

Marsden Point Refinery: **A Resource Consent Application to Renew 20 Resource Consents from the Northland Regional Council**



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Prepared for: **ChanceryGreen on behalf of The New Zealand Refining Company Limited, trading as 'Refining NZ'**

Prepared by: Gavin Kemble, *Director*
Bridgette Munro, *Chairperson*
Blair McLean, *Senior Planner*
George Sariak, *Planner*

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MARSDEN REFINERY
WHANGAREI HARBOUR DREDGING:
ARCHAEOLOGICAL ASSESSMENT

Report prepared for

The New Zealand Refining Company Limited

By

Simon Bickler (PhD)

Rod Clough (PhD)

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Clough & Associates Ltd.
heritage@clough.co.nz
321 Forest Hill Rd, Waiatarua
AUCKLAND 0612
Telephone: (09) 8141946
Mobile 0274 850 059
www.clough.co.nz

TABLE OF CONTENTS

Introduction.....	1
Project Background.....	1
Methodology	1
Results.....	4
Physical Environment	4
History.....	6
Previous Archaeological Research	12
Wider Landscapes	14
Distribution of Sites	15
Discussion and Conclusions	17
Summary of Results	17
Maori Cultural Values.....	17
Primary Effects of Proposal	18
Secondary Effects	20
Resource Management Act 1991 Requirements.....	24
Heritage New Zealand Pouhere Taonga Act 2014 Requirements	25
Conclusions.....	26
Recommendations.....	27
Bibliography	28

INTRODUCTION

Project Background

Marsden Point Refinery is proposing to undertake dredging at the mouth of the Whangarei Harbour (Figure 1). The work will change the contour of the sea bed at the entrance to the Harbour between Marsden Point and the Whangarei Heads extending out into the open ocean, but only within the channel and turning basin and disposal area(s) (Figure 1). Two disposal areas in Bream Bay are proposed (Figure 2).

An archaeological assessment was commissioned by The New Zealand Refinery Company Limited to establish whether the proposed work is likely to impact on archaeological values. This report has been prepared as part of the required assessment of effects accompanying a resource consent application under the Resource Management Act 1991 (RMA) and to identify any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Recommendations are made in accordance with statutory requirements.

Methodology

The scope of the assessment includes:

- A review of known historic heritage within the immediate surrounds of the harbour (including any known wrecks);
- Review of relevant archaeological literature;
- A review of any statutory requirements relating to dredging work; and
- An analysis of any potential effects due to coastal erosion on sites around the Whangarei Heads as a result of changes to the currents in the Harbour resulting from the proposed work.

The New Zealand Archaeological Association's (NZAA) site record database (ArchSite), District Plan schedules and the Heritage New Zealand Pouhere Taonga (Heritage NZ) New Zealand Heritage List were searched to determine whether any archaeological sites had been recorded on or in the immediate vicinity of the proposed dredging area. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early plans held at Land Information New Zealand (LINZ) were checked for information relating to past use of the area.

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INTRODUCTION, CONTINUED

Methodology, continued

The project did not include any fieldwork as the proposed work is not land based. A number of archaeological projects have been undertaken by the authors and other colleagues on archaeological sites on the mainland near the project area which informed the assessment of effects on those sites. In addition, a study by the authors for the Department of Conservation (Bickler et al. 2013) relating to potential climate change effects on archaeological sites in the Whangarei District and a recent analysis of coastal heritage items in the Northland Region by Clough and Associates (Brown et al. 2015) were used in assessing the likelihood of heritage effects for the project.

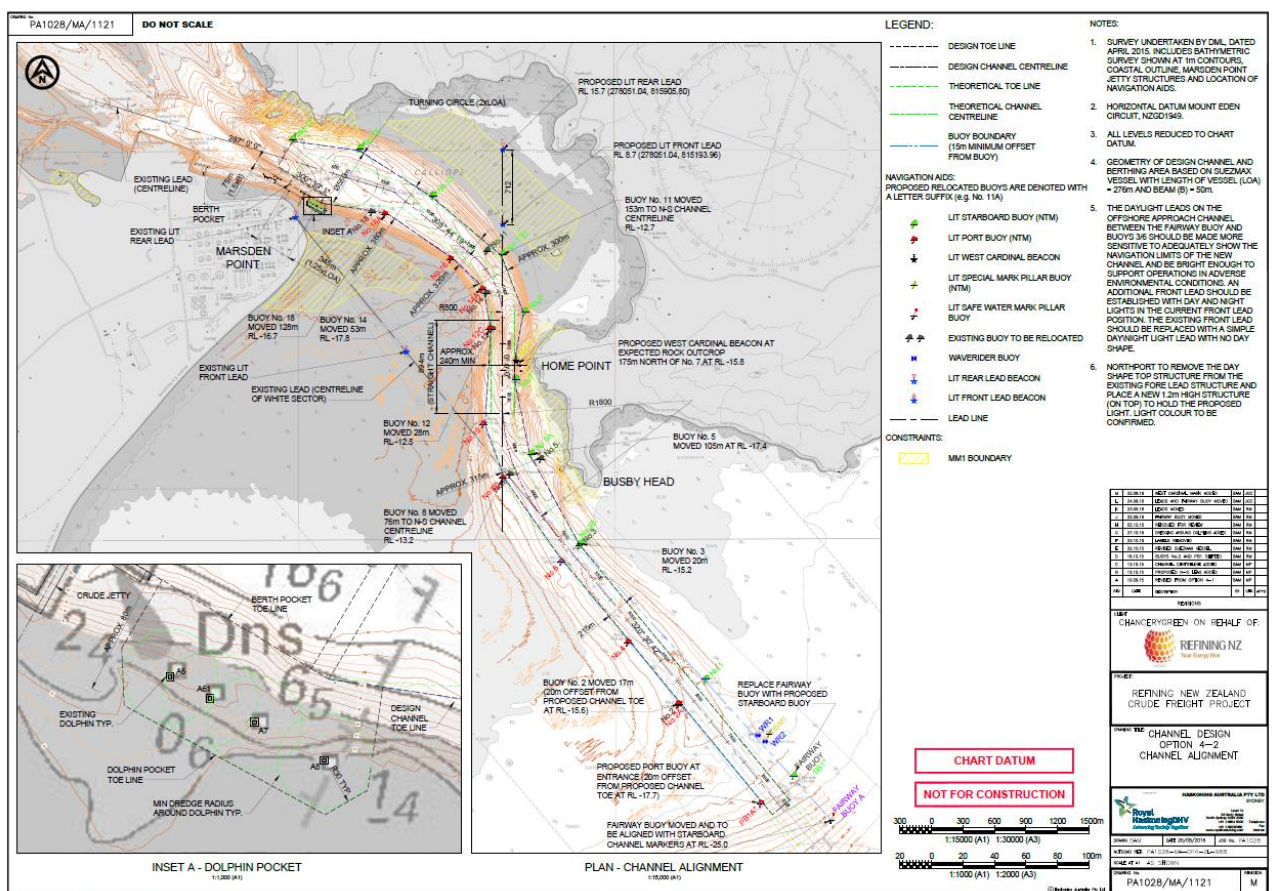


Figure 1. Proposed dredging plan

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INTRODUCTION, CONTINUED

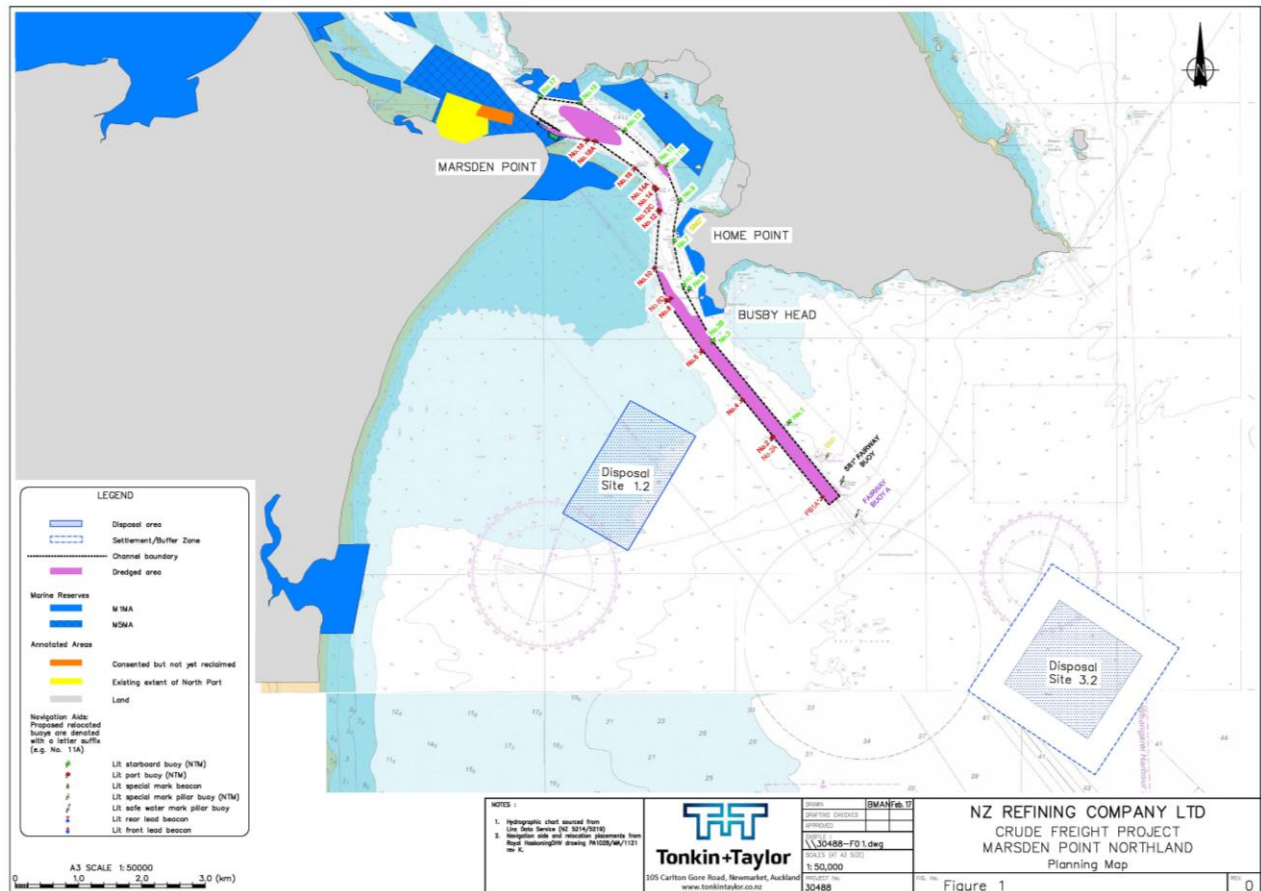


Figure 2. Proposed disposal sites (1.2 and 3.2)

