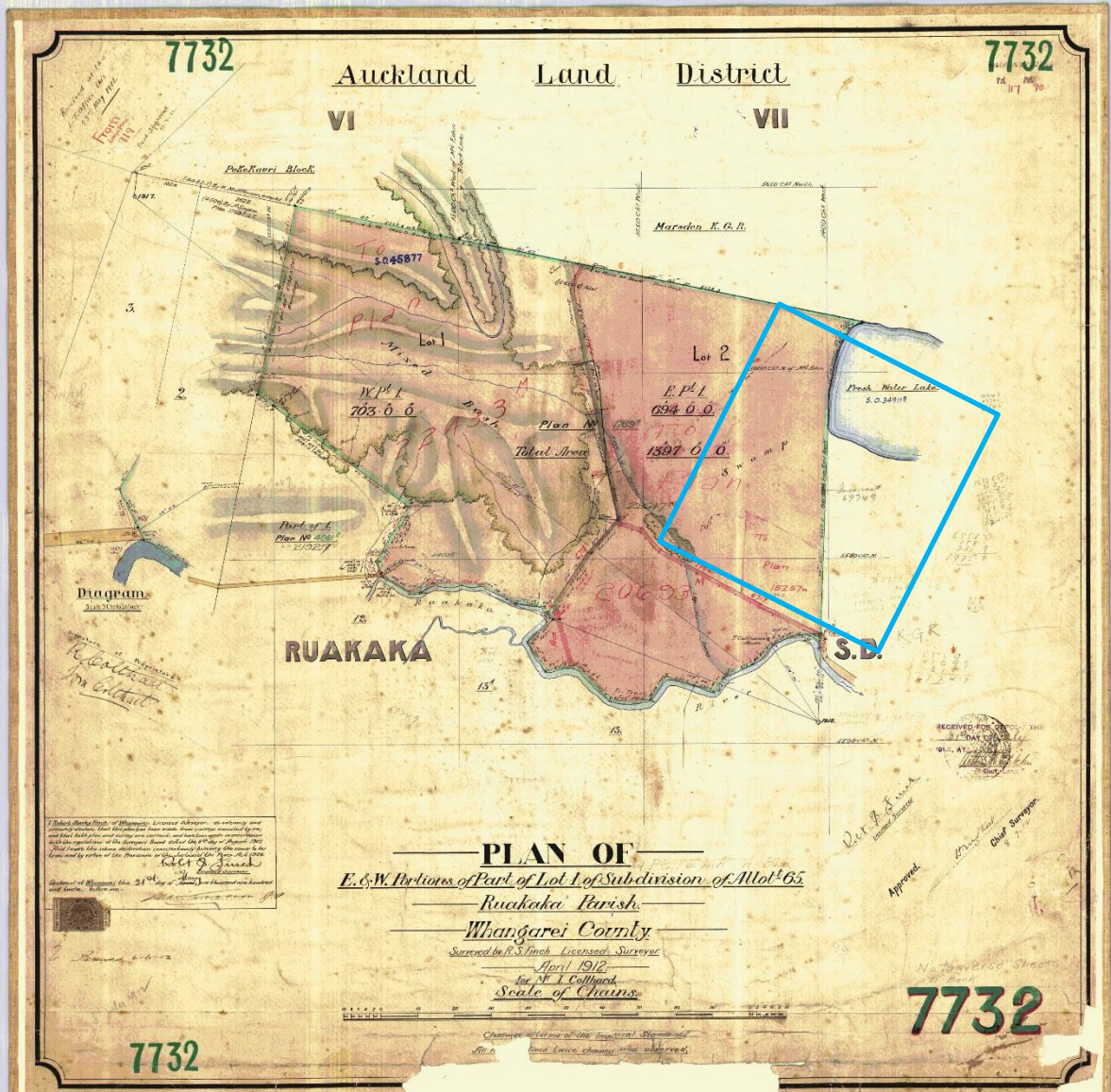


Figure 22: DP 7732 (1912) and Site 2 and 3.

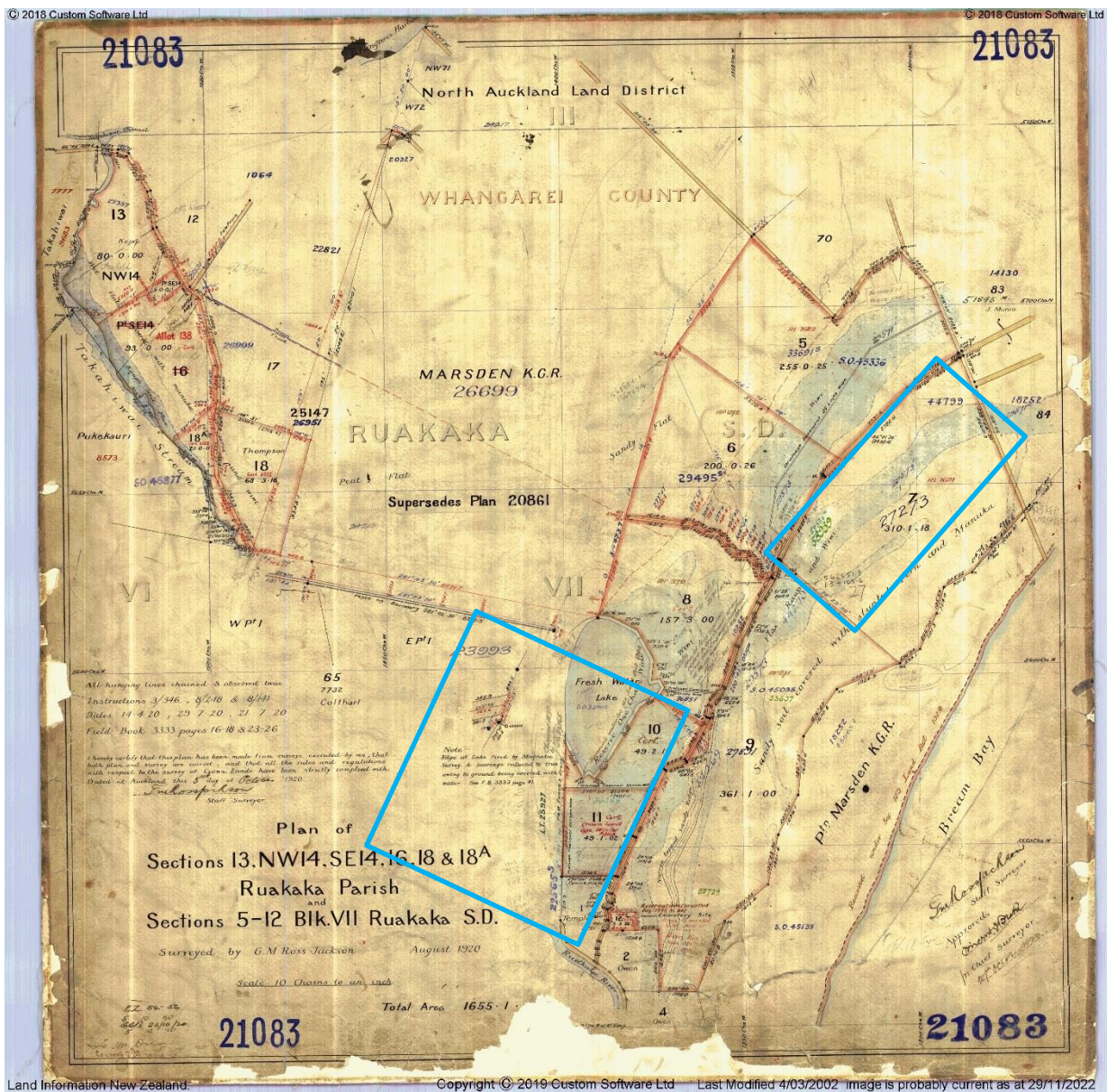


Figure 23: SO 21083 (1920) showing subdivision of the Marsden Kauri Gum Reserve and Site 1, 2 and 3.

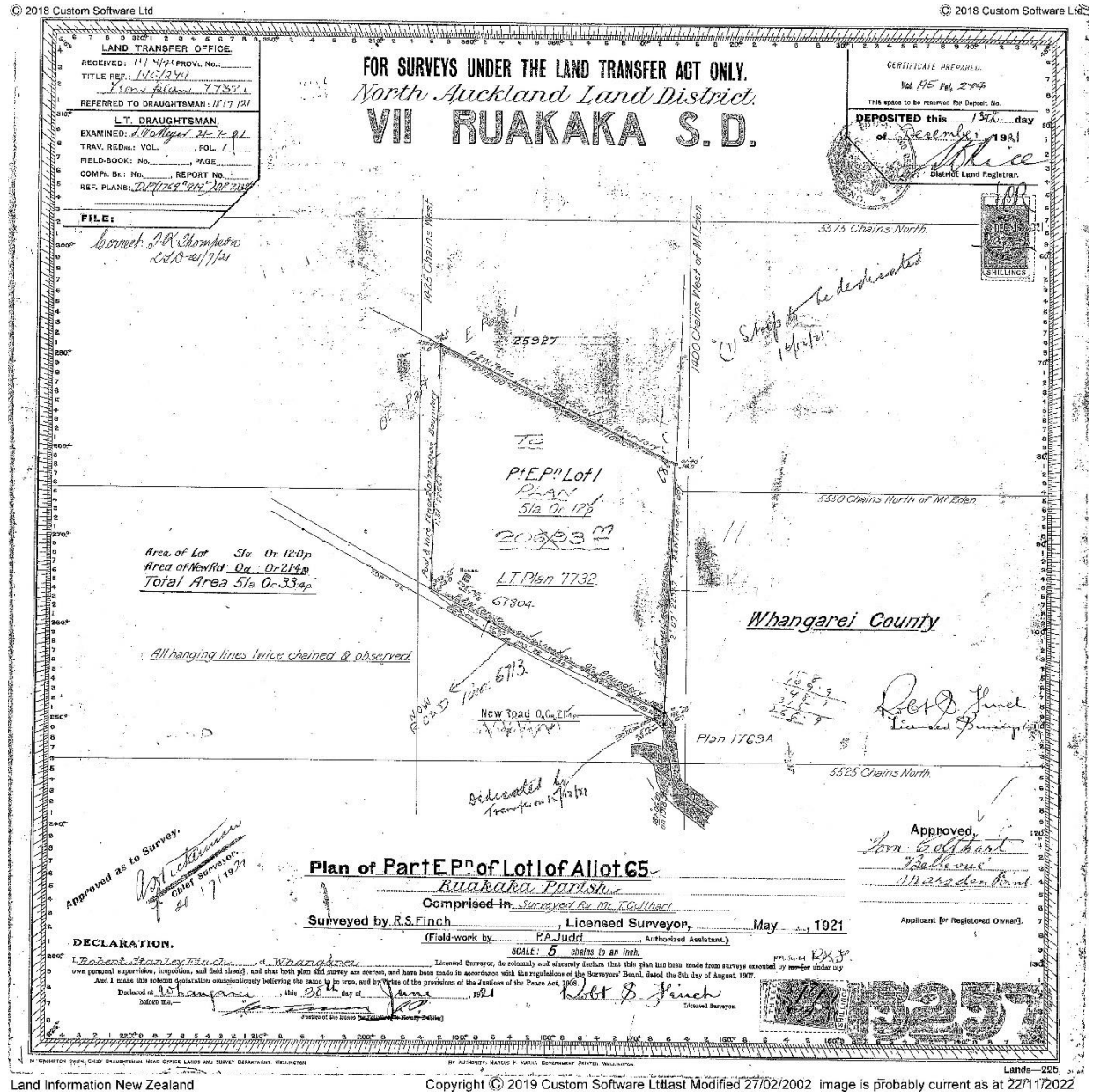


Figure 24: DP 15257 (1921) on the southern side of Site 2 and 3.

