

***PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
- NORTHERN INTERCEPTOR PROJECT:
NOTICES OF REQUIREMENT***

Report prepared for

Watercare Services Ltd

By

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EXECUTIVE SUMMARY

Summary

This report has been prepared for Watercare Services Ltd to assess the effects of the proposed Northern Interceptor Project on archaeological and historic heritage values. This report does not include an assessment of effects on Maori cultural values.

The assessment includes a review of relevant historic heritage databases including the New Zealand Archaeological Association (NZAA) ArchSite database, the Auckland Council Cultural Heritage Inventory (CHI), District Plan and Proposed Auckland Unitary Plan (PAUP) schedules and the New Zealand Heritage List. Previous archaeological reports relevant to the project area were consulted, as were early survey plans held at Land Information New Zealand (LINZ) and historic aerial photographs. Visual inspections of the proposed alignment were undertaken on 1 and 2 March 2016.

One heritage building is recorded within c.100m of the proposed NoR – NI (Waitakere). This is the Radio New Zealand Transmitter Building which is scheduled within the Auckland Council District Plan – Operative Waitakere Section 2003 (ID 1174) and as a Category A historic heritage place within the PAUP (Appendix 9: ID 56). The proposed works should have no effect on the recorded extent of this site.

There is considered to be some potential for previously unrecorded archaeological remains to be exposed as a result of the proposed works within Lowtherhurst Reserve. It is considered unlikely that previously unrecorded archaeological and/or historic heritage remains will be exposed elsewhere along the Waitakere Section of the proposed Northern Interceptor alignment as a result of the current proposed works.

Multiple archaeological and historic heritage sites have previously been recorded within c.100m of the full extent of the proposed NoR - NI (North Shore). These sites are clustered in close proximity to the proposed areas of works at North Wainoni Reserve (R10/1187, CHI 17736; R10/1188, CHI 17737), the North Shore Memorial Park (R10/1179, CHI 17728; R10/1180, CHI 17729) and Wharepapa Reserve at the end of Schnapper Rock Road (R10/814, CHI 1167; R10/815, CHI 1168). Of these, R10/815, R10/1179, R10/1180 and R10/1187 are scheduled as sites and places of value to mana whenua within the PAUP. Only one of these (R10/1180) is located in the immediate vicinity of the proposed alignment; as trenchless construction is envisaged in this location there is scope for avoidance.

The former Greenhithe School House is also located within c.100m of the proposed alignment within Collins Park. The site is scheduled within the Auckland Council District Plan – Operative North Shore Section 2002 (Map 17:5) and within the PAUP as a historic heritage place (Appendix 9: ID 842). The current proposed alignment should have no effects on the scheduled extent of this site.

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EXECUTIVE SUMMARY, CONTINUED

No other archaeological or historic heritage remains were located within c.100m of the proposed alignment within the remainder of the North Shore Section. However, there is considered to be potential that previously unrecorded archaeological remains may be exposed as a result of the proposed works within North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and the southern end of North Shore Golf Club as a result of the proposed works.

Recommendations

- The detailed development plans should take into account the locations of the recorded archaeological sites and ensure that they are avoided to the extent possible.
 - The effects of the proposal will depend on the methodology chosen to construct the interceptor around known archaeological sites. This should be kept in mind when finalising the design and construction methodology.
 - If any of the recorded sites cannot be avoided, an Authority must be applied for under Section 44(a) of the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) and granted by Heritage NZ prior to the start of any works that will affect them. *(Note that this is a legal requirement).*
 - Because it is possible that subsurface archaeological remains may be exposed during development (particularly at Lowtherhurst Reserve, North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club), an Authority should be applied for under Section 44(a) of the HNZPTA as a precaution prior to the start of earthworks. This would establish appropriate procedures for the management of any archaeological remains discovered, reducing the potential for delays during construction.
 - Earthworks at Lowtherhurst Reserve, Wainoni Park North, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club should be monitored by an archaeologist to establish whether any unrecorded subsurface archaeological remains are present.
 - An Accidental Discovery Protocol should apply to any areas not covered by the archaeological Authority.
 - In the event of koiwi tangata (human remains) being uncovered, work should cease immediately in the vicinity of the remains and mana whenua, Heritage NZ, the NZ Police and Council should be contacted so that appropriate arrangements can be made.
 - Since archaeological survey cannot always detect sites of traditional significance to Maori, such as wahi tapu, tangata whenua should be consulted regarding the possible existence of such sites along the length of the proposed alignment, and regarding the scheduled sites and places of value to mana whenua in the vicinity of the alignment.
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1. INTRODUCTION

Clough & Associates has been commissioned by Watercare Services Limited (Watercare) to assess the potential effects on archaeological values related to the construction, operation and maintenance of Watercare's proposed Northern Interceptor.

The Northern Interceptor comprises a new wastewater interceptor and associated infrastructure, from the existing storage tank located at The Concourse, Henderson to the Rosedale Wastewater Treatment Plant (WWTP). It will divert flows from three existing branch sewers (Swanson, Whenuapai and Massey) and connect flows originating from the North West Transformation Area (including Red Hills, Massey North, Kumeu, Riverhead, Huapai and Whenuapai). These flows will be transferred north to the Rosedale WWTP, rather than south to the Mangere WWTP.

Phase 1 of the Northern Interceptor was granted consent in January 2016. Phase 1 will transfer existing flows from the existing Hobsonville Pump Station to the Rosedale WWTP. The section of the Northern Interceptor between Hobsonville Road and the western abutment of the Greenhithe Bridge, is in the same corridor as a water infrastructure project, the North Harbour No. 2 Watermain. A notice of requirement for the works within the shared corridor, which include this portion of the Northern Interceptor, was lodged with the Council in June 2016.

This technical report provides specialist input for the Northern Interceptor Assessment of Effects on the Environment (AEE), prepared by MWH New Zealand Limited which supports the Notices of Requirement (NoR) for the remainder of the route (Project), these being NoR – NI (Waitakere) and NoR – NI (North Shore).

It also identifies any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA).

The works within NoR - NI (Waitakere) will transfer wastewater flows from the Concourse Storage Tank to Hobsonville Road, where it will connect with the shared corridor.

The works within NoR - NI (North Shore) will transfer wastewater flows from the edge of the future harbour crossing at the eastern abutment of the Greenhithe Bridge to the Rosedale WWTP.

Construction will be staged in response to the growth in the area.

Recommendations are made in accordance with statutory requirements.

2. PROJECT DESCRIPTION

The Project and a detailed construction methodology are described in detail in the AEE. In summary, the Project works included within NoR – NI (Waitakere) and NoR – NI (North Shore) will comprise of the following elements:

- A new Pump Station at the Concourse Storage Tank site which will divert flow north away from the Western Interceptor;
- A new Booster Pump Station at Wainoni Park to accommodate additional flows from the Northwest Transformation Area;
- A new Intermediate Pump Station at Wainoni Park North to accommodate further growth in the Northwest Transformation Area, and the diverted flows from the Concourse Storage Tank site (Swanson and Waitakere);
- Installation of a wastewater pipe from the Concourse Storage Tank to Hobsonville Road;
- Installation of a wastewater pipe from the eastern abutment of the Greenhithe Bridge, to the Rosedale WWTP;
- Duplication of the rising main section of wastewater pipe from the Intermediate Pump Station at Wainoni Park North to the Rosedale WWTP;
- Associated structures at connection points, including access shafts, drop shafts, flow control structures, etc.; and
- Installation of a pipe bridge at Manutewhau Reserve, West Harbour.