RESULTS

Physical Environment

The project is located at the entrance to Whangarei Harbour. Detailed geological and environmental information is beyond the scope of the archaeological assessment and the brief summary here relates to the archaeological landscape at the Harbour's entrance. The Ferrar geological maps are shown here (although somewhat dated now) as they often contain information relating to earlier heritage items including the location of pa sites, Maori names and other historic information discussed below.

Whangarei Heads is an area of high relief on igneous rock (Figure 3). The interior coastline is marked by high promontories jutting out into the harbour with rocky shore beaches in the bays between.

Marsden Point is located on the western side of the entrance with an old prograding dune (see e.g., Osborne 1983) running from Ruakaka to the south and then turning west towards One Tree Point (Figure 4). The oil refinery is located at the Point with a wharf on the northern side of the Point. The area is relatively low-lying compared with the high relief at the Heads.

The other key features near the harbour entrance are the small islands in the bays, some of which were used in the past by Maori (e.g., McGregors Island), and historic use in the 19th and 20th centuries (e.g., the WWII gun emplacement on Bream Head, Q07/1264). There are also important sand banks which contain pipi and cockle (e.g., Snake Bank in the Harbour, Figure 5 and Mair Bank off Marsden Point) that were crucial to Maori in the pre-colonial period and continue to be an important resource through to the present (Williams et al. 2006).

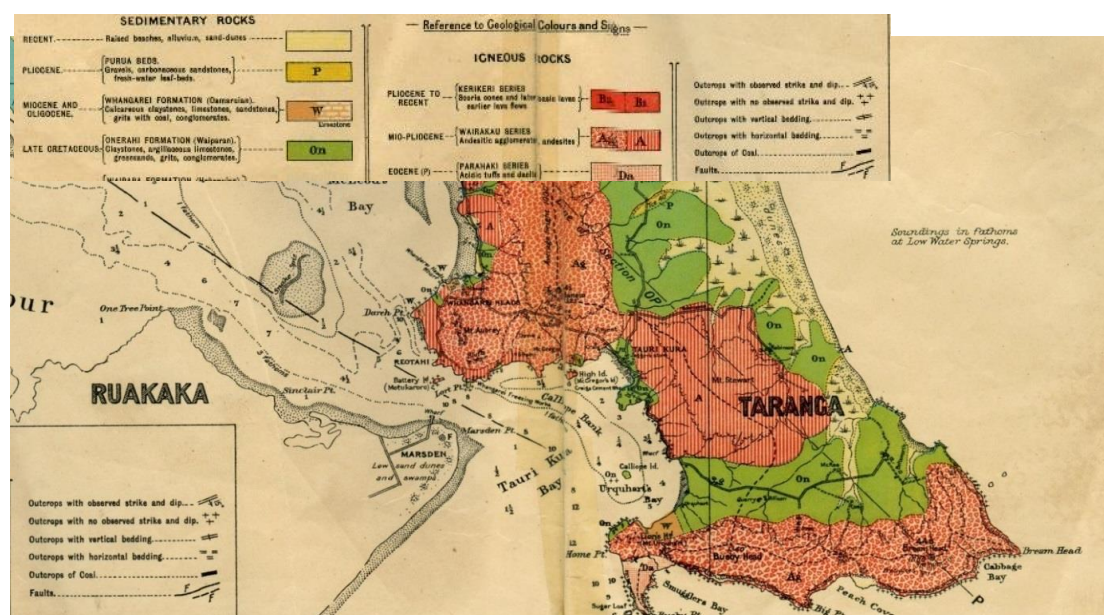


Figure 3. Geological plan of Taranga Survey District (Ferrar et al. 1934)

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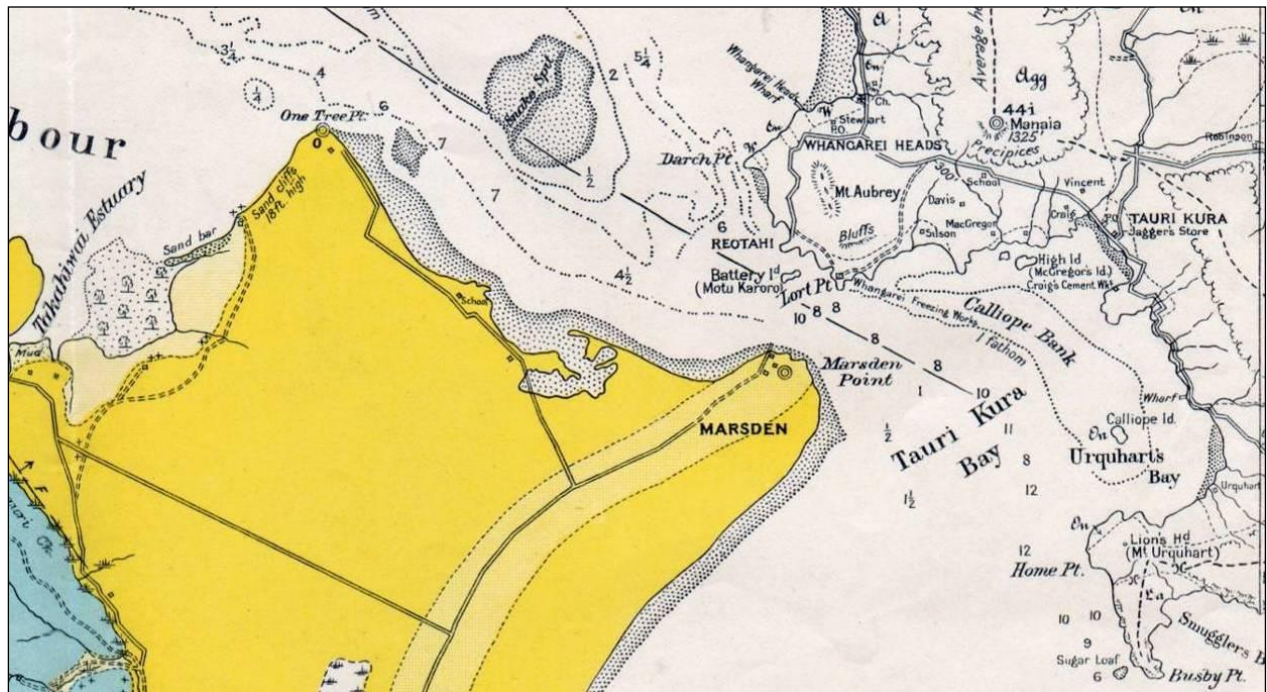


Figure 4. Geological Map of Ruakaka Survey District (Ferrar et al. 1934)

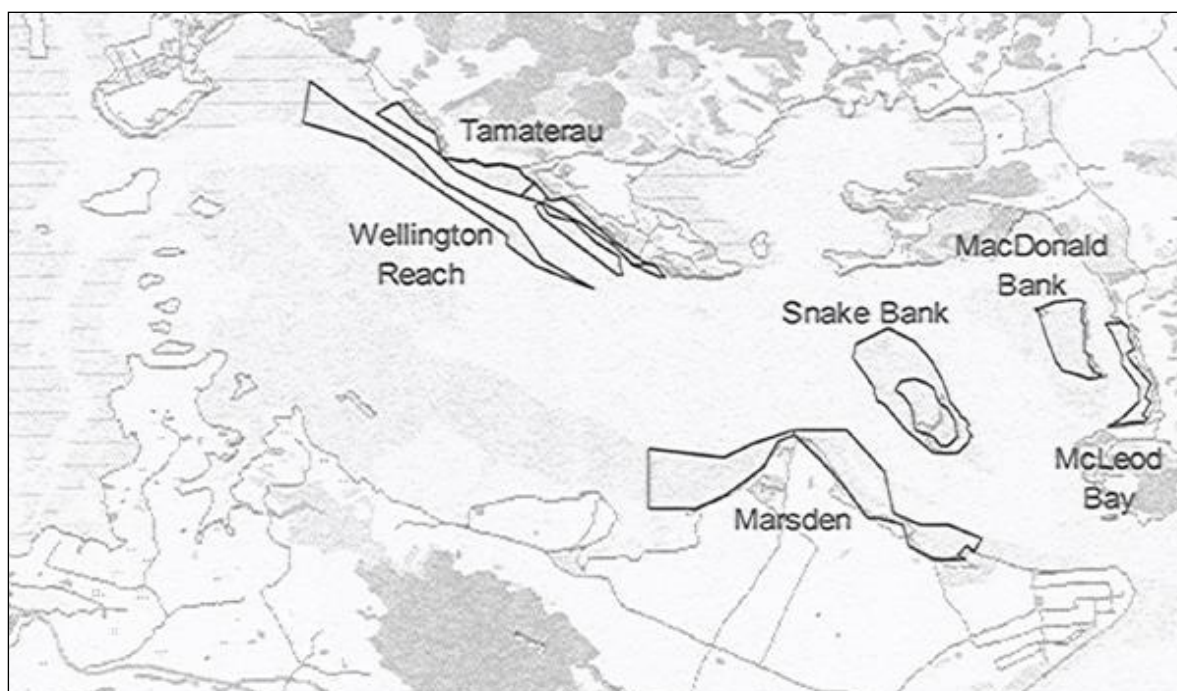


Figure 5. Beaches and banks in Whangarei Harbour that support appreciable numbers of cockles (at July 2002). From Williams et al. 2006: Figure 1

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RESULTS, CONTINUED

History¹

The traditional historical associations relating to the region reflect the migrations, conquests and occupations which have taken place over the centuries. It is a complex history and mana whenua today is based on the pattern which had emerged by the late 18th century.