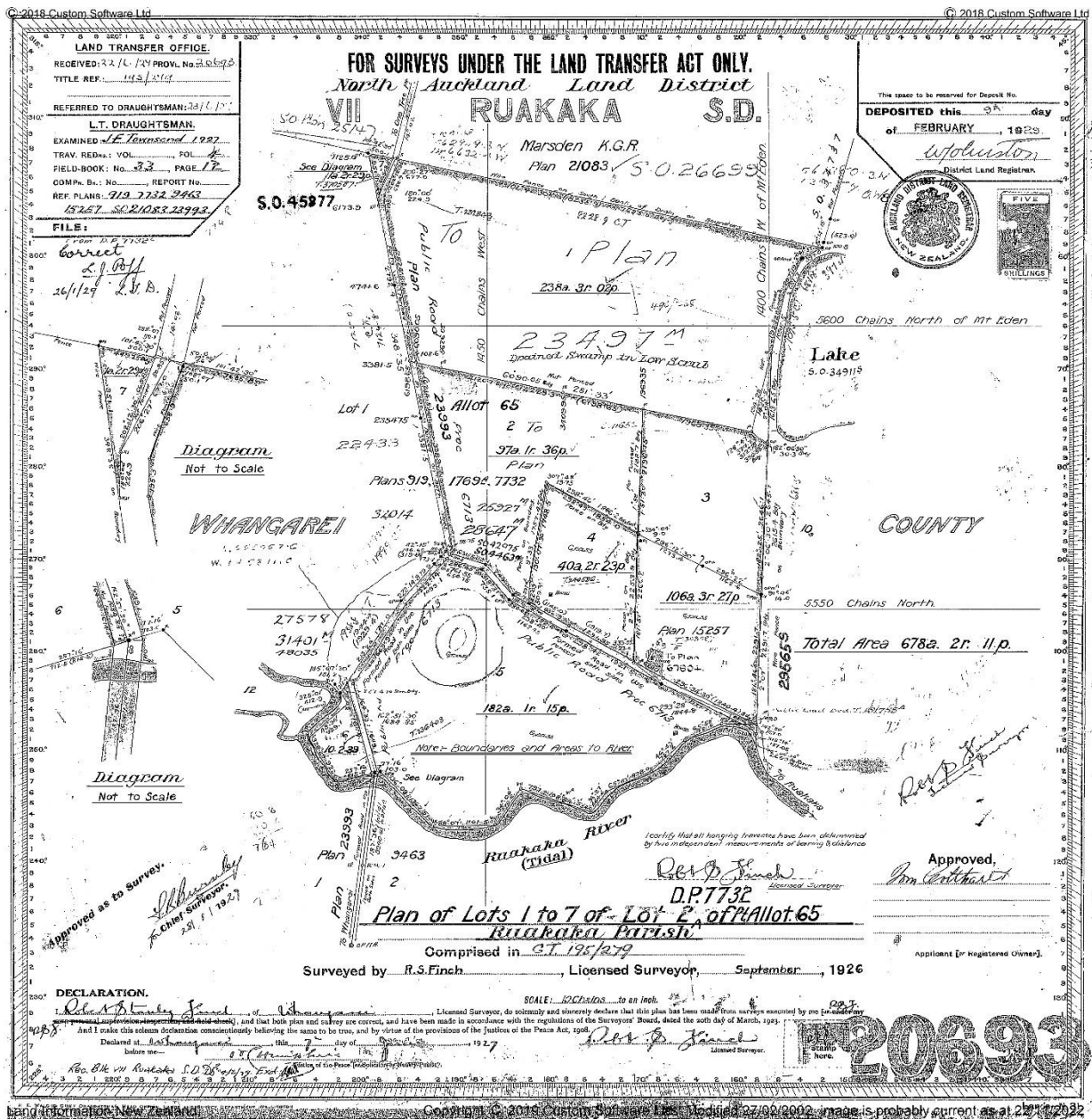


Figure 25: DP 16293 (1926) including Site 2.

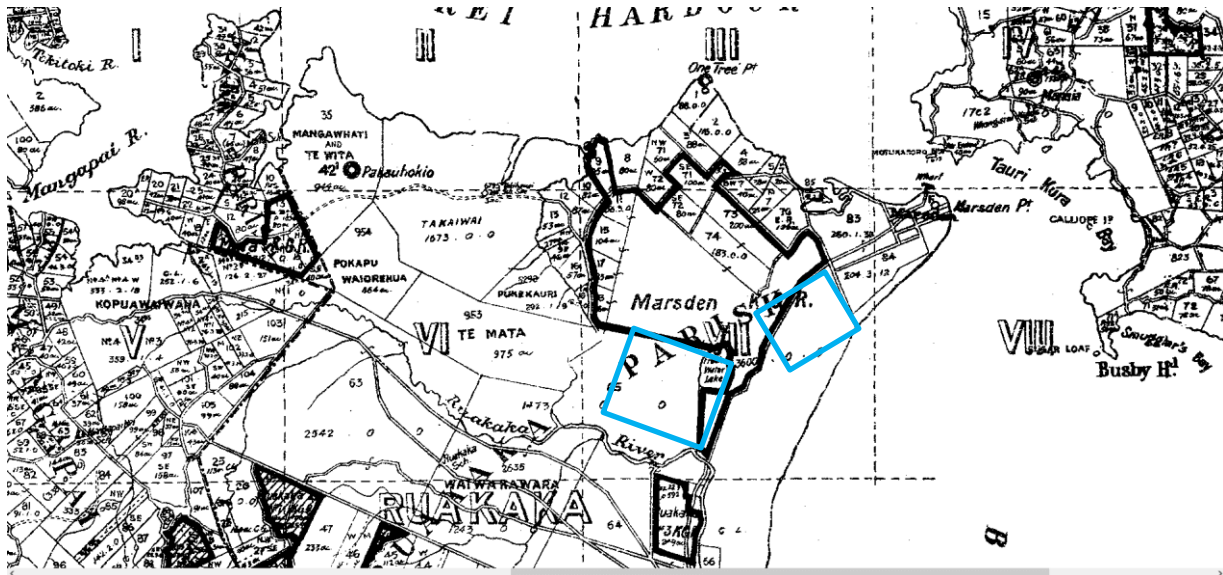


Figure 26: Marsden Kauri Gum Reserve, 1914 (Appendix to the Journal of the House of Representatives, 1914 Session I, C-12: 1535) and approximate location of Site 1, 2 and 3.

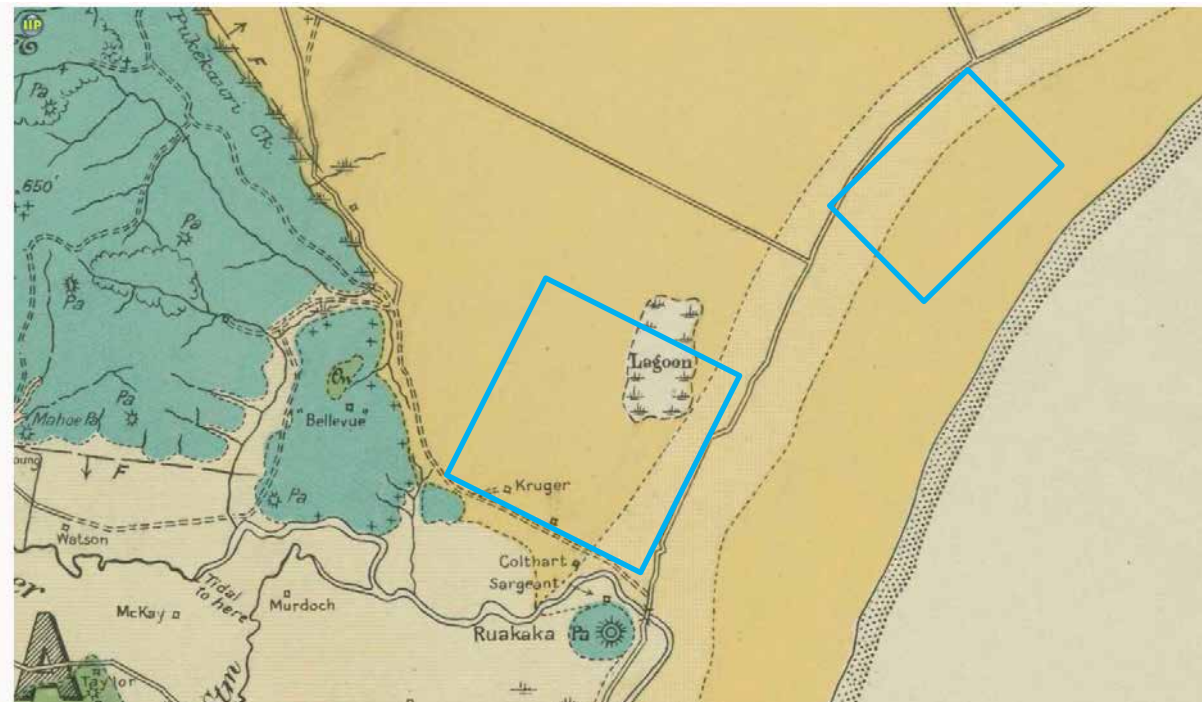


Figure 27: Detail from Ferrar et. al.'s (1928) Ruakākā geological survey and approximate location of Site 1, 2 and 3.