This report provides the following:

- A brief overview of the proposed works;
- A description of the methodology employed in preparing the report;
- An overview of the historic background of the project area;
- A description of the environmental baseline for the particular receiving environment(s) potentially affected by the project;
- Results of field assessment;
- An assessment of the actual or potential effects on the archaeological and historic heritage environment through the proposed construction, having reference to the statutory framework. This includes the identification of activities that could result in adverse effects and, in turn, identifying design refinements or construction methodologies that could avoid, remedy or mitigate such effects;
- Recommended mitigation and management measures and resultant post mitigation assessment of effects.

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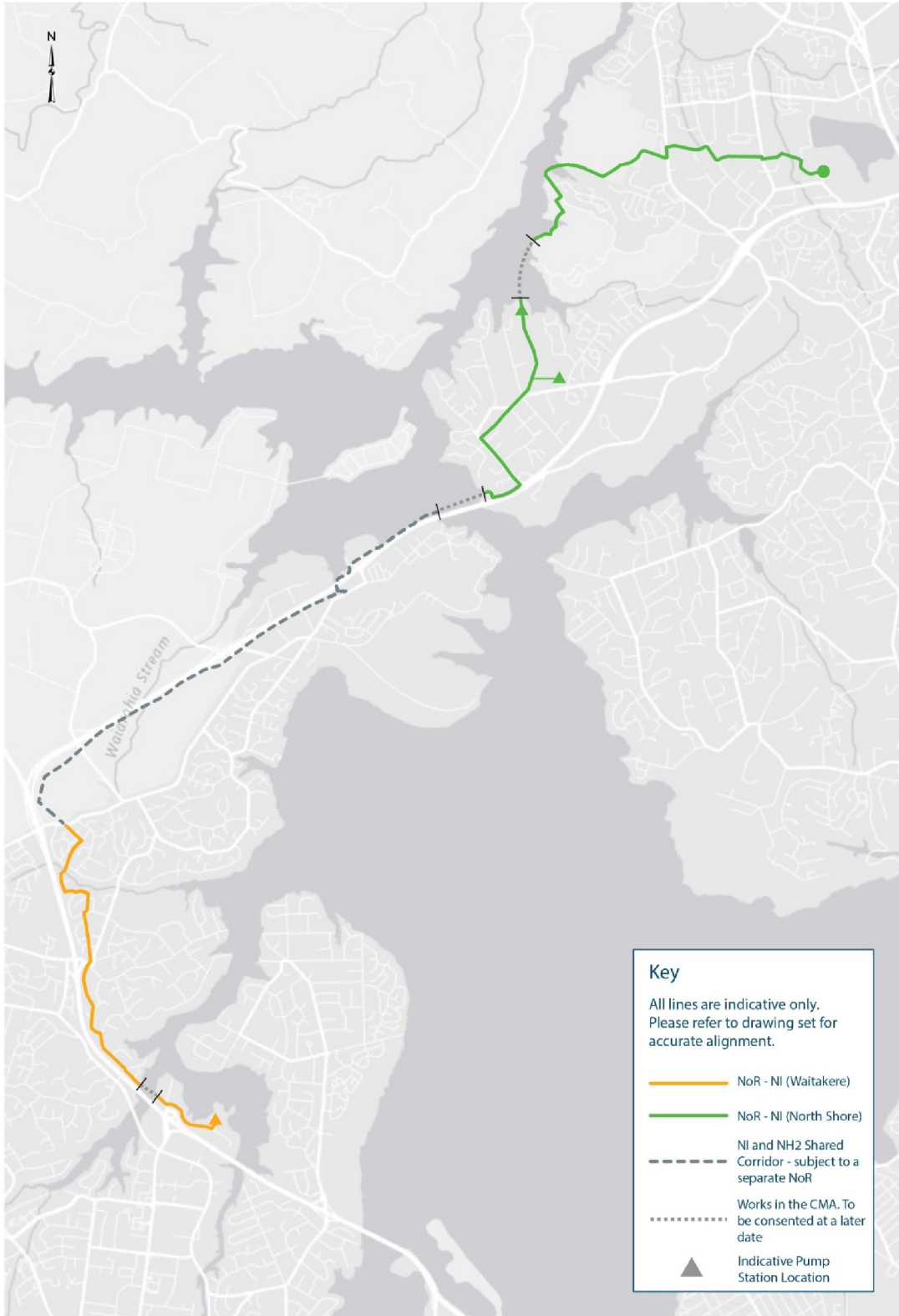


Figure 1. Northern Interceptor – Indicative Alignment

3. METHODOLOGY

The New Zealand Archaeological Association's ('NZAA') site record database (ArchSite), Auckland Council's Cultural Heritage Inventory ('CHI'), Auckland Council District Plans – Operative North Shore Section 2002 and Operative Waitakere Section 2003 – and Proposed Auckland Unitary Plan ('PAUP') schedules and the Heritage New Zealand ('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 designation boundary. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early plans held at Land Information New Zealand (LINZ) and historic aerials were checked for information relating to past land use within the project area.

Visual inspections of the proposed alignment were conducted on 1 and 2 March 2016. Lorena Cardenas, representing the Ngati Manuhiri Charitable Trust, was present during the survey of the North Shore Memorial Park and Wharepapa Reserve sections of the alignment. The ground surface was examined for evidence of former occupation (in the form of shell midden, depressions, terracing or other unusual formations within the landscape, or indications of 19th century European settlement remains). Exposed and disturbed soils were examined where encountered for evidence of earlier modification, and an understanding of the local stratigraphy. Subsurface testing with a probe and spade was carried out where possible to determine whether buried archaeological deposits could be identified or establish the nature of possible archaeological features. Particular attention was paid to the spur crests and creek banks (topographical features where archaeological sites are often found to be located). Sites were photographed and GPS readings taken. Field sketches were made as required and site record forms written or updated.

The assessment of effects on archaeological values took into account the potential for effects on any archaeological remains of pre-1900 date and any significant post-1900 archaeological remains up to the mid-20th century.

4. HISTORICAL BACKGROUND

4.1 Pre-European Settlement

Tamaki-makau-rau was a very favourable area for settlement by Maori from the earliest times, with its rich and easily accessible marine resources and its extensive volcanic fields which provided excellent agricultural soils. The distribution of archaeological sites of pre-European date on the Isthmus reflects the general pattern of settlement: shell midden and settlement sites around the coast and along the waterways leading inland; garden areas around the volcanic cones and other inland areas; and defensive settlement on higher points and particularly concentrated on the volcanic cones themselves. These catchments combined access to marine resources, agricultural soils, fresh water and communication routes via harbours, waterways and overland.

The Greenhithe area, Te Atatu, West Harbour and other locations along the creeks and inlets of the inner reaches of the Waitemata Harbour, were occupied by Maori for generations before the arrival of Europeans, evidence of which survives in the form of recorded place names, oral traditions and archaeological sites (although many have been destroyed by 19th and 20th century development and natural processes).

4.2 Early European Settlement

4.2.1 Waitakere Section

European settlement from 1840 onwards spread rapidly outwards from what is now Auckland's CBD, and initially had the same focus on the coastline and the rivers, which were an essential part of the colonisation of the Isthmus. In West Auckland a number of industries sprang up along the rivers, which provided the necessary water supply as well as a means of transportation in the days before road and rail systems had been developed. The large stands of kauri forest were the first to attract European interest and initial settlements built up around the lucrative timber milling industry.