The lands around Whangarei originally belonged to the Ngati Awa and subsequently the Ngaitahuhu people. In the mid-1700s, the Ngapuhi chief Te Ponaharakeke, living in the district, decided to conquer the One Tree Point area with the help of Ngarokiteuru. The land was divided between the conquerors. Te Ponaharakeke's son, Te Kahore, married Nga Pae, the daughter of the Ngaitahuhu chief Hikurangi. He also married Weku, the sister of the Hokianga chief, Te Raraku. The latter was given lands at One Tree Point and Ruakaka and invited to live there (Manihera et al. in Nevin 1984:6,9). In the early 1800s a war party of Ngatipukenga from Tauranga is said to have attacked the pa at Takahiwai, to the west of One Tree Point and been defeated by the Patuharakeke (Nevin 1984:11). The area around One Tree Point was known as Ara Kahika (Pickmere 1986:5).

In 1823 the missionary Samuel Leigh travelled through the district of Whangarei and found it desolate. He landed near One Tree Point with a mission group and spent the night at Takahiwai (Vallance 1964:30). The missionary Marsden had travelled through the area in 1815 and 1820 and eventually the influence of the visiting missionaries helped to abate the wars. Another missionary, Colenso, travelled the district between 1836 and 1842, accompanied by the British Resident James Busby in 1839, the latter buying the Ruakaka area from the Parawhau and Patuharakeke chiefs. The sale was supervised by the chiefs Te Tirarau III and Karekare (Nevin 1984:14). Busby also bought land in 1839 'on the south side of the harbour' from Patuharakeke (Pickmere 1986:27). In 1841 Colenso travelled from the Kaipara, and the first habitation the party came across was 'near the present settlement of Takahiwai', where they were welcomed by the Patuharakeke rangatira Pou and the hapu (Vallance 1964:34).

Early plans of the harbour date from 1827 (Figure 6) and show the main navigable channel into the Harbour, the high relief at the Heads, Marsden Point (Pte de Sables), and shallow waters associated with the various banks. A later sketch dated to 1842 also shows the entrance to Whangarei Harbour with silhouettes of the Heads ('Tewara') and a manned waka (Figure 7).

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¹ This history is derived from Bickler et al. (2008) and Turner et al. (2010). A more complete history is beyond the scope of this assessment but references in the bibliography provide additional information.

RESULTS, CONTINUED



Figure 6. Whangarei Harbour in 1827 (Originally published by Dépôt-général de la Marine as chart 756 and also as carte 19, from D'Urville's Voyage de la Corvette l'Astrolabe, Atlas Hydrographique). Map of Whangarei Harbour, North Island, New Zealand. Relief shown by soundings and hachures.
<http://natlib.govt.nz/records/20425166>

Marsden Point – Pte des Sables (or Sandy Point)

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RESULTS, CONTINUED

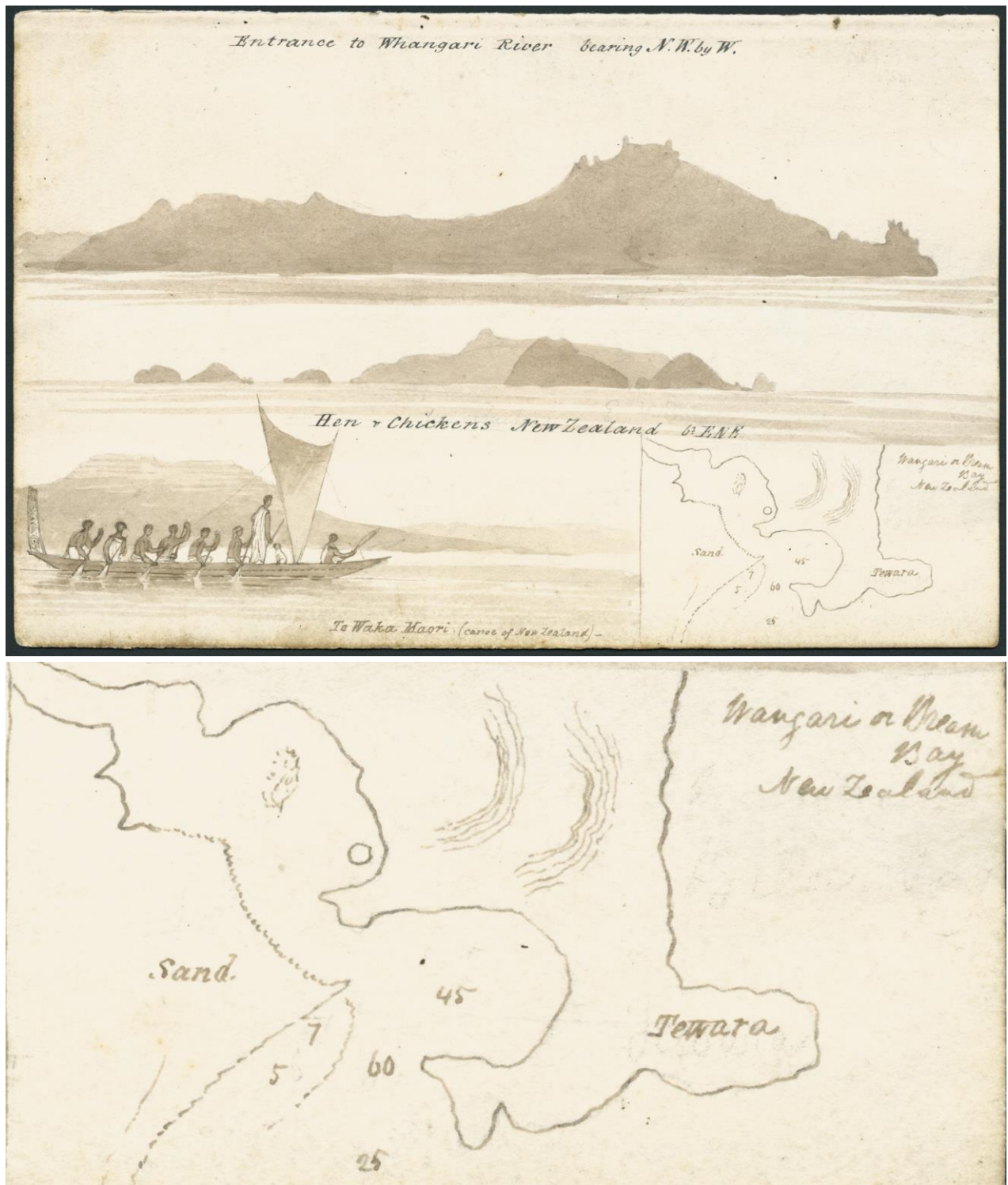


Figure 7. View of the Entrance to Whangarei Harbour (1842)

Entrance to Whangari River, bearing NW by W; Hen and Chickens, New Zealand..., Te Waka Maori (canoe of New Zealand); Wangari or Bream Bay, New Zealand. 1842. Reference number: MS-0104-071
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RESULTS, CONTINUED

History, *continued*

In February 1854 Maori again sold Ruakaka, this time to the Crown. It was a smaller block than previously, not including Marsden Point or One Tree Point, so they insisted on Busby being compensated. The excluded area was known as Poupouwhenua (Figure 8, Figure 9) and was sold to the Crown in July 1854 (Richards 1984:9-12).

In 1857, Donald McLean, Land Commissioner, wrote to the Governor describing the district of Whangarei: ‘... the low, sandy country around the town site of Marsden, ... on the banks of streams are some Native villages, ... here and there are occasional patches of poor white clay soil, which have been dug over for kauri gum’ (Nevin 1984:5). It is highly likely that one of these ‘Native villages’ was along the banks of the Takahiwai Stream and possible that the Patuharakeke were busy in gum-digging activities for, as the trade developed, Maori became rapidly involved.

Nevin has attempted to trace the gumfields which were worked over around the Whangarei Harbour, showing likely activity in the One Tree Point and Marsden areas, although neither is listed as main gumfields in the district (Vallance 1964:84). For evidence, Nevin used local knowledge, field observations and typical soil types (Nevin 1984:16, 17). Small pieces of gum can be found today on the southeast side of the property in disturbed soil. The Takahiwai area supplied flax for mills in and around Whangarei in the early days of settlement. The chief of the Patuharakeke at the time was Te Ikanui Te Pirihi (Nevin 1984:15). Pickmere records that there was a Maori settlement at Takahiwai in the 1880s (1986:151) (see Figure 8).

Captain Duncan Mackenzie must have been an early purchaser of land in the area as he had a property and store at One Tree Point in 1854. It was here that ships’ passengers were offloaded and taken in open boats along the coast to Waipu. The Captain, also known as ‘Prince’, was very active in the shipping business and had four sons who were all master mariners (Pickmere 1986:127).