Figure 28: Detail from SN 212 Run 412/38 (1942) showing Site 1.



Figure 29: Detail from aerial photo SN 212 413/43 (1950) showing Site 2 and Site 3.

5.4 Review of Historic Maps, Plans and Aerials

A review of historic survey plans and aerial imagery did not indicate the presence of any major activity or features which might have historic heritage values on Site 1, 2 or 3. Site 2 lies within what was the original Belle Vue estate and its subsequent subdivision, while Site 1 and 3 were within the remaining Crown Land which became part of the Marsden Kauri Gum Reserve at the end of the 19th century. Site 3 was in the relatively more productive part of the reserve, while Site 1 in the dune lands was on the poorer eastern side of the reserve.

Survey office plan SO 40 (1854-1865) shows the 14807 acre Ruakākā Block and shows a number of features of interest including the location of pa site Q07/94 named Pitorehu the pa site noted in the preceding section to the south of Site 3, pa site Q07/93 named Ruakākā Pa, and what appears to be a kainga on the eastern side of the Ruakākā River mouth to the south east of Ruakākā Pa, called Mapaureke. Two other place names are shown between Mapaureke and the coast, being Kautotapa and Whatapo. The lake is named Puohaenga (sp.?). Further inland within the Ruakākā-Mata valley, a 1227 acre native reserve is surveyed out on the south side of the river.

Belle Vue was sold to Allan Macdonald, and was later sold and subdivided in 1889 as illustrated on DP 919. Site 2 lies within Lot 1 of the subdivision, a large balance lot of 1620 acres containing Belle Vue house itself, with the rest of the Estate divided into 27 smaller lots. There are no features of historical interest shown on the plan, aside from a few remnant patches of bush and the western edge of dune lake and wetland. Site 3 is shown as gum lands in Crown and private ownership.

DP 7732 (1912) shows the subdivision of the western side of Lot 1. Lot 2 of 694 acres is shown between what is now Marsden Highway and Macathie Road, Site 2 of the Energy Park; Lot 1 contains the original Belle Vue house to the west. The subdivision was undertaken by Mr T. Colthart, who has his house between Macathie Road and the river. The whole area of Site 2 to the lake is annotated “Swamp”. In 1918, Colthart sold the western lot, and retained around 500 acres of the eastern lot which he was going to “knock into shape” according to the Northern Advocate (Northern Advocate, 31 May 1918). In 1921, part of Lot 2 was subdivided into a new 50 acre lot by Mr Colthard (sic.; DP 15257); the new lot is fenced with a post and wire fence, and a house is shown immediately north of the road.

In 1926, the balance of Lot 2 DP 7732 is subdivided into six additional lots. Another house has been built adjacent to Macathie Road and while the new house lots are fenced and in grass, the northern area is shown as drained swamp, with a post and wire fence on the southern side of the large drain on the northern boundary.

In 1920 the part of the Marsden Kauri Gum Reserve north of the river and west of Marsden Point Road was subdivided and freeholded, as shown on plan SO 21083. A drainage easement is shown running from the lake southwards to the river, along with the line of a high dune ridge to the east, with fingers of wetland dominated by wiwi and raupo in the dune swales. Multiple drain runs west to east across the wetlands, to the lake and the to the north-south drain. Tracks north of the lake are shown. From north to south, owners/occupiers of the new lots are shown, Lot 1 is Temple, Lot 2

Ferrar’s 1928 geological survey, while showing a number of houses at Marsden Point, One Tree Point, Takahiwai and around Sergeant’s Hill at Ruakākā, shows only the line of Marsden Point Road and what is now Macathie Road in the vicinity of the project area, with the houses already mentioned either side of the Road (McCathie and Kruger).

SO 34911 (1947) shows the survey and subdivision of the now-drained lake bed (formerly unregistered Crown land) into two freehold lots, Section 41 and 42 Block VII Ruakākā SD of 39 and 40 acres respectively, with the surrounding land owners named.

Aerial imagery from 1942 shows the vicinity of Site 1 in a mix of cleared farmland on the western, eastern and sides of the Site, with uncleared scrubby forest in the centre of the northern side adjacent to the Marsden Point Road. A homestead and outbuildings are present on the eastern side adjacent to what would become Rama Road, and the central drain running through Site 1 is well-defined. A homestead and outbuildings are also visible on the western side. The dune lands on the southern side of Site 1 are unmodified, apart from in the south west corner.

By 1950, aerial imagery the wetlands and lake has been largely drained and the entire area has been broken in for farming. A network of herringbone drains cover the wetlands and lake bed, feeding into the main north-south drain taking water to the Ruakākā River. A homestead and outbuildings had been established on Site 3 adjacent to Marsden Point Road by this time, probably dating to sometime after the geological survey and the establishment of the bridge and road.

In general the available maps, plans and aerials do not suggest the presence of any particular potential archaeological or historic heritage feature, but do help to narrow down the areas where archaeological features may be more likely, that is on the older dunes adjacent to the now-drained lake on Site 2 and 3, and on the more recent dunes between the fingers of wetland paralleling the coast on Site 1. Likewise gum digging features which may or may not be archaeological are more likely to be located on Site 2 and 3.

6.0 Site Visit

6.1 Site 1

Site 1 was visited over a day on 25 February 2020 for a different client, half a day on 7 March 2022, and half a day on 19 July 2023 for the purposes of archaeological assessment. Archaeological monitoring over the BESS site has also occurred over five days in May-June 2023.

Surface visibility was mixed within Site 1, with the eastern side in a mix of rank, knee-high grass, weeds (gorse, tobacco weed, Sodom's apple, blackberry), regenerating native bush, and macrocarpa shelter belt, and the western side in short, grazed pasture. Vehicle tracks were walked over in the rank areas as these areas provided the most opportunity to encounter surface shell midden, along with the dune crests, slopes and swales. Other areas where the ground surface was visible were inspected as encountered.

Spade test units were excavated on the northeastern side of the property for the 2022 BESS assessment (Carpenter 2022), and along with examination of exposed soil sections in tracks provided atypical soil profile comprising a thin grey-brown layer of organic-stained sand grading into grey-white unconsolidated wind-blown sand. On the dune crests, the grey-white sand was at least 80cm deep, while in the swales it was found to be 20-40cm deep over a grey-brown sandy hardpan.

Monitoring of the BESS site did not result in the modification or recording of any archaeological features, finds being restricted to early 20th century building materials and artefacts from structures visible in the 1942 and 1950 aerial imagery, and the butt of a Lee-Enfield rifle securely dated as arriving in New Zealand as part of a shipment of surplus Canadian arms in 1912 and passed out to Army Cadets (Carpenter 2023, in prep.)

The western part of Site 1 was walked over extensively in early 2020 (Carpenter 2020). At that time the pasture was in very short grass and was walked over systematically along 20-40m transects. A grass fire had recently burned over the pasture nearest to Port Marsden Highway and surface visibility was good to excellent. An attempt was made to relocate Q07/1165 recorded on the southwest side of Site 1 adjacent to the Alis Bloy Road end during the 2020 visit, but it could not be relocated.

No archaeological sites or features were observed on the ground surface, or in the albeit limited test pitting on the subject property in 2020 or in 2022 within Site 1. However as noted above, a previously unrecorded midden Q07/1461 was recorded on the DOC land adjacent to the southeast corner of the Site 1 in 2020.

Subsequently, A. Carrington for Patuharakeke informed the author he had seen shell midden in tractor tracks in the pasture near the windbreak trees dividing the western and eastern parts of Site 1 during his assessment for the previous client in 2020. This area was re-visited by the author in the company of A. Carrington and A. Djamali for Meridian Energy Ltd, and recorded on 19 July 2023.

The archaeological site comprised a subsurface shell midden of whole and fragmented pipi with a small amount of tuatua, in black charcoal-stained sandy silty soil on the southeast side of a low dune. The shell midden was found by probing, and nothing was visible on the surface in contrast to 2020 and despite the grass still being short. The shell was approximately 10cm below the ground surface, and appeared to be 5-10cm thick in the two spade test units excavated.

The midden extended over approximately 100m² in four main concentrations, with each concentration separated by no more than a few metres, between the top of the dune and the swale to the south where water was ponding. Several smaller concentrations of a metre or so diameter were also noted in the same area.

The centre of the site is at Easting 1733376 Northing 6031020 (NZTM). It has been added to ArchSite as Q07/1501.