Among the earliest timber milling operators in West Auckland was William Swanson, working the forest around Swanson Stream which fed into the Huruhuru Creek. By 1852 Thomas Henderson and William Swanson had erected driving dams on Henderson Creek and Swanson/Huruhuru Stream respectively to assist the transportation of logs to the mills (Diamond 1966:43, 107; Tatton & Clough 2005a, b and 2006).

Henderson and his partner McFarlane were major landowners in the area. In 1855 they were granted a large block of land (Lot 6, Parish of Waipareira) extending between Swanson Stream/Huruhuru Creek and Henderson Creek (shown on LINZ plan SO844E, dated 1859).

Once the forests had been felled, gum digging, horticulture, viticulture, farming and a ceramics industry provided ongoing commercial viability for the area (Clough & Turner 2000:5; Tatton & Clough 2006).

HISTORICAL BACKGROUND, CONTINUED

In 1956, the construction of the northwestern motorway brought the western areas much closer to the central city, resulting in a boom of residential construction and development.

4.2.3 North Shore Section¹

The Greenhithe and Albany areas, of which the study area is a part, were first acquired from Maori for early European settlement through Crown purchases during the mid-1840s. From 1853 the land was further divided through Crown Grants under the provisions of the Waste Lands Act 1853 (King 1984).

The settlement at Greenhithe was initially very sparse due to its isolation and lack of access via roadways. The first known permanent settler was George Deane, who purchased 69 acres in 1858, and a few other settlers acquired land after this. In 1865 Mary Forgham purchased land from the Revd Thomas Hamer, and the land was named ‘Fern Bank’, which was the first European name given to the area (Dunmore 2001). A later landowner, Henry James Blyth, named the land Greenhithe after a small village on the banks of the river Thames in England. This became the official name of the area as accepted by the Post Office in 1884. However, the whole peninsula was still known by two names – Lucas Creek and Greenhithe are listed on the 1891 census (Dunmore 2001).

From its establishment in 1840, Auckland provided a growing demand for timber which was easily extracted from the bush adjacent to the harbour and transported down the estuaries within both the Greenhithe and Albany areas. The accessibility of the general area via the estuary is reflected in its European history and archaeology, with Lucas Creek becoming the centre of one of the very early timber industries in Auckland, as it was one of the early sources exploited for kauri. Both the Okahukura and Okura waterways were the scene of considerable industry, with barges plying their waters throughout the latter part of the 19th century (Rickard 1984).

It is generally remarked that the timber industry greatly increased the environmental degradation of the area (King 1984; Scriven 1981). The gum diggers also moved in directly after the first wave of government land purchases and established small camps across Greenhithe and Albany. Two main camps are recorded: (1) Cut Hill situated at the head of Hellyers Creek just inside the northeast border of Greenhithe; and (2) Schnappers Rock Camp. Gum extraction required deep diggings to get easy access to the gum, with burn-offs further contributing to the degradation of forests and soils.

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¹ Adapted from Clough 1995; Shakles et al. 2011 and Judge 2014.

HISTORICAL BACKGROUND, CONTINUED

After the ephemeral industries of gum and timber extraction more permanent settlers moved into the area. The early farmers remained bound to the estuaries, dependent on them for transport and supplies, and encountered very poor quality leached soils, resulting in many abandoning their land in disgust. Some horticulture was established, but purely at the subsistence level until the late 19th century, when commercial fruit growing was established. Henry James Blyth was shipping apples, peaches, plums, pears and lemons to the Auckland market by 1887 (Dunmore 2001).

The population of Greenhithe stood at around 40 at the turn of the century. By 1906 development was taking place over much of Greenhithe due to years of scrub and bush clearance, along with the construction of new roads allowing subdivisions to be developed. This led to higher settlement numbers over the ensuing early 20th century, with the population reaching 134 by 1926 (Dunmore 2001).

By the 1950s, with the ongoing development of roading, patronage of the Greenhithe wharf had fallen off considerably and the structure began to fall into disrepair. In 1958 the Auckland Harbour Board resolved to demolish the wharf, finally undertaking the demolition in 1960 (King 1984).

The Greenhithe (Upper Harbour) Bridge connecting Hobsonville and Greenhithe was constructed in the 1970s. In 2006 a duplicate bridge was constructed abutting the original bridge on its northern side to allow for increased traffic demands (Fletcher Construction Company Ltd 2015).

4.4 Information from Early Plans/Aerials

4.4.1 Waitakere Section

An aerial photograph dating to 1940 shows the southern end of the Waitakere project area (there is no coverage over the northern end) as being in farm and orchard blocks (Figure 2). By 1959, pockets of the project area have been developed and earthworks for the construction of the northwestern motorway are evident (Figure 3). An aerial photograph taken in 1996 shows extensive areas of residential development as well as industrial development around The Concourse and Selwood Road (Figure 4).

4.4.2 North Shore Section

An undated survey plan probably dating to the late 1800s (OLC 110) shows the Greenhithe area as being subdivided into large farm blocks (Figure 5). A further plan dating to 1882 shows the area north of Te Wharau Stream, also subdivided into large farm blocks on the shores of Lucas Creek (Figure 6). The plan shows that all the flat land had been cleared by this stage, and the only remaining bush cover is shown along the creek banks and within stream gullies.

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HISTORICAL BACKGROUND, CONTINUED

A survey plan (DP 4875) undertaken in 1909 for Misters Widdison and Churchouse, of the area now known as Wainoni Park, shows the existence of what appears to be a farmhouse and outbuildings as well as a garden, orchard and fowl run (Figure 7). Comparison of this plan with the 1963 aerial shows that the farmhouse still remained on site at that time. The aerial also shows extensive evidence of ploughing over the site (Figure 8).