A.M. Rust, born 1859, wrote in his reminiscences of Whangarei that, for Maori, fishing was a great pastime. They used to make raids on the sharks about One Tree Point, then clean the harvest and hang it out to dry in the sun (Rust 1936:125).

A number of shipwrecks around the Whangarei Harbour occurred during the 19th and 20th centuries (see Papers Past website for newspaper reports of a number of these occurrences). Diggle (2014) provides an overview of shipwrecks in the area, but no systematic survey has been undertaken in the Whangarei Harbour to determine the likely locations of all the possible wrecks in the area. Most appear to have occurred outside the mouth of the Harbour on the seaboard side of the Heads.

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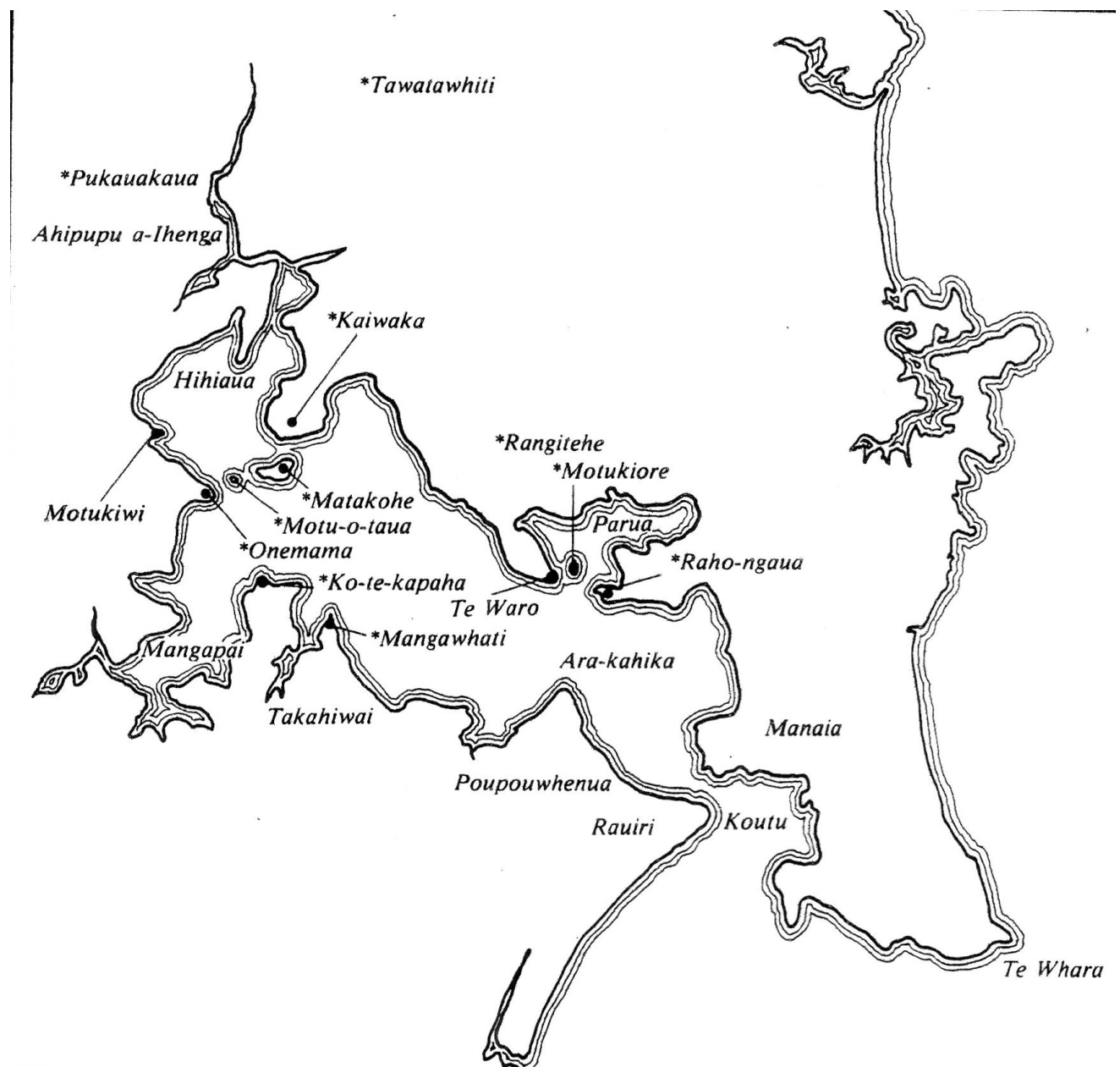


Figure 8. 'Pa sites and place names in use in the early nineteenth century' (Pickmere 1986:5)

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RESULTS, CONTINUED



Figure 9. Close-up of Roll 16 (LINZ) Date unknown

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RESULTS, CONTINUED

Previous Archaeological Research

Excavations have been carried out around Whangarei Harbour since the 1960s. At Bream Head, for example, a large midden site produced evidence of significant shellfish cooking as well as seal, dog, bird, tuatara and fish bone, chert flakes, hangi stones and fishing equipment (Green & Davidson 1964 and NZAA Site Record Form Q07/103 cited by Phillips and Harlow 2001:14). More recent test excavations at Bream Head have been conducted, but little information is available regarding the results. Bickler et al. (2008) excavated midden sites in McGregors Bay, opposite the subject area on the north side of Whangarei Harbour, consisting of small to medium-sized middens, but these were relatively simple sites with no evidence of structures of significant complexity.

Nevin and Nevin (1981, G. Nevin [1984]) carried out the main surveys on the southern side of Whangarei Harbour and identified a large number of the sites which have been identified in the Ruakaka area. These were mostly midden near the coast. Farther inland, G. Nevin (1984) identified a large number of sites in the Takahiwai hills including pa, sites with pits and terraces, and evidence of gardening along with the ubiquitous midden sites.

In the inland areas around Takahiwai and near Ruakaka, the Maori settlement pattern appears to have been focussed around the higher ridges. Pa sites offered some defence from raiding parties travelling through the area. Gardening was carried out in this hinterland. Access to the rich marine resources would have been straightforward and during the seasonal cycle, family groups probably moved down to the dune lands to collect food for storage and perhaps exchange.

A small number of excavations have been carried out near Whangarei including investigation of the Ruarangi Pa (Q07/30). The excavations there created a picture of a site that had been occupied a number of times from the 1700s with evidence of houses and midden within the defences. Cockle was overwhelmingly the most common shellfish identified in the midden excavated at the pa (Hougaard 1971 cited in Phillips & Harlow 2001:12-13).

The large midden Q07/58 was excavated by Nichol and Walton in 1976 (Nichol 1988 cited in Phillips & Harlow 2001:13) and suggested extensive shellfish processing much like at the sites around One Tree Point.

Best (1999) excavated a small pit and terrace complex (Q07/897) in Ruakaka where a sequence of pollen data showed the environmental changes brought about by Maori and then Europeans in the area. The site included a cache of digging implements of relatively 'modern' age (i.e., 1800s onwards, where radiocarbon techniques become problematic) along with a radiocarbon date from a midden on the ridge above the cache of between 1640-1870 (at 2 σ).

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RESULTS, CONTINUED

Previous Archaeological Research, *continued*

More extensive excavations were carried around One Tree Point, west of Marsden Point, and were reported by Phillips and Harlow (2001). A series of midden deposits were excavated which ranged from small concentrations of hangi/firescoops overlain with shells through to large complexes of firescoops, hangi, stake and post holes. The investigators concluded that the sites represented summer occupation of the One Tree Point area for large scale processing of shellfish from 1500 AD onwards. Most appeared to have only been used during a single season, but in at least one case there was evidence that Maori returned to one of the sites at least once.

Some late 19th century to early 20th century artefacts were also recovered during the investigation of the sites. They were considered to be chance finds relating to gum-digging activities and not linked with the earlier shellfish processing activities.

Subsequent investigations around One Tree Point (see e.g., Campbell 2005, 2006; Bickler et al. 2007) identified a large number of small midden sites ranging in age from 1500 AD to around 1850 AD scattered in the old dunes. These were smaller scale than the sites excavated by Phillips and Harlow (2001), but were probably small seasonal campsites.

There are no known archaeological sites at Marsden Point itself, although it seems likely that the original pre-European occupation there would have been similar to One Tree Point. While the earthworks around that area have probably destroyed most of the sites that may have been present, the possibility of some intact evidence being discovered in the future cannot be ruled out given the prograding shoreline and possible burial of some sites.

A number of investigations, generally of midden sites, have also been carried out on the Whangarei Heads. These include sites in Reotahi Bay (Campbell & Keith 2007) through to McGregors Bay where dates from the 15th to 17th centuries were obtained (see e.g., Bickler et al. 2008). Middens associated with pits and terraces were investigated at Tamaterau to the northwest (Judge & Clough 2008). The sites probably represented the living, gardening and storage areas that made up part of a relatively large settlement associated with a pa (Q07/673) in the 17th or 18th centuries. Recent infrastructure works undertaken by WDC have also exposed two complex multi-layered occupation sites at Taurikura and Urquharts Bays. Radiocarbon dates parallel the occupation at One Tree Point dating to 1500–1700AD (Judge et al. 2010). At Urquharts Bay, human remains, garden soils as well as food storage pits have been found with large middens and represent the range of occupation and activities around the northern harbour (Phillips 2006a,b; Phillips & Druskovich 2009; Judge & Clough 2006b).

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RESULTS, CONTINUED

Previous Archaeological Research, *continued*

Carpenter (2012) has summarised the archaeological work around Bream Head and the neighbouring area while outlining a management structure for sites on the Department of Conservation Land there. Carpenter (2012: 26) argued that most of the sites ‘represent an intensive occupation focussed on large-scale consumption of shellfish from nearby shell banks around the mouth of the Whangarei Harbour.’