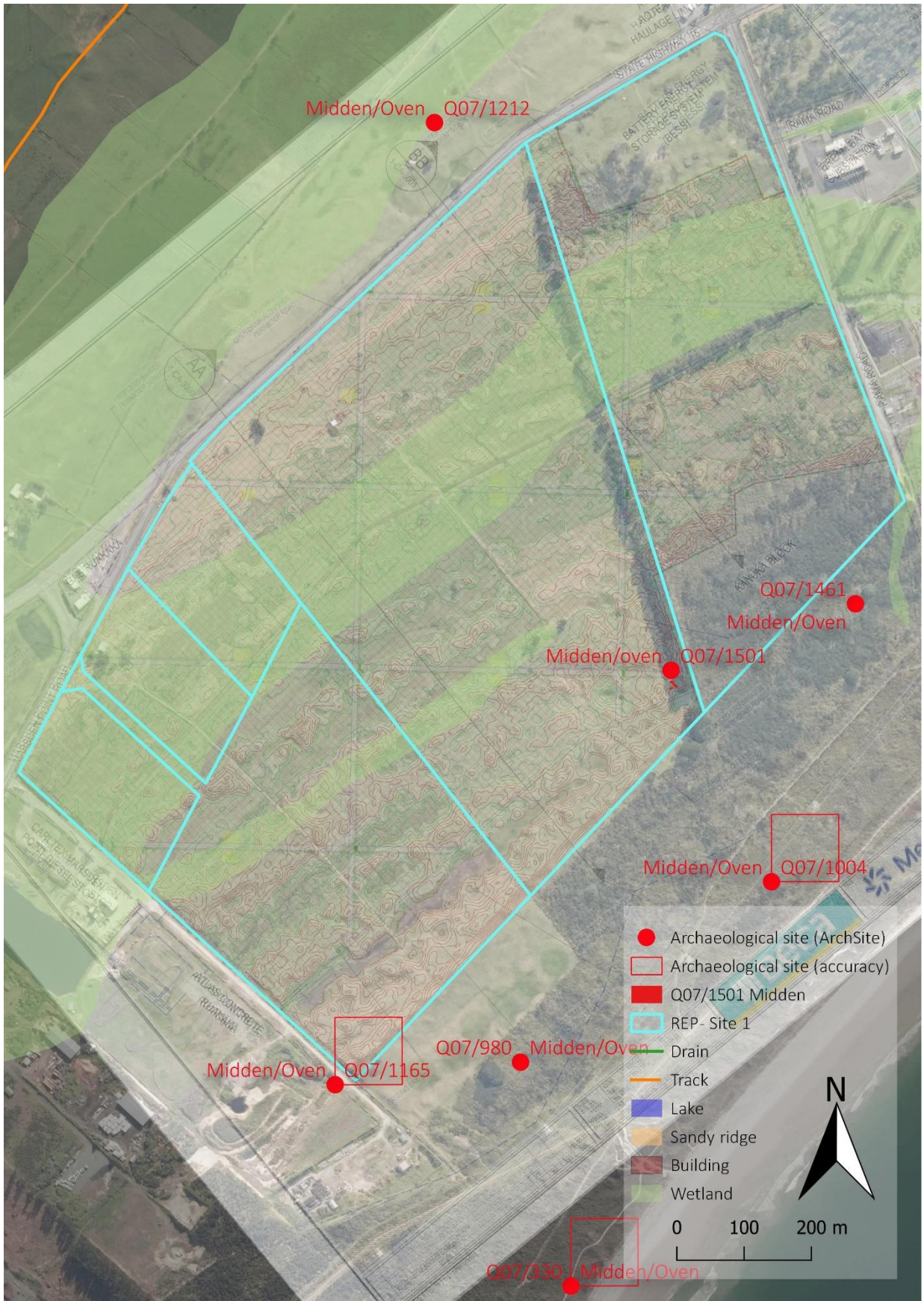


Figure 30: Archaeological sites, early 20th century landscape features and solar farm proposal at Site 1.

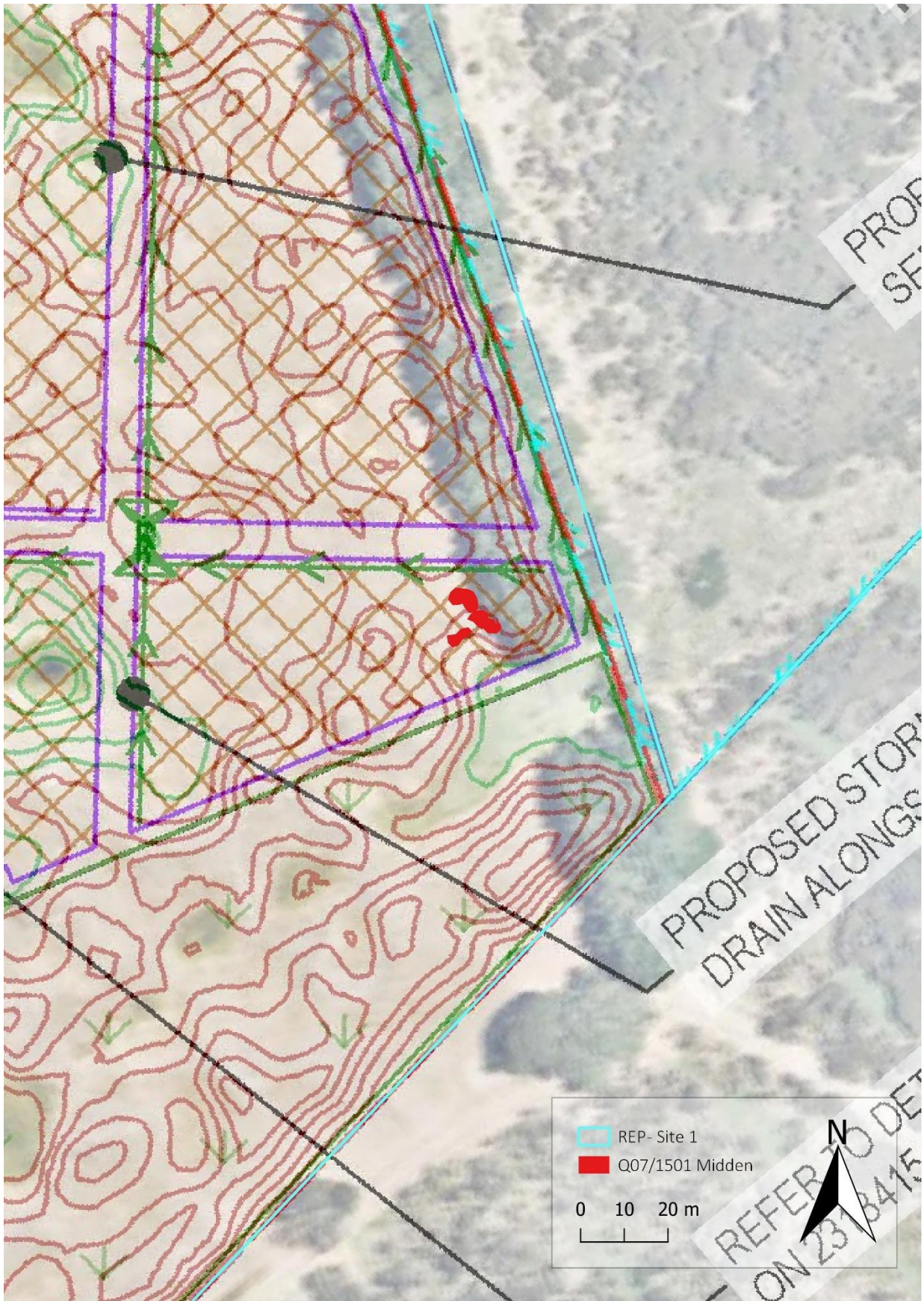


Figure 31: Q07/1501 midden, solar farm proposal and cut (brown contour) and fill (green contour).



Figure 32: Approximate extent of subsurface shell midden Q07/1501 (red shading), looking northeast (2023).



Figure 33: Approximate extent of Q07/1501 (red shading), looking southeast (40cm scale, 2023).



Figure 34: Northern test unit with pipi (40cm scale; 2023).



Figure 35: Southern test unit with pipi and tuatua (40cm scale, 2023).



Figure 36: Q07/11165 midden, and Site 1 solar farm proposal and cut (brown contour) and fill (green contour).



Figure 37: Looking south over rank grass and weeds, eastern side of Site 1 (2020).



Figure 38: Looking west from centre of Site 1 over gently rolling pasture (2020).



Figure 39: Looking east towards Rama Road over the BESS site on Site 1 (1m scale,2022).



Figure 40: Looking west over the BESS site while monitoring on Site 1 (2023).

6.2 Site 2

Inspection of sites occurred over two days (24-25 November 2022), with the first day on Site 2 and the second on Site 3. The drained flats were walked over, with particular attention paid to the exposed banks of drains, and the old dunes on the boundary between the two sites, and the eastern boundary of Site 3/Marsden Point Road. Areas where stock had eroded sloping ground were of special interest. Little time was spent on the northern flats of Site 3, as most of this area is drained wetland or lake bed. Surface visibility was good to fair, with the ground surface either grazed/recently grazed or in rank grass/carrot weed. No spade testing or probing was undertaken as there were no potential sites or features to test.

Exposed drain cuttings and cattle wallows and dunes tended to show 20-40cm of dark brown silty sandy topsoil formed from a hundred years of pastoral farming, over archaeologically sterile layers of sandy peat with subfossil wood inclusions on the flats, or sandy hard pan on the dunes.

On the eastern side of Site 3 adjacent to Marsden Point Road and south of where the Transpower lines cross the boundary, a small patch of cockle shell and ceramic/crockery fragments was noted eroding out of a cattle wallow, adjacent to some large tree stumps. This material suggested a potential historic or modern occupation, with a potential earlier occupation represented by shell midden (although the shell might also relate to the historic/modern occupation also).

As noted above, the 1950 aerial imagery shows a homestead in this area, with outbuildings to the south. The homestead is still present in the 1966 aerial, but is gone by the late 1970s. The homestead is not present on the 1922 geological survey. Likewise the homestead is not present on the 1912 survey plans. Assuming a typical lifespan of 50 years for a dwelling without major renovations, this suggests that at first glance, the homestead likely post-dates 1900 and is not archaeological. No other potential archaeological or historical features were observed.