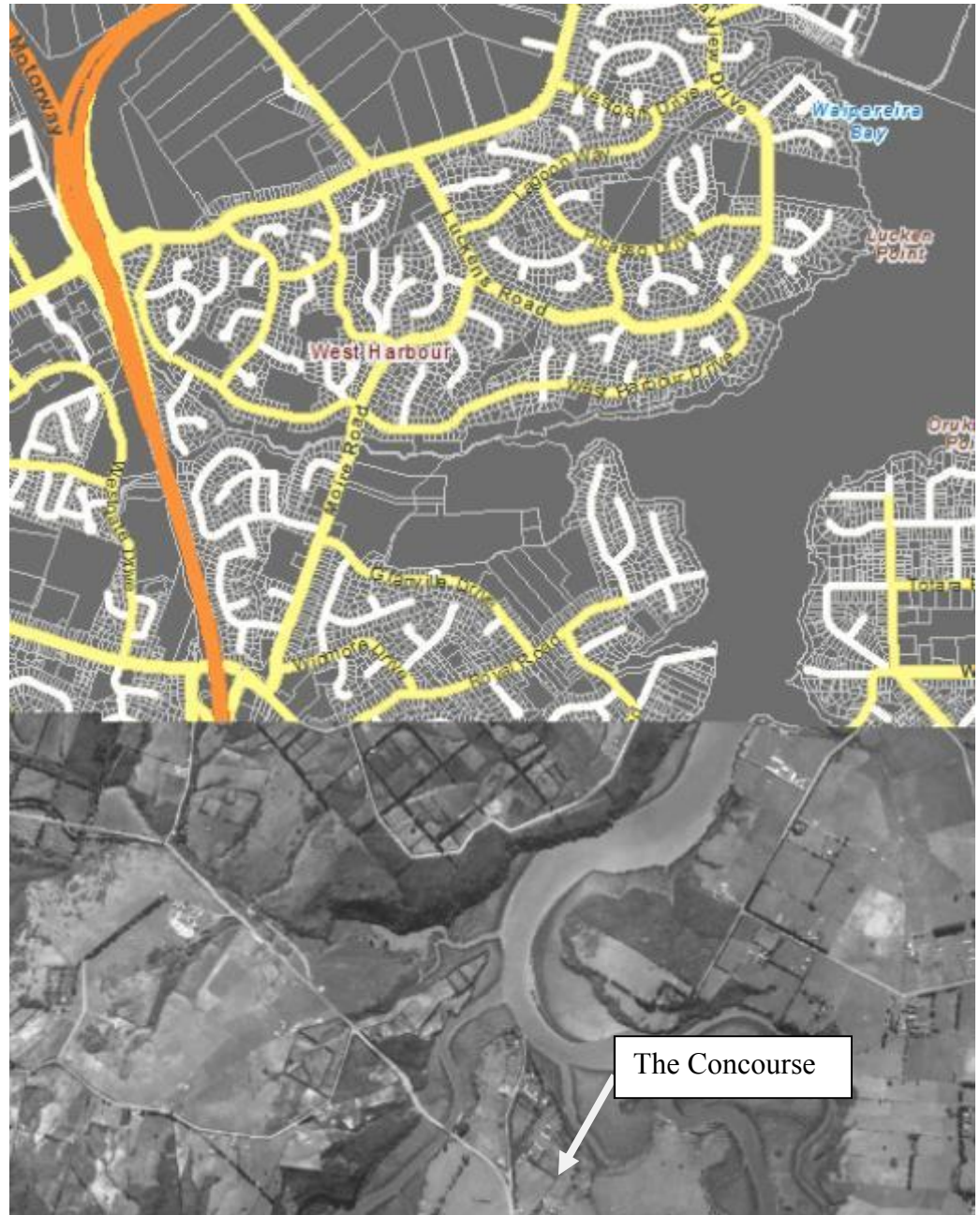
An aerial photograph dating to 1959 shows the extensive earthworks being undertaken at Rosedale for the establishment of the wastewater treatment plant. Much of the remainder of the area remains in large farm/orchard blocks, although residential areas are evident focused around the shores of the Upper Harbour and Lucas Creek (Figure 9).

A later aerial dating to 1963 shows the expanse of farm and orchard blocks (Figure 10). The aerial also shows the preliminary earthworks being undertaken for the establishment of the North Shore Golf Club (Figure 11). By 1996, the area has been heavily developed. Extensive areas of earthworks are shown within the present day industrial/commercial area to the east of Albany Highway and within Rosedale Park (Figure 12).

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HISTORICAL BACKGROUND, CONTINUED

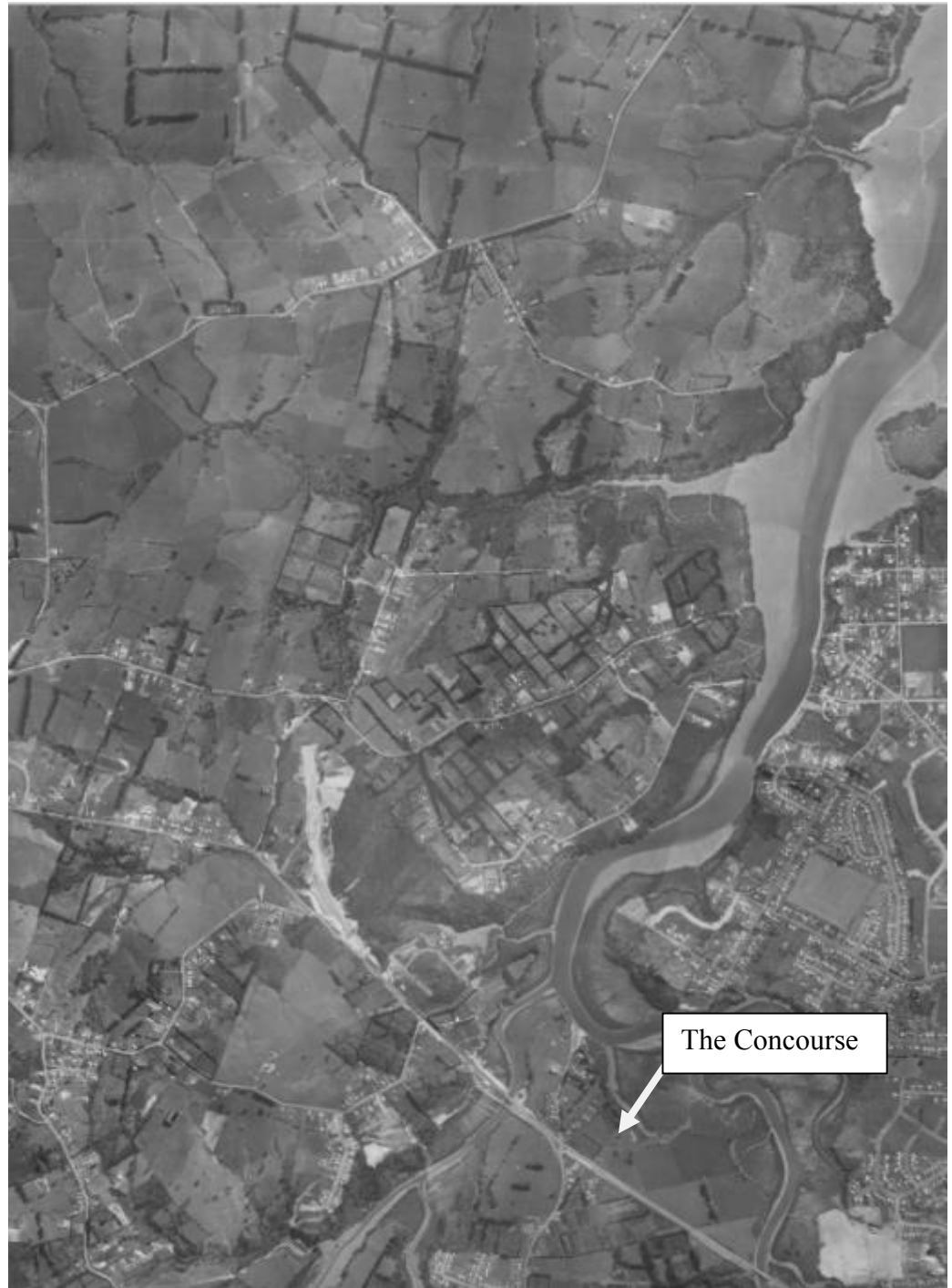
Figure 2. 1940 aerial of the Waitakere section of proposed works. Aerial source: Auckland Council GIS 2016



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HISTORICAL BACKGROUND, CONTINUED

**Figure 3. 1959
aerial
photograph
showing the
Waitakere
Section of
proposed works.
Aerial source:
Auckland
Council GIS 2016**



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HISTORICAL BACKGROUND, CONTINUED

Figure 4. 1996 aerial photograph showing the Waitakere Section of proposed works. Aerial source: Auckland Council GIS 2016