There has been no major archaeological research undertaken on the sources of the shellfish, notably the cockle beds around Snake Bank and the pipi around Mair Bank off Marsden Point. However, the evidence from the archaeological sites suggest both areas have been used by Maori since at least 1500 AD and probably at least one or two centuries earlier.

Wider Landscapes

The scale of archaeological excavations in the Whangarei Harbour area has increased the information relating to the Maori occupation prior to European settlement. At Puwera, to the southwest of Whangarei city, an investigation of three archaeological sites in 2008 by Clough & Associates and the University of Auckland (Turner et al. 2010) provided evidence of inland settlement areas. The Puwera sites included remains of houses, extensive storage pits, cooking areas and stone working dating from the 16th-18th centuries. The storage facilities suggest that major gardens were located nearby, while the range of stone and obsidian tools demonstrated that the inhabitants had access to a range of materials sourced throughout the country. The results from Puwera contrast with those from other locations such as One Tree Point, but given the difference in environment (inland hills as opposed to coastal dunes), this is not surprising. It is likely the sites formed part of seasonal round of activities areas for populations in the area with seasonal encampments near the rich marine resources and more protected and good garden areas in the hinterland.

Around Kamo, north of Whangarei, volcanic soils provided similar conditions for gardening as the fertile soils of central Auckland for both Maori and early European settlers (Johnson 2002:60). Archaeological investigations at site Q06/486 included evidence of Maori occupation dating to the 17th century with nearby evidence of 19th century activities relating to the transformation of the landscape for farming.

Stone walls dating from the 19th century on are common across the District (see e.g., Prince 2009) and provide a visible symbol of the transformation of the Whangarei area into a pastoral landscape.

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RESULTS, CONTINUED

Distribution of Sites

The current distribution of archaeological sites in the NZAA database is shown in Figure 10 and Figure 11. The majority of sites relate to pre-European Maori settlement with a few 19th and 20th century sites relating to European settlement. A more detailed discussion can be found in Bickler et al. (2013).

It should be noted that the NZAA site database shows all previously recorded sites including those that have been destroyed either by natural process or land development. This over-representation of sites is balanced in part by the likelihood of new sites that continue to be identified in the area. As a result, the data is a useful indicator of the general pattern of archaeological features in the Harbour.

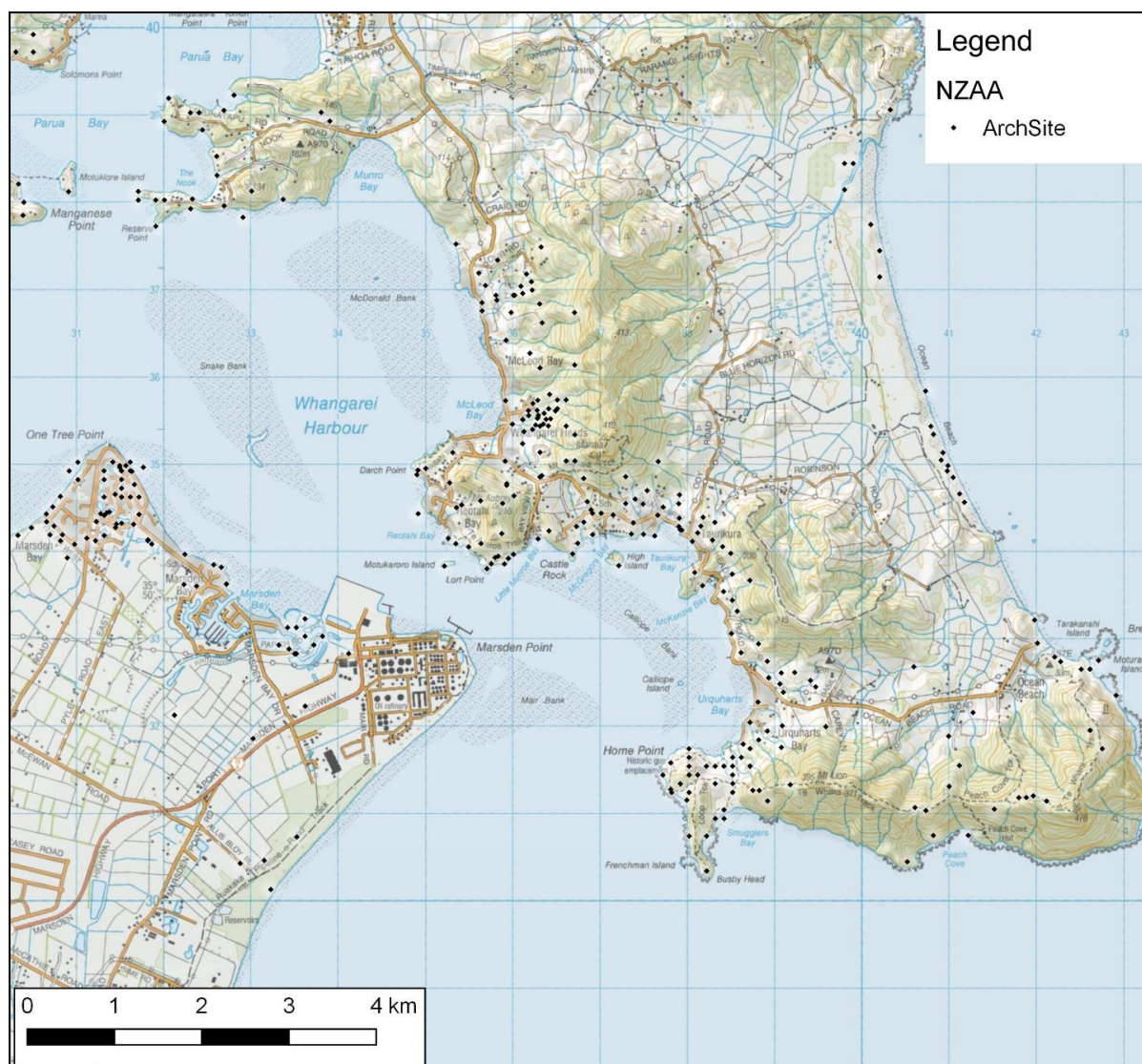


Figure 10. Distribution of archaeological sites (NZAA ArchSite database)

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Figure 11.
Distribution of
archaeological
sites by site type
(NZAA ArchSite
database)



DISCUSSION AND CONCLUSIONS

Summary of Results

The desktop analysis of the archaeological sites around the entrance to Whangarei Harbour shows the range of the features on both sides of the entrance. This includes midden, pit and terrace sites and pa sites dating back at least as far back as 1500AD with other sites likely to be older in the inner harbour. Sites relating to European settlement are recorded in the Harbour although none particularly near to the proposed dredging. The overwhelming majority of sites in the vicinity relate to earlier Maori settlement described in the oral and written histories and archaeological research of the region.

Maori Cultural Values

This is an assessment of effects on archaeological values and does not include an assessment of effects on Maori cultural values. Such assessments should only be made by the tangata whenua. Maori cultural concerns may encompass a wider range of values than those associated with archaeological sites. The historical association of the general area with the tangata whenua is evident from the recorded sites, traditional histories and known Maori place names. A Cultural Impact Assessment has been commissioned as part of the project.

Archaeological Value and Significance, continued

The archaeological value of sites relates mainly to their information potential, that is, the extent to which they can provide evidence relating to local, regional and national history through the use of archaeological investigation techniques, and the research questions to which the site could contribute. The surviving extent, complexity and condition of sites are the main factors in their ability to provide information through archaeological investigation. For example, generally pa are more complex sites and have higher information potential than small midden (unless of early date). Archaeological value also includes contextual (heritage landscape) value. Archaeological sites may also have other historic heritage values including historical, architectural, technological, cultural, aesthetic, scientific, social, spiritual, traditional and amenity values.

There are no known archaeological sites identified in the area of the dredging.

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DISCUSSION AND CONCLUSIONS, CONTINUED

The Heritage Landscape

A number of archaeological sites have been identified at the entrance to the Whangarei Harbour on both sides of the proposed dredging. These sites include evidence of both Maori and European settlement, agriculture and marine exploitation over the past few hundred years. A number of these sites have been investigated by past archaeological research with valuable results relating to Whangarei's history. The archaeological sites border the area of dredging on the nearby coastal areas (Figure 12).

The archaeological sites, as well as the later historical records, demonstrate that the pipi beds at Mair Bank and the cockle at Snake Bank around Whangarei Harbour, along with the other fishing resources, have been important to populations living around the Harbour for several hundred years.

Primary Effects of Proposal

As described in the report, the archaeological features and remains around the Whangarei Harbour can take the form of burnt and fire cracked stones, charcoal, rubbish heaps including shell, bone and/or 19th century glass and crockery, ditches, banks, pits, old building foundations, artefacts of Maori and early European origin or human burials. Shipwrecks around the Harbour are also possible, although there is no specific record of any in the dredging zone.

There are no known archaeological sites directly affected by the dredging or proposed marine disposal sites (Figure 12). Nor will any known sites be affected by the relocated or additional channel marker buoys, or other navigation aid structures (Figure 1).

It is possible that land based disposal sites may be required in the future, but would only be undertaken subject to the necessary consents being in place (Tonkin & Taylor 2016: 6). If land based disposal sites are proposed in the future they would require assessment from an archaeological perspective.