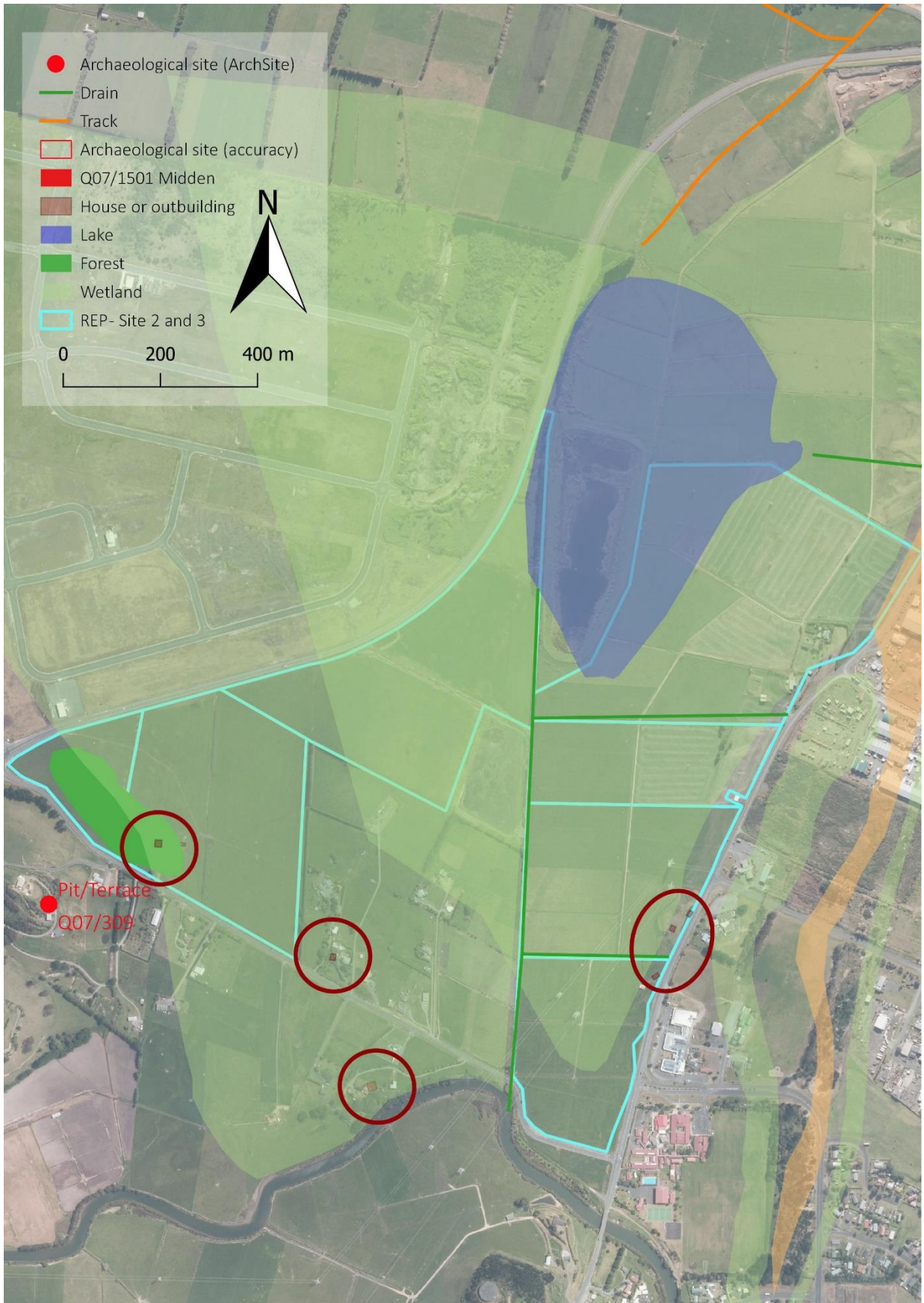


Figure 41: Archaeological sites, early 20th century landscape features and solar farm proposal at Site 2 and 3.



Figure 42: Site 2, looking south towards Macathie Road/Port Marsden Highway intersection (2022).



Figure 43: Looking west along drain towards Port Marsden Highway (2022).

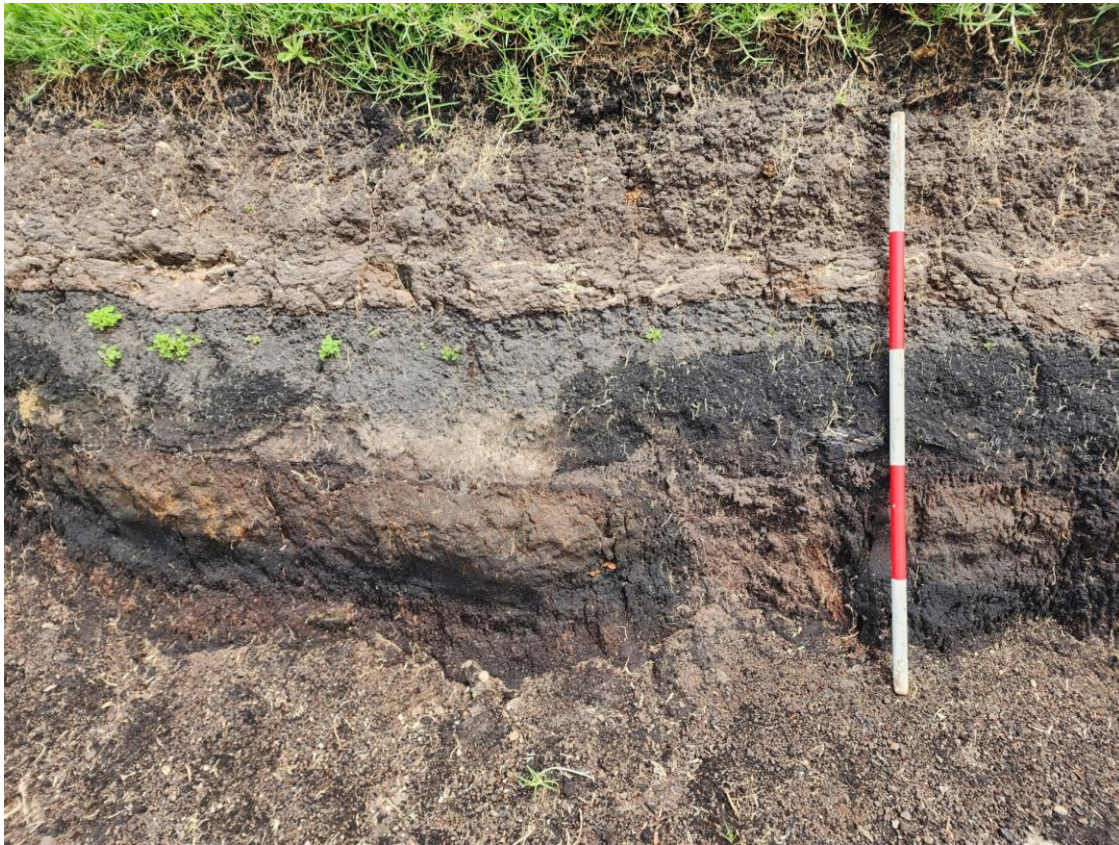


Figure 44: Typical soil profile in drain (1m scale) (2022).



Figure 45: Looking east from site 2 over Site 3 (2022).



Figure 46: Typical soil profile through consolidated Pleistocene sand dune (2022).



Figure 47: Looking south across Site 3, adjacent to Marsden Point Road (2022).



Figure 48: Looking east along drain over drained flats to Marsden Point Road (2022).



Figure 49: Typical soil profile adjacent to Marsden Point Road (2022).



Figure 50: Fragmentary cockle shell and crockery fragments in eroded area adjacent to historic habitation (2022).



Figure 51: Cockle shell and ceramic/crockery fragments (2022).

7.0 Significance Assessment

7.1 Assessment Criteria

Archaeological significance assessment is based on the following criteria.

The first set of criteria assess the potential of the site to provide a better understanding of New Zealand's past using scientific archaeological methods. These categories are focussed on the intra-site level.

How complete is the site? Are parts of it already damaged or destroyed? A complete, undisturbed site has a high value in this section, a partly destroyed or damaged site has moderate value and a site of which all parts are damaged is of low value.

How diverse are the features to be expected during an archaeological excavation on the site? A site with only one or two known or expected feature types is of low value. A site with some variety in the known or expected features is of moderate value and a site like a defended kainga which can be expected to contain a complete feature set for a given historic/prehistoric period is of high value in this category.

How rare is the site? Rarity can be described in a local, regional and national context. If the site is not rare at all, it has no significance in this category. If the site is rare in a local context only it is of low significance, if the site is rare in a regional context, it has moderate significance and it is of high significance if the site is rare nationwide.

The second set of criteria puts the site into its broader context: inter-site, archaeological landscape and historic/oral traditions.

What is the context of the site within the surrounding archaeological sites? The question here is the part the site plays within the surrounding known archaeological sites. A site which sits amongst similar surrounding sites without any specific features is of low value. A site which occupies a central position within the surrounding sites is of high value.

What is the context of the site within the landscape? This question is linked to the one above, but focuses onto the position of the site in the landscape. If it is a dominant site with many features still visible it has high value, but if the position in the landscape is ephemeral with little or no features visible it has a low value. This question is also concerned with the amenity value of a site and its potential for on-site education.

What is the context of the site within known historic events or people? This is the question of known cultural association either by Tangata Whenua or other descendant groups. The closer the site is linked with important historic events or people the higher the significance of the site. This question is also concerned with possible commemorative values of the site.

An overall significance value derives from weighing up the different significance values of each of the six categories. In most cases the significance values across the different categories are similar.

7.2 Significance Assessment of Archaeological Sites

Midden site Q07/1501 is assessed as being of moderate significance. The site is in good condition and is amenable to archaeological investigation and probably contains additional features aside from the recorded midden. While a number of similar sites are recorded in the area, they are generally of poor condition and in comparison to sites at One Tree Point or the southern end of Ruakākā, and no sites in the dune lands have been investigated.

The site has no amenity value but is likely to be of significance to Patuharakeke, particularly if opportunities are made for community involvement and public advocacy and interpretation should it be necessary to excavate the site.

Other similar sites which may be encountered are likely to be of a similar archaeological value.

Table 2: Archaeological significance assessment of Q07/1501.

Significance Category	Value	Comment
Integrity, condition and Information Potential	Moderate	The site and observed features have been modified by stock trampling and tractor movements, but this modification appears to be large superficial and the site is otherwise intact. Other subsurface features are likely to be present including ovens and hearths and investigation of the site is likely to yield a range of information about chronology, subsistence practices and the local environment.
Diversity	Low-moderate	The observed features consist of intact subsurface deposits of whole and fragmented shell midden in primary context. Associated features are likely.
Rarity and Uniqueness	Low-moderate	A number of midden sites are recorded in the vicinity around Marsden Point, One Tree Point and Ruakākā, along the adjacent coastline and inland. These generally consist of large numbers of cockle and pipi shells and associated charcoal and fire cracked rock associated with large scale, seasonal shellfish exploitation from the 16 th century onwards. Most of the surface midden have been modified by farming and the development of the area over the last 50 years, but intact subsurface deposits remain.
Archaeological Context	Low	The features are probably associated with the use and occupation of the dunes and intervening wetlands by Maori in the mid to late pre-European contact or 'Classic' period. There are several similar sites recorded nearby but most are in poor condition and none have been investigated.
Landscape, Visual and Amenity Values	Low	The site is not visible in the landscape and the features are largely subsurface and are not amenable to interpretation. The site has no landscape, recreation amenity value, any education value would probably be through excavation and any associated public advocacy or community outreach.
Historical, Community and Cultural Association	Moderate	The feature is not associated with any known historical personality or event but is likely to be of some significance to Patuharakeke Te Iwi as it is part of their cultural landscape. With the exception of the Tangata Whenua, the wider local community does not value coastal midden.

8.0 Assessment of Effects

There are three common outcomes when assessing the effects of a project on archaeological sites and values and making recommendations for their management:

- 1) There are no effects and an archaeological Authority is not required, but an accidental discovery protocol is recommended to manage any unanticipated potential archaeological finds.