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HISTORICAL BACKGROUND, CONTINUED



Figure 5. OLC 110 (n.d.) showing Greenhithe at southern part of project area. Source: Quickmaps 2014

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HISTORICAL BACKGROUND, CONTINUED

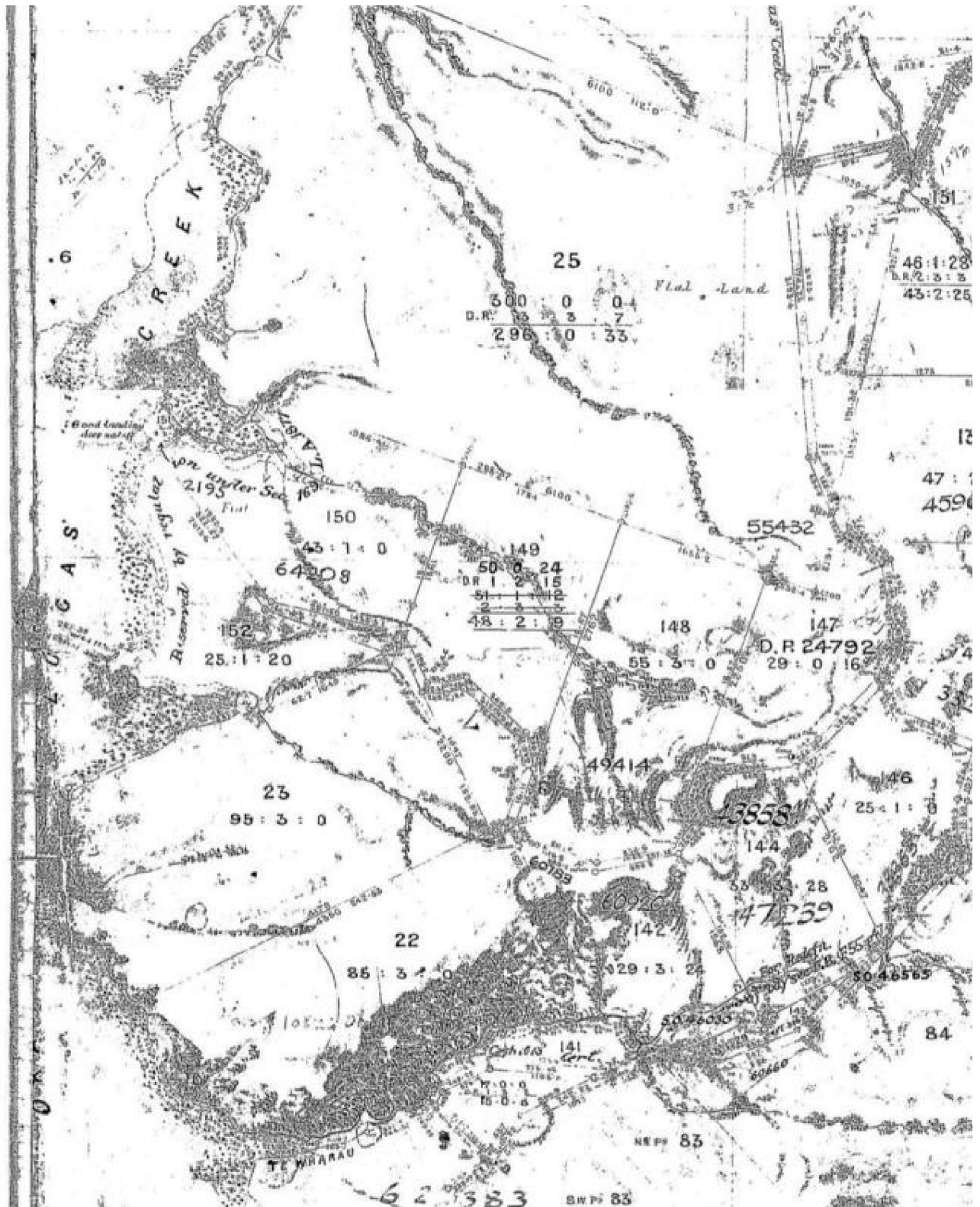
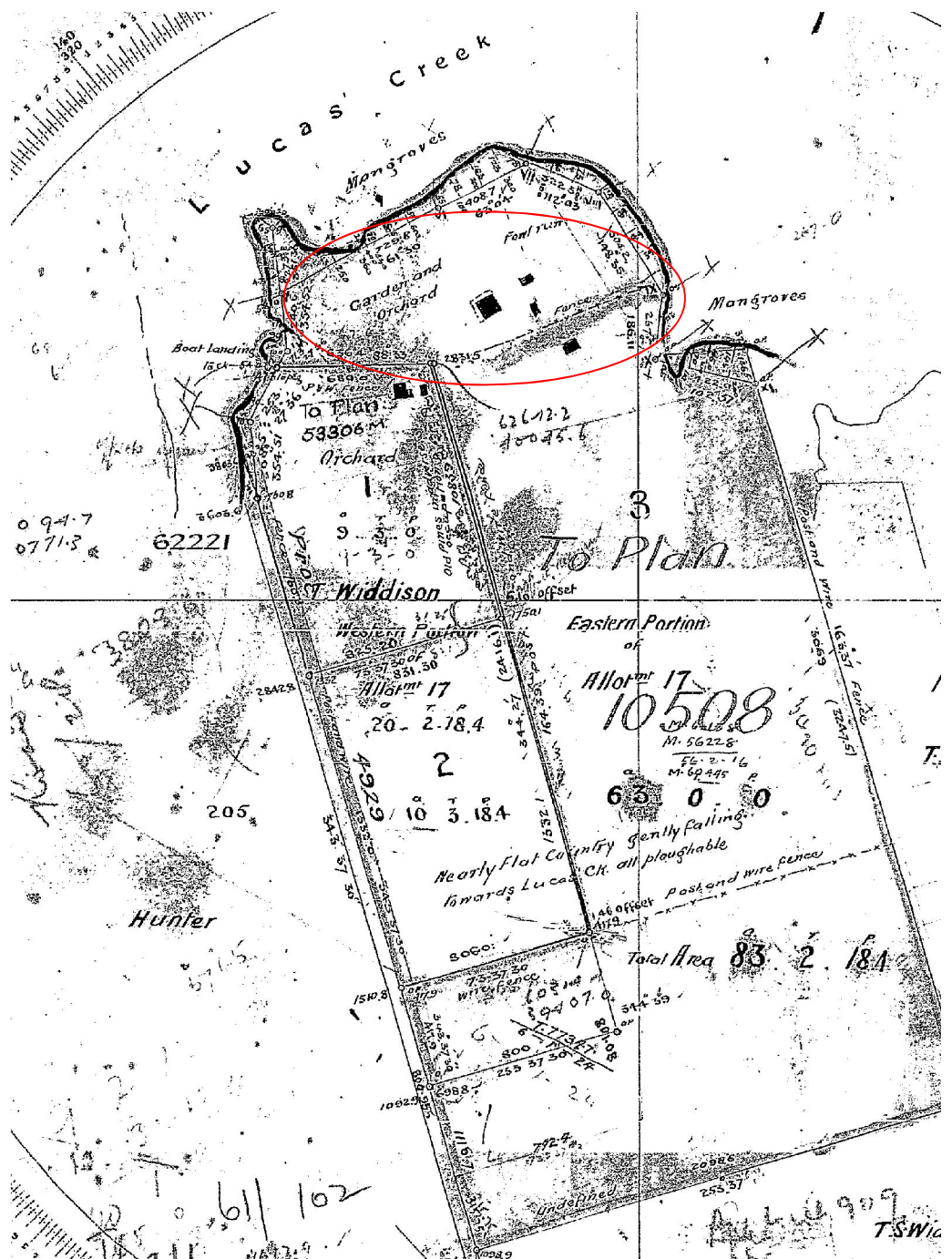