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DISCUSSION AND CONCLUSIONS, CONTINUED

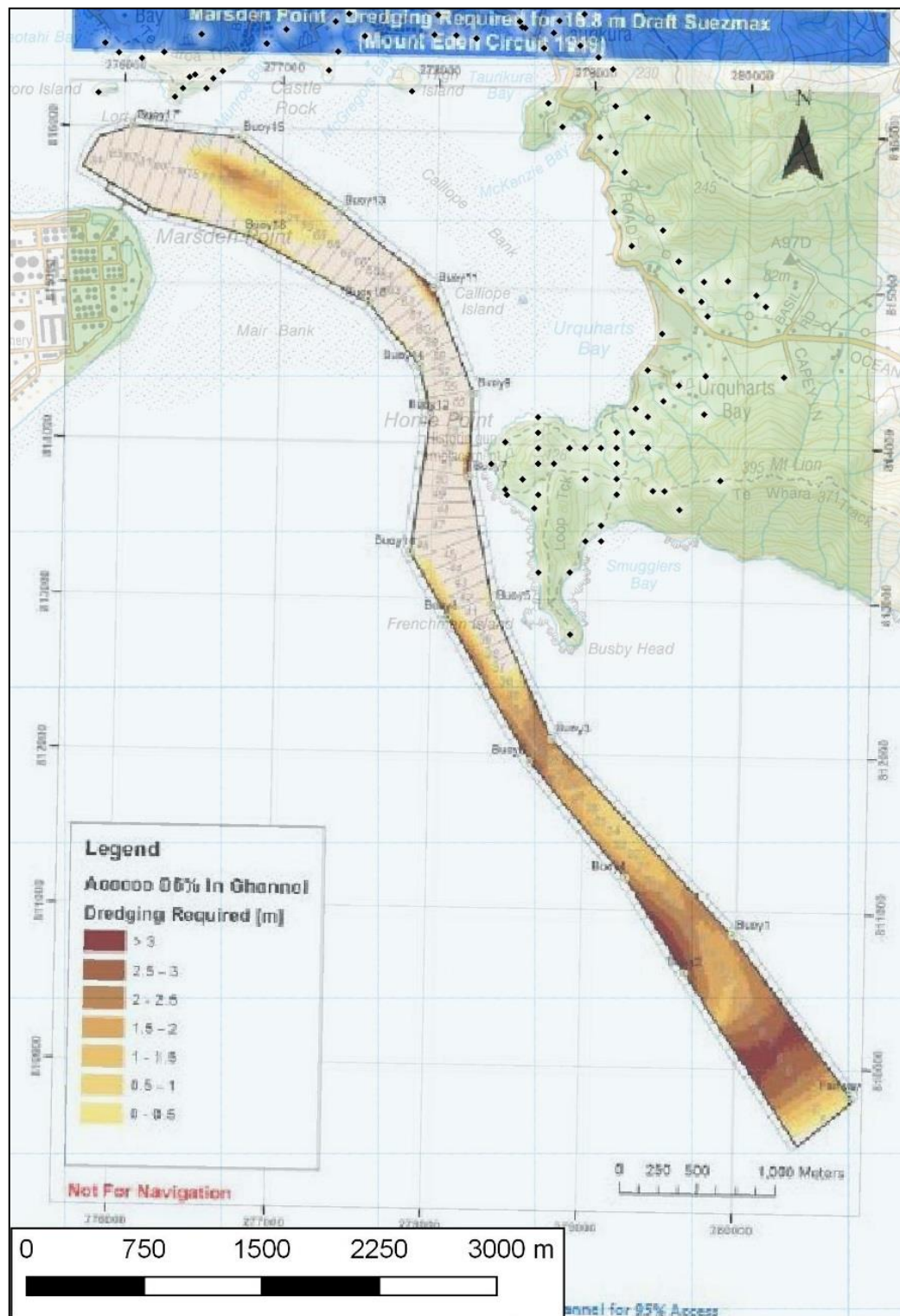


Figure 12. Distribution of archaeological sites (NZAA database) and proposed dredging plan

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DISCUSSION AND CONCLUSIONS, CONTINUED

Secondary Effects

The project brief included an assessment of possible effects on archaeological sites as a result of changes to the currents as a result of the dredging. This is also a concern raised in the Draft Cultural Effects Assessment,² which states ‘Physical impacts that could increase secondary erosion effects along the northern shoreline, (ie. at Busby head) risk other important kaimoana gathering locations, our cultural landscapes and seascapes and undisclosed waahi tapu (burial caves) along this shoreline’ (CEA, p.26). Of these potential effects, our report is only concerned with potential effects on the archaeological sites that contribute to cultural landscapes.

The Whangarei District Council (WDC GIS Dept)³ has identified a number of hazard zones relating to:

1. Coastal erosion,
2. Flooding; and
3. Land stability.

A study of the potential effects of climate change on archaeological sites in the Whangarei District (Bickler et al. 2013), included the area of the Whangarei Harbour entrance as a case study. The analysis outlined there (Bickler et al. 2013:31ff) pointed to the possible influence on coastal erosion hazards and flooding hazard on the southern side of the harbour. Land to the west of Marsden Point towards One Tree Point is susceptible to flooding with coastal erosion significant to the south of Marsden Point.

On the Whangarei Heads land stability was considered to be the major natural factor as the higher relief made flooding less likely. However, while erosion was not specifically included in that area, the land stability is in part affected by the coastal erosion processes which exacerbate the land stability.

The distribution of archaeological sites and the WDC hazards identified in the earlier study is summarised in Figure 13. Overall, the case study showed how exposed midden on both sides of the harbour entrance were very likely to be destroyed by these hazards and this was likely to increase as a result of rising sea levels, increased storm events and erosion (Bickler et al. 2013: 34-36).

More recent data on the hazards available from the Northland Regional Council was examined in relation to the distribution of archaeological sites and shown in Figure 14.

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² Refining NZ Crude Freight Proposal – Tangata Whenua o Whangarei Te Rerenga Paraoa DRAFT Cultural Effects Assessment. 11 June 2017.

³ Currently available at <http://gis.wdc.govt.nz/intramaps80/?project=Whangarei&configId=0df84abb-1e1f-4b1c-a202-d198446d9c4e>

DISCUSSION AND CONCLUSIONS, CONTINUED\

Secondary Effects, *continued*

The updated hazard information shows a wider area of land that is subject to erosion rather than the specific coastal fringe identified originally in the earlier analysis. This does, however, confirm the conclusions from Bickler et al. (2013), which identified the complex relationship between land stability and erosion as a significant factor in site destruction. However, many archaeological sites around the coastal fringe at the Harbour entrance are vulnerable to potential hazards, but assessing the vulnerability of any particular site to those hazards would require detailed site-specific analysis.

The broad scale nature of the analysis makes it difficult to provide specific data regarding site survivability as a result of changes to the currents that might occur as a result of the proposed dredging and disposal activities. The Tonkin & Taylor coastal processes assessment (2016) concludes that ‘overall the changes to tidal flows and wave conditions resulting from the channel dredging and marine disposal are small and typically within the existing variability of tidal currents and wave energy. No changes to existing coastal processes are anticipated on the open coast from Marsden Point to Ruakaka River or along the rocky coast from Home Point to Smugglers Bay, on the ebb tide shoal and Mair Bank or within the inner harbour area.’

As a result, it is unlikely there will be any specific, identifiable or cumulative effects on archaeological sites around the coastline. Current erosion patterns are likely to continue to damage and destroy archaeological sites (Bickler et al. 2013: 36) regardless of proposed dredging. Here, as elsewhere, the more vulnerable components of cultural landscapes such as coastal midden will continue to erode away, but the most visible components, such as prominent coastal pa sites, would survive.

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DISCUSSION AND CONCLUSIONS, CONTINUED