- 2) There may be archaeological effects, which due to circumstance are difficult to determine, and an archaeological Authority is recommended on a precautionary basis (Note there is no statutory or policy basis for the use of the term ‘precautionary’ with regards to an archaeological Authority, but it is a “term of art”).
- 3) There are or there is reasonable cause to suspect there will be archaeological effects, and an archaeological Authority is required.

8.1 Site 1

At Site 1 of the Ruakākā Energy Park there are definite archaeological effects based on the current plans. Recorded archaeological sites Q07/1501 midden is within an area scheduled to be cut down for the solar panel arrays, and is adjacent to proposed internal access ways. The macrocarpa windbreak on the boundary with the adjacent lot to the east is to be removed and this may also affect the site if not undertaken carefully.

There is a strong likelihood of other archaeological effects on features adjacent to and associated with the midden, and given the presence of the site there is a moderate likelihood of other sites being present in the project area which will be destroyed.

Previously recorded site Q07/1165 midden recorded on the southwestern corner of the project area in the early 2000s but not relocated in this assessment may be modified or destroyed by the earthworks required to create the proposed wetland in this area, but had already undergone a degree of modification when it was originally recorded.

If Q07/1501 can't be avoided through a redesign of the solar farm in this area, a proactive investigation of Q07/1501 is recommended, prior to the commencement of earthworks for the solar farm, followed by monitoring in sensitive areas as topsoil stripping occurs.

If Q07/1501 can be avoided and protected, removal of the windbreak trees and other adjacent works will still need to be monitored and the site will require a long-term management plan specifying any buffer (e.g. no modification within a minimum 20m of the features, or as indicated by investigation), fencing, planting and/or ongoing vegetation management which may be required. It may be useful to undertake a small exploratory investigation of the site even if it is protected in this manner, in order to help address any questions Patuharakeke may have about the pre-European contact Maori occupation of the area, and as part of the wider mitigation strategy for the project.

8.2 Site 2 and 3

At Site 2 and Site 3 of the Ruakākā Energy Park there is a low likelihood of archaeological effects.

Based on field observation and historic and archaeological research, the wetland and lake are unlikely to have been used for permanent occupation by Maori prior to 1900, but newspaper accounts suggest the lake was used for eeling into the early 20th century and was a popular recreation spot due to the water quality and abundant waterfowl. It is likely that other resources were also sourced from the lake and wetland, and more temporary or seasonal occupation may have occurred on higher/drier ground in the vicinity around the lake edge, such as on the adjacent dunes.

It is also possible that waterlogged artefacts associated with eeling, fishing or gardening (weirs, nets, digging sticks, waka) may be encountered in this environment. Horticultural features such as drainage systems associated with growing wetland cultigens by Maori are also a possibility as are sites associated with gum digging are also a possibility. It may be difficult if not impossible to determine if gum digging features meet the statutory definition of an archaeological site, as they may post-date 1900. Such features are unlikely to be identified prior to topsoil stripping and bulk earthworks.

However given the sites recorded nearby, the large scale of the project and potential costs in time and money to stop work and apply for an archaeological Authority if an accidental discovery is made, it would be prudent to include Site 2 and 3, along with Site 1 in any Authority application on a precautionary basis.

With the exception of chance finds of waterlogged artefacts, any archaeological sites and features are likely to be of only minor to moderate significance and are likely to be similar to other features found during recent development in the Marsden Point-One Tree Point- Ruakākā area, such as midden or gum workings.

These sorts of subsurface archaeological features, in the absence of surface features, are difficult to proactively identify and avoid. Mitigating effects on such features usually takes the form of identifying such features in the course of earthworks by archaeological monitoring and on-call procedures, investigating features, and then allowing them to be destroyed or where possible, avoided and left in-situ. The presumption is that such features are likely to be of low to moderate significance based upon the significance assessment criteria used for archaeological sites. Further consultation with Heritage New Zealand and stakeholders may be required if potentially highly significant archaeological features are uncovered.

Limited monitoring of works is recommended on Site 2 and 3, focussing on the margins of the drained lake and the high ground adjacent, and adjacent to Marsden Point Road.

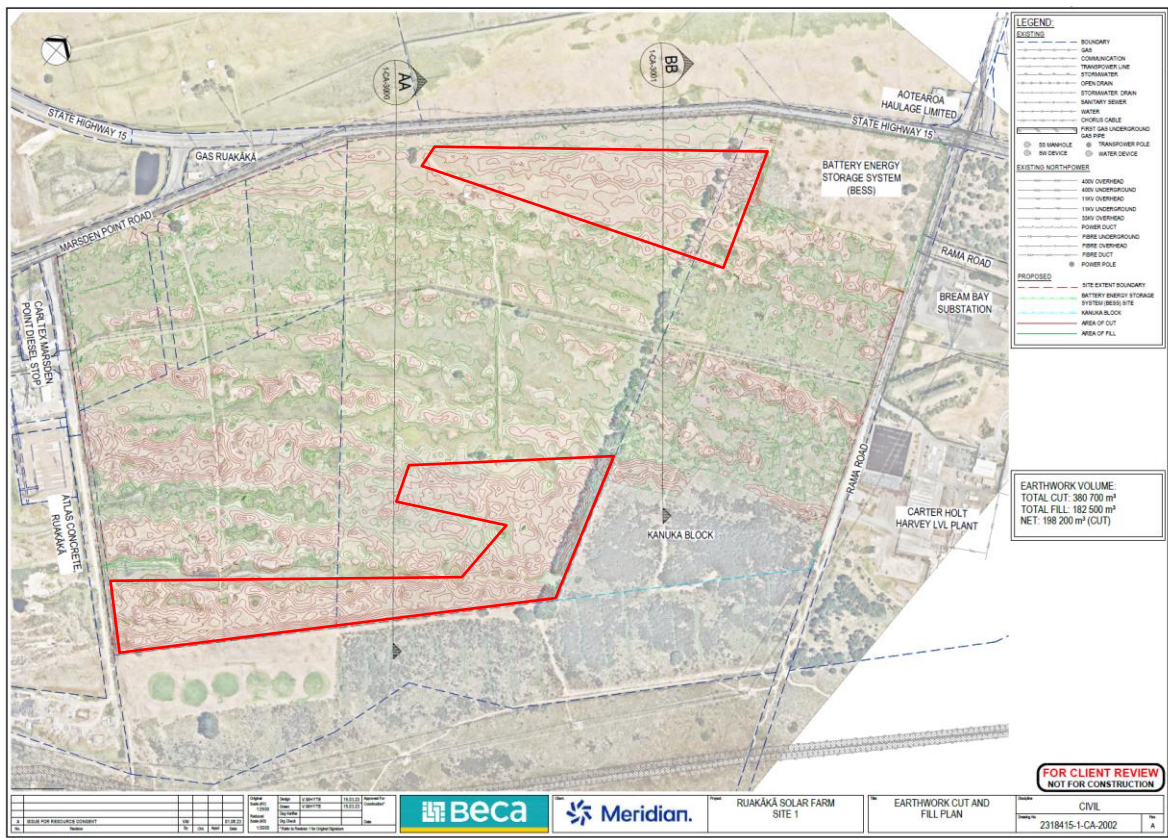


Figure 52: Site 1 cut/fill for monitoring (red polygons).

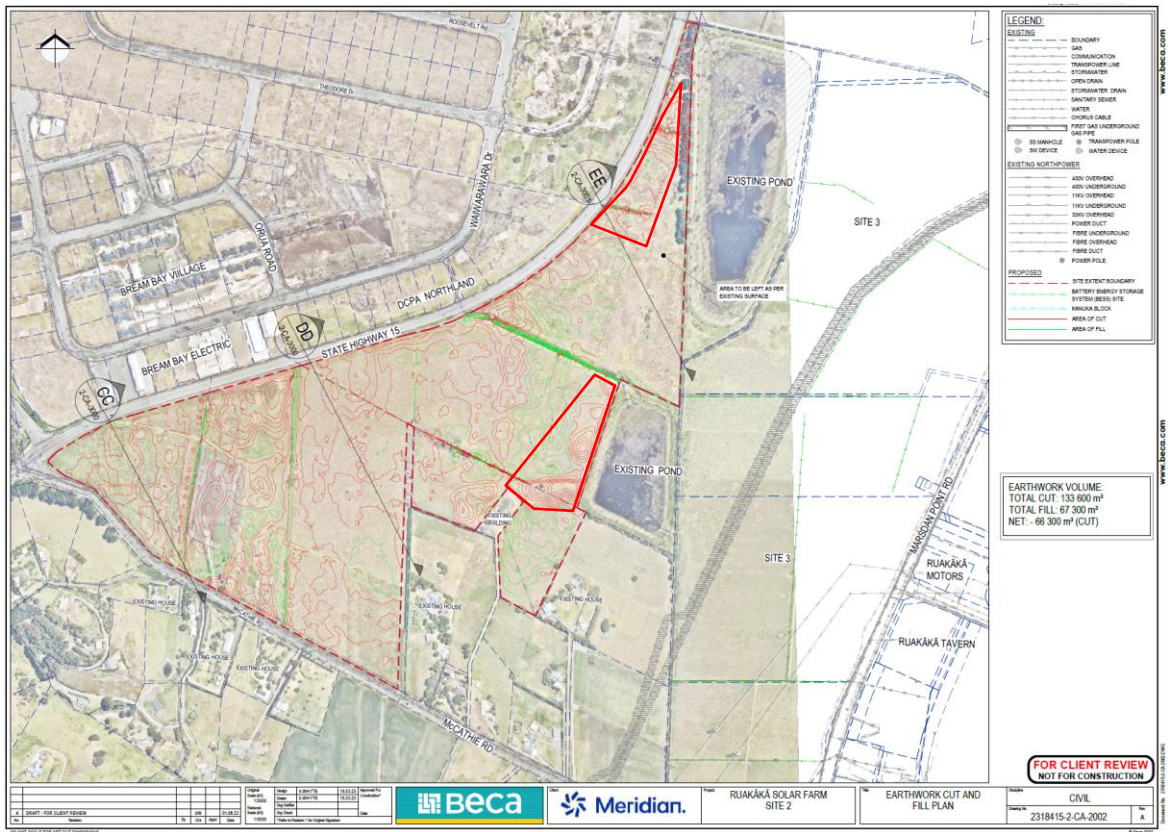


Figure 53: Site 2 cut/fill for monitoring (red polygons).