Figure 6. Detail of SO2474 (1882) showing the northern part of the project area with Te Wharau Stream near bottom, North Shore Memorial Park (Lot 23 & 152) and North Shore Golf Club (western part of Lot 25).
 Source: Quickmaps 2014

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HISTORICAL BACKGROUND, CONTINUED

Figure 7. Detail of Plan DP 4875 (1909) showing buildings, gardens and fowl run at northern end of Wainoni Park (circled). Source: LINZ 2014



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HISTORICAL BACKGROUND, CONTINUED



Figure 8. 1963 aerial showing old farm house (marked with arrow) within what is now Wainoni Park; the area around all shows signs of extensive ploughing. Aerial source: Google Earth 2014

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HISTORICAL BACKGROUND, CONTINUED



Figure 9. Showing partial coverage of 1959 aerial photographs. Note the beginning of earthworks for the Rosedale Treatment Plant in the upper right-hand corner (marked with arrow). Hobsonville airbase is shown on the lower left hand corner. Source: Auckland Council GIS 2014



Figure 10. 1963 aerial showing Greenhithe, Albany and Rosedale areas. Note that much of the land remains in open farmland/orchard blocks. Source: Google Earth 2014

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HISTORICAL BACKGROUND, CONTINUED



Figure 11. 1963 aerial showing earthworks being undertaken for the formation of North Shore Golf Club. Aerial source: Google 2014



Figure 12. 1996 aerial of the project area within Albany and Rosedale, showing extensive earthworks being undertaken along the eastern side of Albany Highway (shown in black) and within Rosedale Park (towards the upper right-hand corner). Source: Auckland Council GIS 2014

5. DESCRIPTION OF RECEIVING ENVIRONMENT

5.1 Notice of Requirement Northern Interceptor (Waitakere)

5.1.2 The Concourse to Selwood Drive

The section of the project area that runs from The Concourse Pump Station to Selwood Road, Henderson, is located within c.200m of the river banks at the confluence of Huruhuru Creek and Henderson Creek. The concept design indicates that, at this location, the pipeline is likely to be installed by trenched technologies from The Concourse Pump Station, along Concourse Road to Selwood Road.

This area was utilised for farming through until the late 20th century; however, it has been substantially modified during the late 20th century through industrial development and roading as evident on an aerial photograph taken in 1996 (Figure 4).

Previous archaeological survey within this area includes an assessment of the Western Ring Route SH16 from Henderson Creek to Huruhuru Creek (Ussher and Clough 2010).

The majority of recorded archaeological remains in the area are located on the coastal edge, away from the proposed designation corridor. The sites comprise shell midden deposits associated with pre-European Maori occupation as well as brickworks and a wharf associated with early European settlement (Figure 13). No archaeological or other historic heritage sites are recorded within c.100m of The Concourse to Selwood Drive section of the proposed designation corridor.



Figure 13. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.1.2 Selwood Drive to Huruhuru Road

The Selwood Drive to Huruhuru Road section of the proposed designation corridor runs from Selwood Drive, crosses Huruhuru Creek to the east of the existing motorway bridge, and then runs through Taitapu Park and along Kopi Place to Huruhuru Road. The concept design indicates that, at this location, the pipeline is likely to be installed by trenched technologies with a crossing over the Huruhuru Creek.

This area was utilised for farming prior to the mid-20th century when it began to be opened up for residential development (Figure 3; DP 47652; DP 68950)

Previous archaeological survey within this area includes an assessment of the Western Ring Route SH16 from Henderson Creek to Huruhuru Creek (Ussher and Clough 2010).

As with the previous section, the majority of recorded archaeological remains in the area are located on the river banks to the north and east of the proposed area of works. The sites comprise shell midden deposits associated with pre-European Maori occupation as well as a historic brickworks located at the end of Selwood Road (Figure 14).

The Auckland Council CHI records one historic industrial building (CHI 3335) c.100m north of the proposed designation corridor (Figure 14; Table 1). The building comprises the Radio New Zealand Transmitter Building. The building is scheduled within the Auckland Council District Plan – Operative Waitakere Section 2003 and as a Category A historic heritage place within the PAUP (Appendix 9: 56). The scheduled extent of place of which is shown on Figure 15. There are currently no other archaeological or other historic heritage remains recorded within c.100m of the proposed designation corridor.

Table 1. Historic heritage sites located within c.100m of the proposed Selwood Drive to Huruhuru Road section of designation corridor. Source: Auckland Council CHI 2016

CHI No.	NZAA No.	Site Type	Name	Location	District/Regional Plan Name	NZTM Easting	NZTM Northing
3335	N/A	Building - Industrial	Radio New Zealand - Transmitter Building BCNZ transmitter building	2 - 12 Selwood Road, Massey	Waitakere City Council District Plan Operative 2003; PAUP Category A Historic Heritage Place ID 56	1745441	5921041