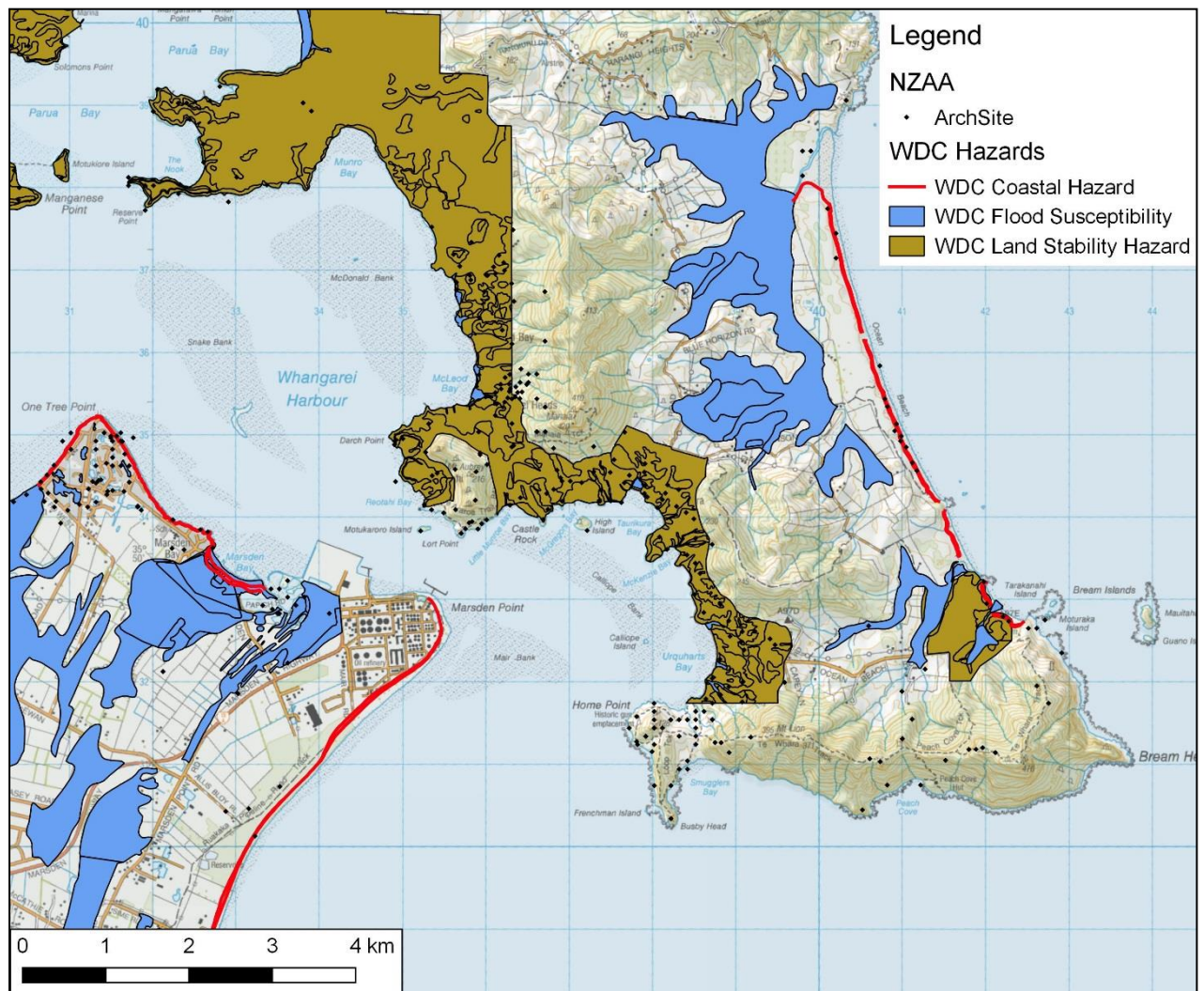


Figure 13. Distribution of archaeological sites (NZAA ArchSite) in relation to identified hazards in Whangarei District (WDC GIS Department 2008)

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DISCUSSION AND CONCLUSIONS, CONTINUED

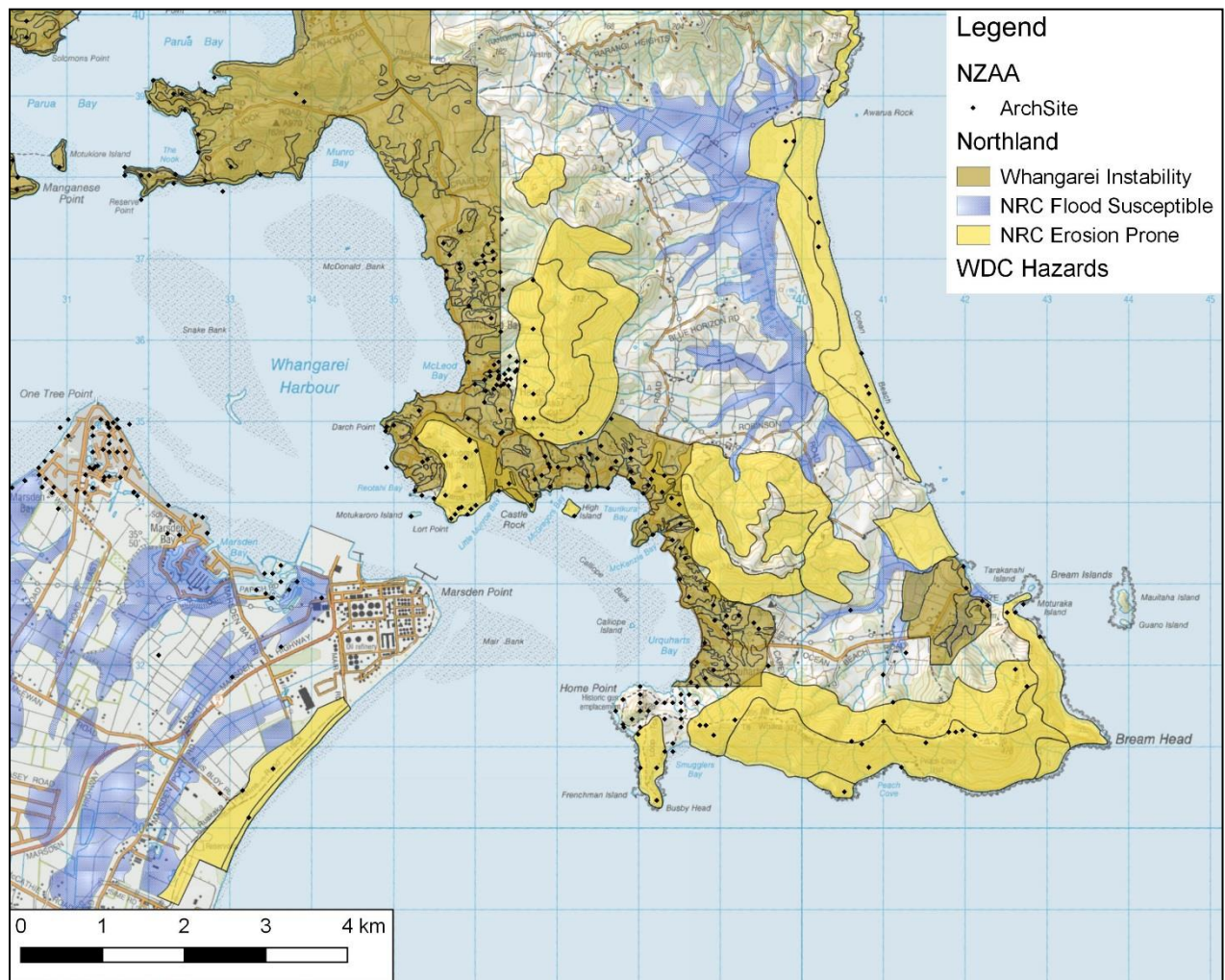


Figure 14. Distribution of recorded archaeological sites (NZAA ArchSite) and identified hazards (Northland Regional Council, data from Koordinates.com)

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DISCUSSION AND CONCLUSIONS, CONTINUED

Resource Management Act 1991 Requirements

Section 6 of the RMA recognises as matters of national importance: *‘the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga’* (S6(e)); and *‘the protection of historic heritage from inappropriate subdivision, use, and development’* (S6(f)).

All persons exercising functions and powers under the RMA are required under Section 6 to recognise and provide for these matters of national importance when *‘managing the use, development and protection of natural and physical resources’*. Archaeological and other historic heritage sites are resources that should be sustainably managed by *‘Avoiding, remedying, or mitigating any adverse effects of activities on the environment’* (Section 5(2)(c)).

Historic heritage is defined (S2) as *‘those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: (i) archaeological; (ii) architectural; (iii) cultural; (iv) historic; (v) scientific; (vi) technological’*. Historic heritage includes: *‘(i) historic sites, structures, places, and areas; (ii) archaeological sites; (iii) sites of significance to Maori, including wahi tapu; (iv) surroundings associated with the natural and physical resources’*.

Regional, district and local plans contain sections that help to identify, protect and manage archaeological and other heritage sites. The plans are prepared under the rules of the RMA. The Whangarei District Plan and Northland Regional Coastal Plan are relevant to the proposed activity, as is the New Zealand Coastal Policy Statement.

This assessment has established that the proposed activity will have no effect on any known archaeological or post-1900AD remains, and has little potential to affect unrecorded remains. If resource consent is granted, consent conditions relating to archaeological monitoring or protection would therefore not be required. A general condition relating to the accidental discovery of archaeological remains (i.e. as shipwrecks) could be included, requiring that if any archaeological remains are exposed during development, work should cease in the immediate vicinity and the Council and Heritage NZ should be informed.

Continued on next page

DISCUSSION AND CONCLUSIONS, CONTINUED

Heritage New Zealand Pouhere Taonga Act 2014 Requirements

In addition to any requirements under the RMA, the HNZPTA protects all archaeological sites whether recorded or not, and they may not be damaged or destroyed unless an Authority to modify an archaeological site has been issued by Heritage NZ (Section 42).

An archaeological site is defined by the HNZPTA Section 6 as follows:

‘archaeological site means, subject to section 42(3), –

(a) 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)’

Under Section 42(3) an Authority is not required to permit work on a pre-1900 building unless the building is to be demolished.

Under Section 43(1) a place post-dating 1900 (including the site of a wreck that occurred after 1900) that could provide *‘significant evidence relating to the historical and cultural heritage of New Zealand’* can be declared by Heritage NZ to be an archaeological site.

Authorities to modify archaeological sites can be applied for either in respect to archaeological sites within a specified area of land (Section 44(a)), or to modify a specific archaeological site where the effects will be no more than minor (Section 44(b)), or for the purpose of conducting a scientific investigation (Section 44(c)). Applications that relate to sites of Maori interest require consultation with (and in the case of scientific investigations the consent of) the appropriate iwi or hapu and are subject to the recommendations of the Maori Heritage Council of Heritage NZ. In addition, an application may be made to carry out an exploratory investigation of any site or locality under Section 56, to confirm the presence, extent and nature of a site or suspected site.

An archaeological authority will not be required for the project as no known sites will be affected, and it is unlikely that any undetected sites are present. However, should any sites (e.g. shipwreck remains) be exposed during development the provisions of the HNZPTA must be complied with.

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DISCUSSION AND CONCLUSIONS, CONTINUED

Conclusions

This desktop assessment has examined the archaeological data relating to the land-based settlement around the Whangarei Harbour. That information, along with previous research on possible environmental hazards around the Whangarei Harbour (Bickler et al. 2013) and the coastal processes assessment for the current proposal (Tonkin & Taylor 2016), suggests that while many sites may be vulnerable to future erosion, it is unlikely that there is any overall increased risk to archaeological features as a result of the project.

If any land based disposal areas are proposed in the future, these would need to be assessed to establish whether they have the potential to impact on archaeology.