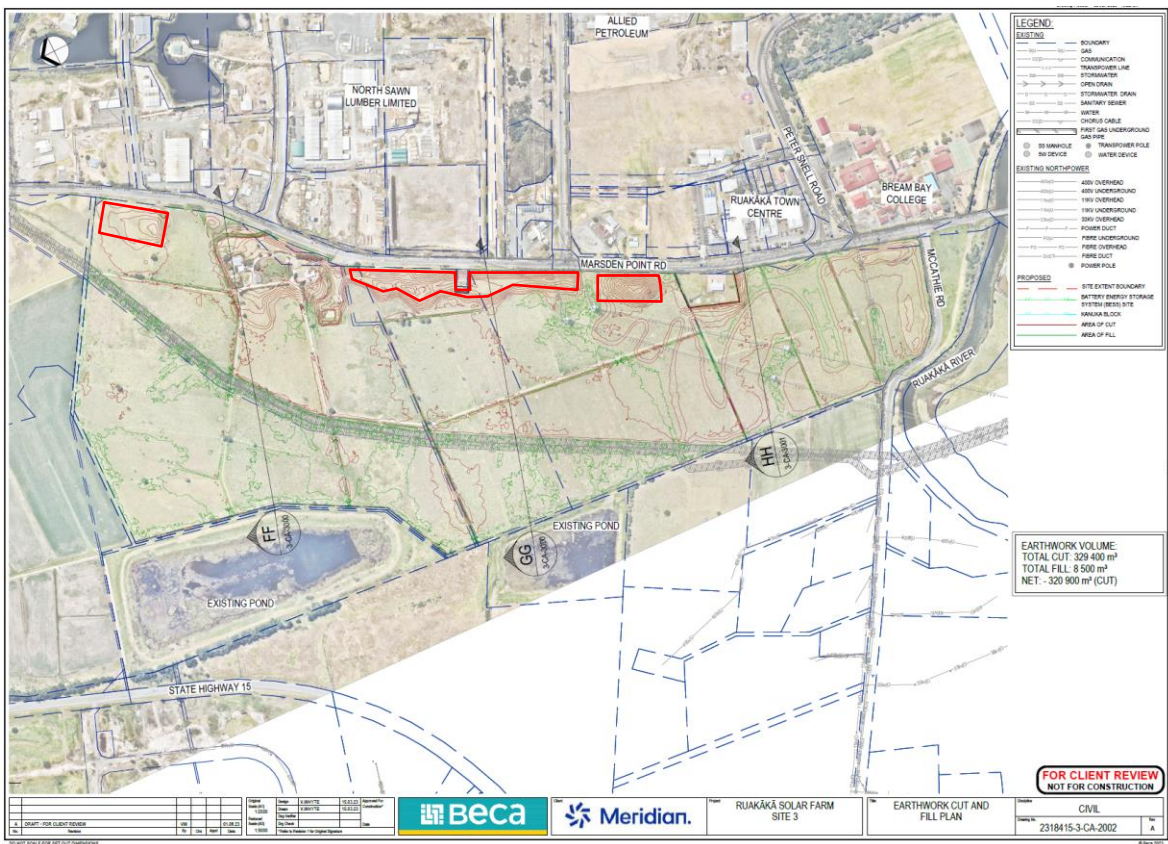


Figure 54: Site 3 cut/fill for monitoring (red polygons).

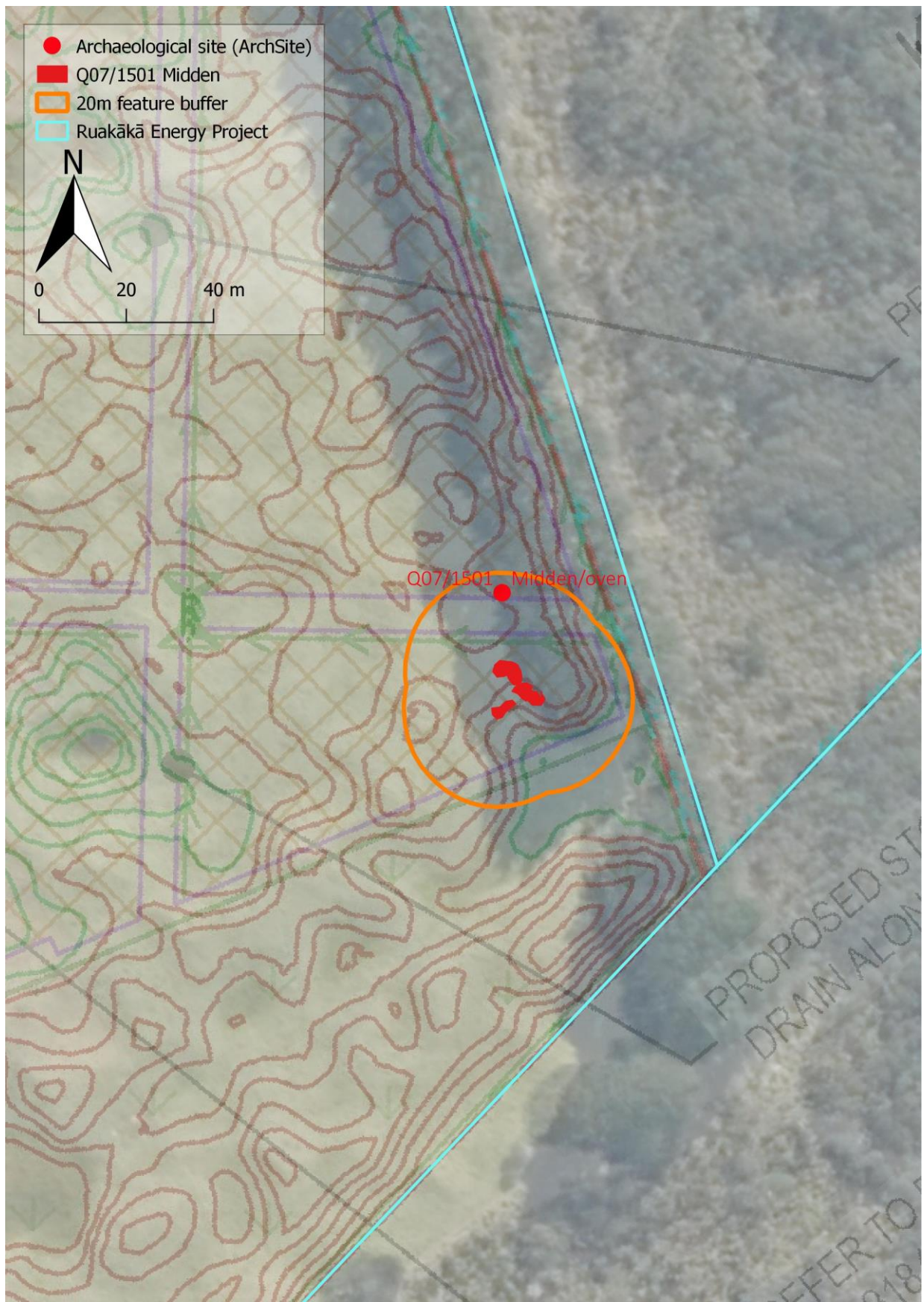


Figure 55: Q07/1501 with minimum 20m protection buffer.

9.0 Findings and Recommendations

- 1) There are recorded archaeological sites on the Site 1, and within 100m on adjacent properties.
- 2) Q07/1501 midden on Site 1 will be destroyed by the proposed cut/fill earthworks for the solar farm in that area, if it cannot be avoided by a redesign in that area. It may also be modified by the removal of adjacent pine tree windbreak.
- 3) Q07/1165 midden which may be on Site 1 but could not be relocated, may also be affected.
- 4) There may be other unrecorded archaeological sites on Site 1 that are not amenable to identification from observation of the existing ground surface, and which may be affected.
- 5) There are no recorded archaeological sites, or other heritage sites or features, on or within 100m of the Site 2 and 3 project area.
- 6) There may be unrecorded archaeological sites on Sites 2 and 3 that are not amenable to identification from observation of the existing ground surface, and which may be affected.
- 7) Unrecorded/subsurface sites may be affected by any large-scale ground disturbing activity on Sites 1, 2 and 3, including vegetation clearance, site establishment including sediment control and site access, topsoil stripping and bulk cut/fill earthworks, and piling of solar panel support structures.
- 8) An archaeological Authority (consent) from Heritage New Zealand Pouhere Taonga is required the destruction or modification of Q07/1501 midden, the potential destruction or modification of Q07/1165 midden, and in order to manage and mitigate any other ground disturbing activity elsewhere which might modify or destroy other archaeological sites, or where there is cause to suspect such sites may be modified or destroyed.
- 9) Such an application will require consultation with Patuharakeke, the Tangata Whenua.
- 10) Any archaeological Authority granted to modify or destroy sites in the area will likely contain standard conditions requiring, among other things:
 - a) An archaeological management plan containing roles, responsibilities and procedures for managing accidental archaeological discoveries and protocols for mitigation by archaeological monitoring and investigation.
 - b) Harvest plan to avoid affecting Q07/1501 during tree removal, including direction to fell away from the site and avoid hauling stems or moving plant over the site.
 - c) Proactive investigation of Q07/1501 prior to tree felling, site establishment and bulk earthworks if it cannot be avoided by a redesign.
 - d) Management plan for Q07/1501 if it can be avoided and requires ongoing protection and management.
 - e) Monitoring in areas adjacent to Q07/1501, Q07/1165 and other sensitive areas as indicated.
 - f) Spot monitoring and on-call procedures to manage other areas.
 - g) Research strategy to guide investigation of archaeological features.

- 11) Other historic heritage features may be present on Sites 2 and 3 related to gum digging but these or may not be archaeological according to the statutory definition.

10.0 Summary

Geometria Ltd was commissioned by Meridian Energy Ltd to undertake an assessment of archaeological and heritage values for Sites 1, 2 and 3 of the Ruakākā Energy Park.

Archaeological sites have been recorded on Site 1 and adjacent areas to the south and east. Sites are also recorded to the south and west of Sites 2 and 3. At least one archaeological site will be affected, and other archaeological effects are possible.

An archaeological Authority is required as recorded site Q07/1501 on Site 1 will be destroyed by cut/fill earthworks for the project if it cannot be avoided, and Q07/1165 may also be affected. There is potential for other archaeological sites to be present and destroyed in the course of the earthworks required, and so the Authority should cover all the sites/works, with additional monitoring in high-risk areas, and spot monitoring and on-call procedures elsewhere.