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

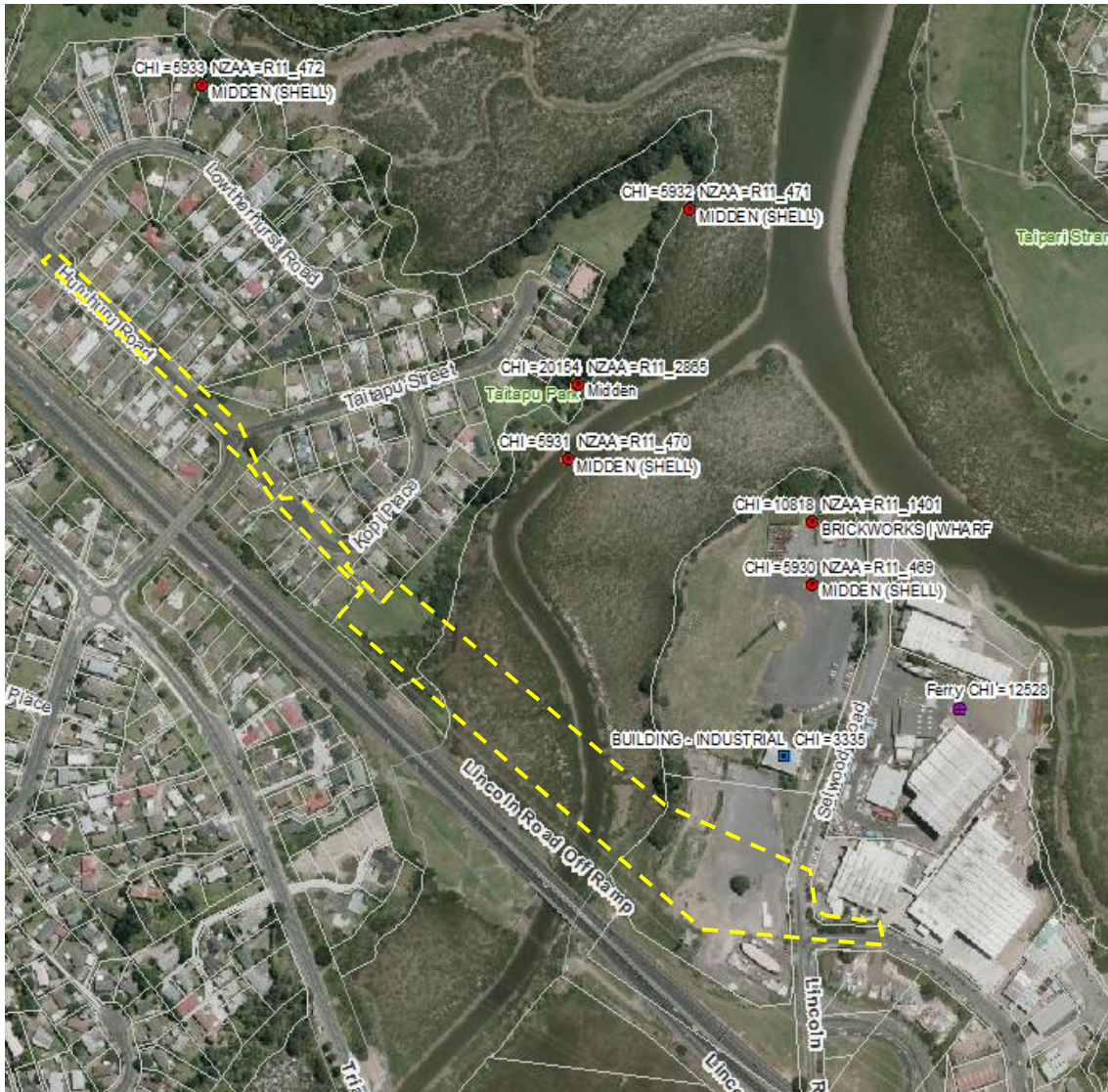


Figure 14. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Figure 15. Aerial showing historic heritage extent of place for CHI 3336 (PAUP Appendix 9: 56). Source: PAUP GIS 2016



5.1.3 Huruuru Road to Cedar Heights Avenue

The section of the proposed designation corridor from Huruuru Road to Cedar Heights Avenue runs mainly along existing road alignments, with a small section of the corridor running through Lowtherhurst Reserve. The concept design indicates that, at this location, the majority of the pipeline is likely to be installed by trenched technologies with trenchless construction at the northern end of Cedar Heights Avenue. This section of the designation corridor begins to progress away from the river/creek banks, hence the relative dearth of recorded archaeological sites.

The closest recorded archaeological site is located 150m+ to the east of the proposed designation corridor along Huruuru Road (Figure 16). The site comprises a shell midden deposit (R11/472; CHI 5933) located on the banks of the creek. The NZAA site record for R11/1472 notes that scattered patches of shell were observed over an extensive area of c.40m x 10m at the head of the small inlet adjacent to a waterfall at Lowtherhurst Reserve in 1977.

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED



Figure 16. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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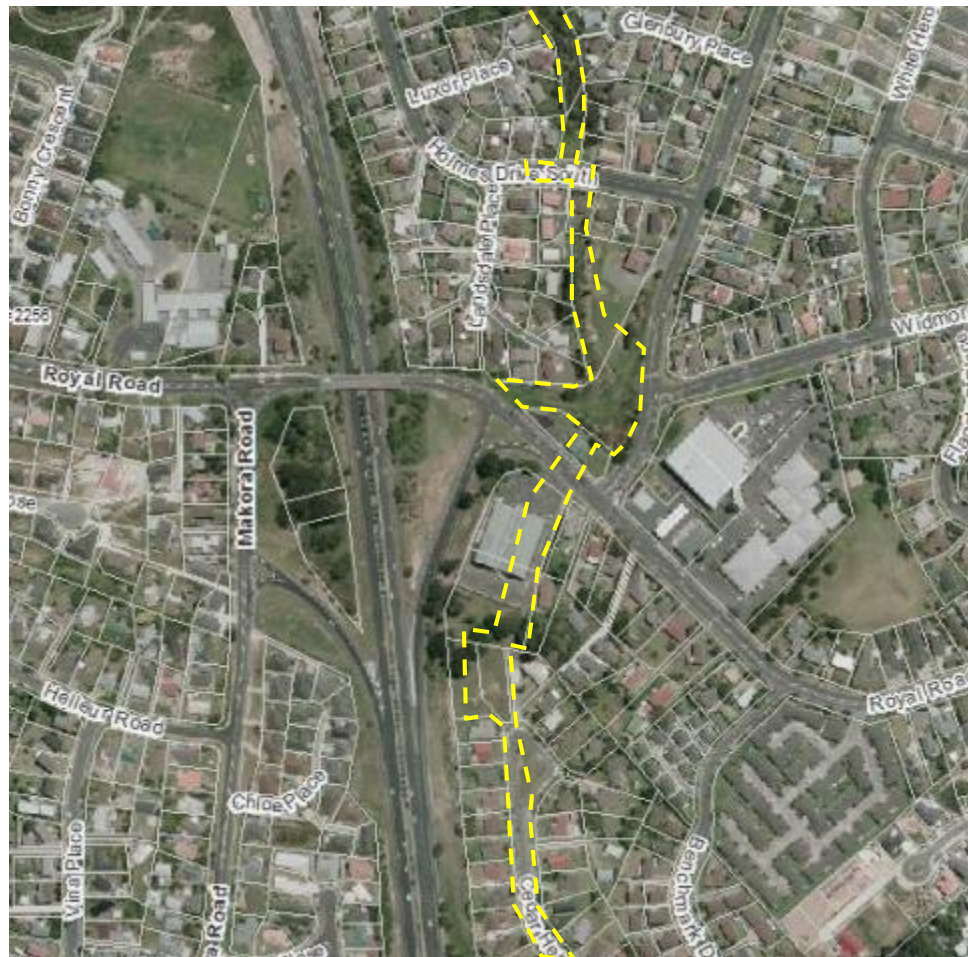
DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.1.4 Cedar Heights Avenue to Holmes Reserve

This section of the proposed designation corridor from Cedar Heights Avenue to Holmes Reserve runs along formed and sealed roading at the southern end then through Holmes Reserve – a small residential reserve surrounding a minor waterway. The concept design indicates that, at this location, the pipeline is likely to be installed by trenchless technologies.

There are currently no archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor from Cedar Heights Avenue to Holmes Reserve (Figure 17).

Figure 17.
Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow).
Aerial source: Auckland Council GIS 2016



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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.1.5 Holmes Reserve to Holmes Drive

The section of the proposed designation corridor from Holmes Reserve to Holmes Drive progresses mainly along formed and sealed roadways within an intensively developed residential area. The alignment does, however, cross over a branch of the Manutewhau Stream at Holmes Drive.

Previous archaeological survey within the general area includes an assessment undertaken of the former McWhirter farm block located on the western side of the north-western motorway, within c.200m of the current proposed designation corridor (Campbell & Clough 2003). No archaeological sites were identified within the property.

There are currently no archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor from Holmes Reserve to Holmes Drive (Figure 18).