RECOMMENDATIONS

**It is
Recommended:**

- That there should be no constraints on the proposed dredging project on archaeological grounds, since no archaeological sites are known to be present and it is considered unlikely that any will be exposed during development.
 - That if archaeological evidence should be unearthed during the work (e.g., evidence of early shipwrecks), work should cease in the immediate vicinity of the remains and the Council, project archaeologist and/or Heritage NZ should be notified.
 - That if modification of an archaeological site does become necessary, an Authority must be applied for under Section 44(a) of the HNZPTA and granted prior to any further work being carried out that will affect the site. *(Note that this is a legal requirement).*
 - That in the event of koiwi tangata (human remains) being uncovered, work should cease immediately in the vicinity of the remains and the tangata whenua, Heritage NZ, NZ Police and Council should be contacted so that appropriate arrangements can be made.
 - That since archaeological survey cannot always detect sites of traditional significance to Maori, such as wahi tapu, the tangata whenua should be consulted regarding the possible existence of such sites associated with the project area. A cultural impact assessment is in preparation.
 - That if land based disposal is proposed in the future, the disposal areas should be assessed for potential effects on archaeological values.
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BIBLIOGRAPHY

- Best, S. 1996. Paradise Shores Resort Ltd Proposed Subdivision at Ruakaka: Initial Archaeological Survey. Unpublished report for Reyburn and Bryant Ltd.
- Best, S. 1999. The Prescott's Dam Site, Ruakaka, Site N24/581: Archaeological Excavation of Artifact Findspot. Unpublished report for Whangarei District Council.
- Bickler, S., B. Baquié and M. Plowman. 2005. Preliminary Report for NZ Historic Places Trust Authority pursuant to Section 14, Historic Places Act 1993, No 2005/209. Architage report.
- Bickler, S.H., B. Baquié, M. Plowman and D. Harlow. 2007. Further Excavations at One Tree Point, Whangarei Harbour. Unpublished report for Authority pursuant to Section 14, Historic Places Act 1993 No 2005/209. Architage report.
- Bickler, S.H., Clough, R. and S. Macready. 2013. The Impact of Climate Change on the Archaeology of New Zealand's Coastline: A Case Study from Whangarei District. Department of Conservation, New Zealand. *Science for Conservation* No. 322. Available at <http://www.doc.govt.nz/publications/science-and-technical/new-publications/>.
- Bickler, S., G. Farley, M. Plowman and R. Clough. 2008. Investigations at McGregors Bay, Whangarei Heads: Final Report in Fulfilment of NZHPT Authority no. 2003/143. Clough & Associates unpublished report for Reyburn & Bryant Ltd.
- Brown, A., R. Clough with S. Bickler. 2015. Northland Coastal and Freshwater Heritage Survey: Identification of Historic Heritage Resources (Draft Clough & Associates unpublished report for Northland Regional Council).
- Campbell, M. 2005. Kowi Lakes Development, One Tree Point, Ruakaka, Lot 1 DP 320790 and Lot 3 DP 327945: archaeological assessment. Unpublished report to Surveyors North.
- Campbell, M. 2006. Archaeological Investigations of Site Q07/1148, Kowi Lakes, One Tree Point, Ruakaka: Final report. Unpublished report to Surveyors North.
- Campbell, M., S. Bickler and R. Clough. 2004. The Archaeology of Omaha Sandspit, Northland, New Zealand. *New Zealand Journal of Archaeology* 25(2003):121-157.
- Campbell, M. and S. Keith. 2007. Archaeological investigation of site Q07/1215, Reotahi: final report. Unpublished CFG Heritage report for G. and D. MacDonald.
- Carpenter, J. 2012. Bream Head Heritage Assessment. Report for Department of Conservation. <http://www.doc.govt.nz/Documents/conservation/historic/by-region/northland/bream-head-heritage-assessment.pdf>.
- Diggle, L. 2014. *Shipwrecks of New Zealand*. 8th edition. Auckland.
- Ferrar, H. et al. 1934. The Geology of the Dargaville-Rodney Subdivision, Hokianga and Kaipara Divisions. *New Zealand Geological Survey Bulletin* No. 34. Wellington:Govt. Printer.
- Fredericksen, C., I. Barber and S. Best. 1995. Pre-European Occupation on the Papamoa Dune Ridges: the archaeological excavation of site U14/2841, L.S. Johnson Trust Property, Papamoa, Bay of Plenty. Unpublished report to New Zealand Historic Places Trust.
- Furey, L., 1999. Archaeological Excavation of T10/993 at Matarangi. *Archaeology in New Zealand*, 42(4): 314–336.
- Green, R. and J. Davidson. 1964. Adult education weekend school. Excavation notes.
- Harlow, D. 1998. Archaeological Survey and Assessment Report for Resource Consent Application: One Tree Point Ltd, One Tree Point, Ruakaka. Unpublished report.
- Harlow, D. 2005. Archaeological Assessment Report as Part of Documentation for an Application to the Historic Places Trust under Section 12 of the Historic Places Act 1993: Marsden Point Developments Ltd., La Pointe Beach Estates, One Tree Point, Ruakaka. Unpublished report.
- Heritage NZ. 2006. Writing Archaeological Assessments. Archaeological Guidelines Series No. 2. New Zealand Historic Places Trust Pouhere Taonga (now Heritage NZ).

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BIBLIOGRAPHY, CONTINUED

- Johnson, L. 2002. Archaeological Monitoring of the Kamo By-pass and Investigation of Site Q06/486. Unpublished Northern Archaeological Research report for Opus International Ltd.
- Judge, C. and R. Clough. 2008. Archaeological investigation of sites Q07/668 and Q07/670, allotment 33 Owhiwa Parish, Tamaterau, Whangarei: final report. Unpublished Clough & Associates report prepared in fulfilment of NZHPT authority no. 2007/170 for Todd Hamilton.
- Judge, C., D. Prince, R. Clough and S. Bickler. November 2010. Whangarei Heads Sewerage Scheme: Final Archaeological Monitoring Report in Fulfilment of NZHPT Authority No. 2007/278. Unpublished Clough & Associates report prepared for Whangarei District Council.
- Nevin, G. [c.1984]. Whangarei Harbour Study: Archaeology. A report for the New Zealand Historic Places Trust. Unpublished report.
- New Zealand Archaeological Association ArchSite Database, accessed at <http://www.archsite.org.nz>.
- New Zealand Heritage List, accessed at <http://www.historic.org.nz>.
- Osborne, N. 1983. Holocene Coastal Depositional Landforms; Bream Bay, Northland. Unpublished MA thesis, Department of Geography, University of Auckland.
- Phillips, C. 2006a. Damage assessment of midden site (Q07/571), 2567 Whangarei Heads Road, Urquharts Bay. Unpublished report.
- Phillips, C. 2006b. Discovery of koiwi at Urquharts Bay, Whangarei Heads. Unpublished report.
- Phillips, C., and B. Druskovich, 2009. Archaeological Investigation, Midden Q07/571, 2567 Whangarei Heads Road, Urquharts Bay: Historic Places Authority 2007/25. Unpublished report for NZ Historic Places Trust and G. Hamilton.
- Phillips, C. and D. Harlow. 2001. Investigation of Midden Sites at One Tree Point, Whangarei Harbour. Unpublished report.
- Pickmere, N.P. 1986. *Whangarei. The Founding Years 1820 -1880*. Whangarei: N.P. Pickmere
- Plowman, M., G. Farley, N. Hill, S. Bickler and R. Clough. 2006. One Tree Pt – Stage 1: Preliminary Report. Unpublished Clough & Associates report to the New Zealand Historic Places Trust and Dannemora Ltd.
- Prince, D. 2003. One Tree Point Road/Pyle Road West Development (Lot 1 DP 153407), One Tree Point, Whangarei District: proposed subdivision: archaeological survey and assessment of effects. Unpublished report to Wood and Partners.
- Prince, D. 2004a. Danne Mora One Tree Point Development (Lot 2 DP 332054, DP 106192, SO 26701 and DP 197696), One Tree Point, Whangarei District: proposed subdivision: archaeological survey and assessment of effects. Unpublished report to Wood and Partners.
- Prince, D. 2004b. Letter to Wood and Partners, 5/9/2004.
- Prince, D. 2009. Lots 1 and 2 DP 208297, 43 Austin Road, Maunu, Whangarei: report of archaeological investigation under NZHPT Authority 2008/239. Unpublished Time Depth Enterprises report prepared for Landnorth Ltd.
- Richards, J. 1984. *Ruakaka. A Brief History*. Ruakaka Parish Residents and Ratepayers Association.
- Rust, A.M. 1936. *Whangarei and District Early Reminiscences*. Reed.
- Tonkin & Taylor Ltd. December 2016. Crude Shipping Project - Coastal Processes Assessment. Report for ChanceryGreen on behalf of Refining NZ Ltd. Draft for Consultation.
- Turner, M., S. Bickler, R. Clough, S. Best and R. Wallace. 2010. Puwera Landfill Site, Portland, Whangarei. Final Report on Excavations at Sites Q07/1091, 1092 and 1103 in Fulfilment of NZHPT Authority Nos. 2004/50 & 2009/250. Prepared for Whangarei District Council. *Clough & Associates Monograph No. 8*.
- Vallance, D. 1964. *The Story of Whangarei*. Auckland: Whangarei Heads Centennial Committee.
- Williams, J., M. Cryer, J. McKenzie, M. Smith, T. Watson, G. Mackay, R. Tasker. 2006. Biomass survey and stock assessment of cockles (*Austrovenus stutchburyi*) on Snake bank, Whangarei Harbour, 2005. *New Zealand Fisheries Assessment Report 2006/21*.