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Appendix A- Archaeological Site Records



Site Record Form

NZAA SITE NUMBER: Q07/1165

SITE TYPE: Midden/Oven

SITE NAME(s):

DATE RECORDED:

SITE COORDINATES (NZTM) Easting: 1732872

Northing: 6030426

Source: CINZAS

IMPERIAL SITE NUMBER:

METRIC SITE NUMBER: Q07/1165



Finding aids to the location of the site

Brief description

MIDDEN

Recorded features

Midden

Other sites associated with this site

SITE RECORD HISTORY	NZAA SITE NUMBER: Q07/1165
<p>Site description</p> <p>Condition of the site</p> <p>Statement of condition</p> <p>Current land use:</p> <p>Threats:</p>	

SITE RECORD INVENTORY	NZAA SITE NUMBER: Q07/1165
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Supporting documentation held in ArchSite

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM (METRIC) Metric map number sheet Q07 Metric map name Whangarei NZMS 260 map edition 1, 1988	NZAA METRIC SITE NO: Q07/1165 DATE VISITED 8.8.2002 SITE TYPE Midden SITE NAME: MAORI OTHER								
Grid Reference Easting 264355 Northing 659220	N24								
1. Aids to relocation of site (attach sketch map) Marsden Point, Ruakaka On Keith property, 'Envirosands', to east of junction of Marsden Point Rd and McEwan Rd, Ruakaka. It is on Lot 2 DP 207728 located 10 metres east of the boundary of the front title (Lot 1 DP 207728) together making up Lot 13 DP 55607. It is one metre inside the northern boundary of the Lot on the eastern slope of a dune where the vegetated dunes commence. On a cleared raceway along the boundary fence, it extends into the scrub. East of large pines on neighbouring property to north.									
2. State of site and possible future damage Very slight erosion of shell through soil surface from vehicular traffic. Should be better protected when buried as part of construction improvement to farm race. Roadway to provide access for sand removal from dunes. Burial of site to be attended by Omie Wassell, Patuharakeke representative.									
3. Description of site (Supply full details: history, local environment, references, sketches, etc. If extra sheets are attached, include a summary here) The site measures, by probing, approximately 4m x 4m. A spade test indicated 2cm black sandy soil over 1 - 4 cm cockle shells and fragments with occasional small hangi stones within a black sandy soil matrix. See Harlow report: August, 2002									
4. Owner Current: John Keith Tenant/Manager: Address: Marsden Point Rd, Ruakaka Postal address: RD1, Te Kauwhata									
5. Nature of information (hearsay, brief or extended visit) Archaeological Survey accompanied by Omie Wassell, representative for Patuharakeke Photographs (reference numbers and where held): Aerial photographs (reference numbers and clarity of site)									
6. Reported by Dianne Harlow Filekeeper <i>[Signature]</i> Address 548 Manukau Rd Date 2/10/02 Epsom									
7. New Zealand Historic Places Trust (for office use) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">XX Type of site AA</td> <td style="width: 50%; border: none;">Present condition and future danger of destruction</td> </tr> <tr> <td style="border: none;">Local environment</td> <td style="border: none;">AA</td> </tr> <tr> <td style="border: none;">AE Land classification</td> <td style="border: none;">Local Body MC</td> </tr> </table> </td> <td style="width: 50%; border: none;"></td> </tr> </table>		<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">XX Type of site AA</td> <td style="width: 50%; border: none;">Present condition and future danger of destruction</td> </tr> <tr> <td style="border: none;">Local environment</td> <td style="border: none;">AA</td> </tr> <tr> <td style="border: none;">AE Land classification</td> <td style="border: none;">Local Body MC</td> </tr> </table>	XX Type of site AA	Present condition and future danger of destruction	Local environment	AA	AE Land classification	Local Body MC	
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">XX Type of site AA</td> <td style="width: 50%; border: none;">Present condition and future danger of destruction</td> </tr> <tr> <td style="border: none;">Local environment</td> <td style="border: none;">AA</td> </tr> <tr> <td style="border: none;">AE Land classification</td> <td style="border: none;">Local Body MC</td> </tr> </table>	XX Type of site AA	Present condition and future danger of destruction	Local environment	AA	AE Land classification	Local Body MC			
XX Type of site AA	Present condition and future danger of destruction								
Local environment	AA								
AE Land classification	Local Body MC								





Site Record Form

NZAA SITE NUMBER: Q07/1501

SITE TYPE: Midden/Oven

SITE NAME(s):

DATE RECORDED:

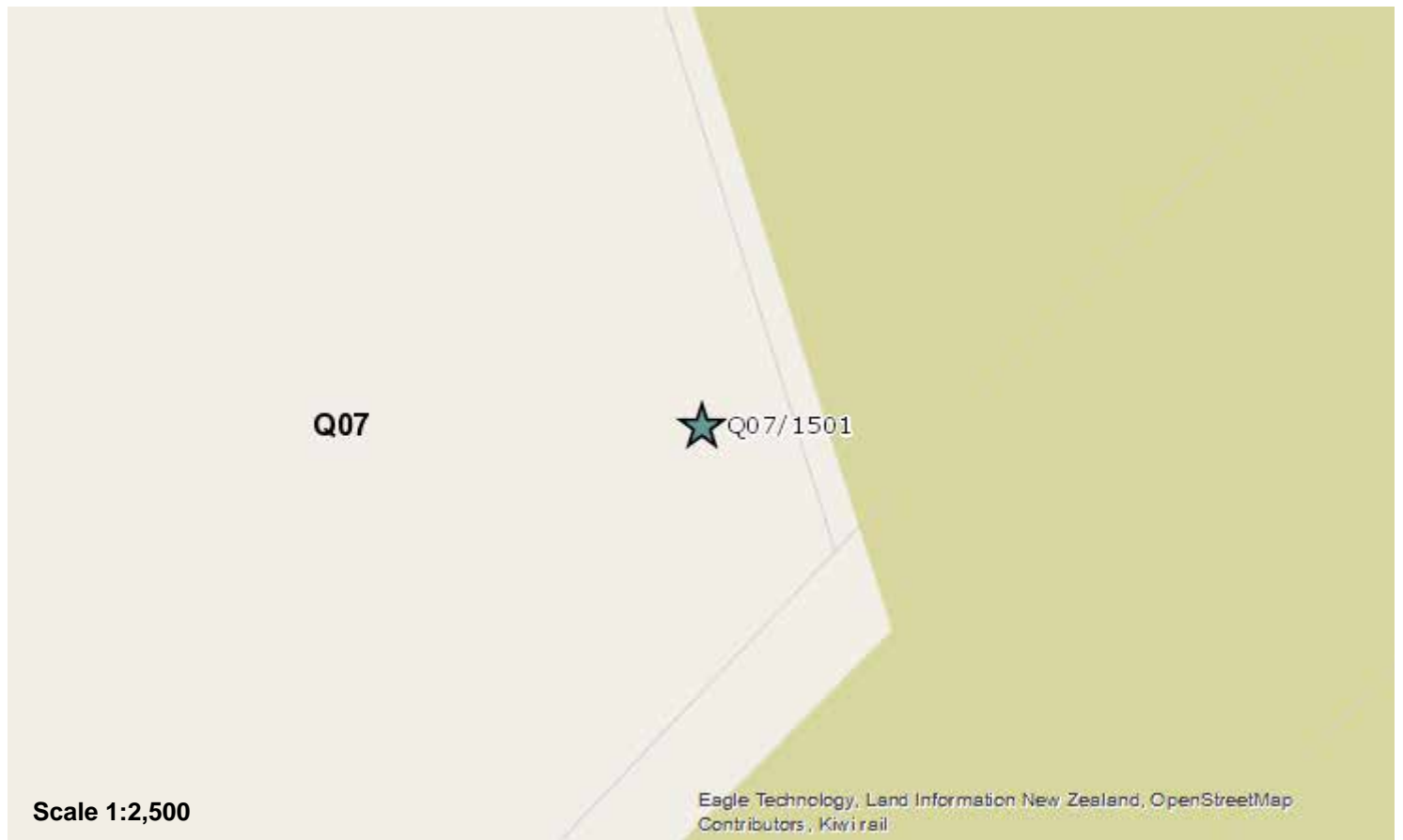
SITE COORDINATES (NZTM) Easting: 1733374

Northing: 6031024

Source: Handheld GPS

IMPERIAL SITE NUMBER:

METRIC SITE NUMBER: Q07/1501



Finding aids to the location of the site

Just inside the south eastern corner of Lot 3 DP 419151, 70m north of the southern boundary and 30m west of the eastern boundary, on the southern side of a low dune, between the dune crest and swale.

Brief description

Shell midden on low dune: subsurface deposit of whole and fragmented pip and tuatua

Recorded features

Midden

Other sites associated with this site

SITE RECORD HISTORY**NZAA SITE NUMBER:** Q07/1501**Site description**

Updated 19/07/2023 (Field visit), submitted by jonocarpenter , visited 19/07/2023 by Carpenter, Jonathan
Grid reference (E1733374 / N6031024)

A. Carrington of Patuharakeke Te Iwi informed J. Carpenter that he had observed shell midden in the vicinity in 2020 while undertaking an assessment of a client doing due diligence before a potential land purchase.

The site was revisited and recorded by Carpenter in the company of A. Carrington and A. Djamali, the environmental manager for the Meridian Energy Ltd BESS project on neighbouring Lot 3 DP 419151 to the east, on 19 July 2023.

The site comprised a subsurface shell midden of small to medium-sized whole and fragmented pipi with a small amount of tuatua, in black charcoal-stained sandy silty soil. The shell midden was found by probing, although it had originally been noted in tractor tracks in 2020, at the end of a very dry summer. It was approximately 10cm below the ground surface, and 5-10cm thick.

The midden was located on the south side of a low dune. The midden extended over approximately 100m² in four main concentrations, separated by no more than a few metres, between the top of the dune and the swale to the south.

The centre of the site is at Easting 1733376 Northing 6031020 (NZTM).

Condition of the site**Statement of condition**

Updated: 24/07/2023 - Good – Majority of visible features are intact, but some minor loss of definition and/or damage

Current land use:

Updated: 24/07/2023 - Grazing

Threats:

Updated: 24/07/2023 - Stock trampling, Farming practices, Erosion, Road/ track formation or maintenance, Property development, Services/ utilities

SITE RECORD INVENTORY

NZAA SITE NUMBER: Q07/1501

Supporting documentation held in ArchSite