Figure 18. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016



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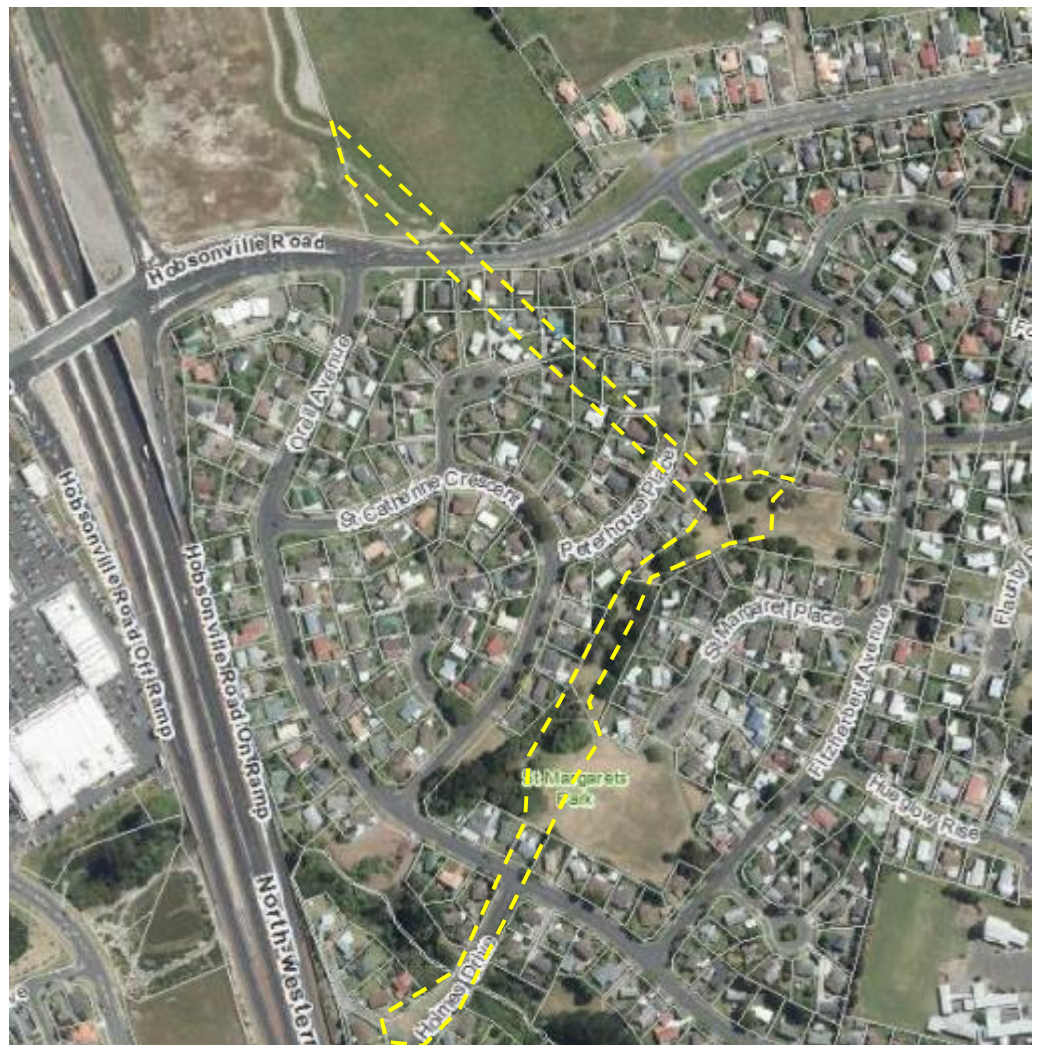
DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.1.6 Holmes Drive to Hobsonville Road

This section of the proposed designation corridor runs from Holmes Drive to Hobsonville Road, predominantly along existing formed and sealed roadways or beneath existing residential housing, as well as crossing through the western edge of St Margarets Park.

There are currently no archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor from Holmes Drive to Hobsonville Road (Figure 19).

Figure 19. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016



Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2 Notice of Requirement Northern Interceptor (North Shore)

5.2.1 The Knoll to Collins Park

The section of the proposed designation corridor from The Knoll to Collins Park runs primarily along existing formed and sealed roads to Collins Park at the northern end.

Archaeological assessments previously undertaken within the general area include: an extensive coastal survey of the Lucas Creek area undertaken by Auckland Regional Council (Brassey 2010) and an archaeological survey of the Plum Orchard Estate subdivision on the corner of Rame Road and Greenhithe Road (Bioresarches 1994).

There are currently no archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor from The Knoll to Collins Park (Figure 20).

Figure 20. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016



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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.2 Collins Park to Wainoni Park

The Collins Park to Wainoni Park section of the proposed designation corridor runs through the southern edge of Collins Park – an existing residential active recreation reserve, and along Greenhithe Road, a formed and sealed main road through residential Greenhithe.

Auckland Council CHI site 12928 is located within c.100m north of the proposed designation corridor through Collins Park. The site comprises the former Greenhithe School building. The site is scheduled within the Auckland Council District Plan – Operative North Shore Section 2002 and within the PAUP as a Category B Significant Historic Heritage Place (Appendix 9: 842). The identified extent of the historic heritage place within the PAUP is illustrated on Figure 22.

There are currently no other archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor from Collins Park to Wainoni Park (Figure 21).



Figure 21. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Table 2. Historic heritage sites recorded within c.100m of the proposed designation corridor from Collins Park to South Wainoni Park. Source: Auckland Council CHI 2016

CHI No.	NZAA No.	Site Type	Name	Location	District/Regional Plan Name	NZTM Easting	NZTM Northing
12928	N/A	Building - Educational	Old Greenhithe School Building	Collins Park, Greenhithe Road, Greenhithe	Auckland Council District Plan - Operative North Shore Section 2002; PAUP Category B historic heritage place Appendix 9:842	1749173	5928771



Figure 22. Aerial showing the scheduled site extent of CHI site 12928 (purple hatching). Aerial source: Auckland Council PAUP GIS 2016

Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.3 South Wainoni Park

The proposed designation corridor runs northwards through the western side of South Wainoni Park, where a new pump station is proposed. A historic aerial photograph dating to 1959 shows South Wainoni Park as being in farm/orchard land with multiple shelter belts and open areas of pasture. The area does not appear to have been substantially modified since this time.

Previous archaeological assessments within the general area include an assessment of the CDL Land subdivision on the eastern side of Wainoni Park (Mosen 1995). More recently, and of particular significance to the current project, was an assessment of the Northern Interceptor Phase 1 undertaken by Clough & Associates which also ran through Wainoni Park (Judge & Clough 2015). No archaeological sites were identified within South Wainoni Park.

There are currently no archaeological or other historic heritage sites recorded within c.100m of the proposed designation corridor through South Wainoni Park (Figure 23).

Figure 23. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation boundaries (shown in yellow). Aerial source: Auckland Council GIS 2016



Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.4 North Wainoni Park to North Shore Memorial Park

This section of the proposed designation corridor runs north from South Wainoni Park through the central section of North Wainoni Park, crossing beneath Te Wharau Creek to the North Shore Memorial Park.

Historic survey plans previously discussed showed a farmhouse, outbuilding, gardens, orchard and a fowl run at north Wainoni Park in 1909 (DP 4875; Figure 7). Comparison of this plan with the 1963 aerial shows that the farmhouse still remained on site at that time. The aerial also shows extensive evidence of ploughing over the site (Figure 8).

Identified archaeological sites within Wainoni Park are focused around the northern edge that is bounded by Te Wharau Creek. The sites comprise shell midden deposits related to pre-European Maori settlement of the Creek, located around the coastal edge. The current proposed areas of works within North Wainoni Park (including the pump station site) are located within c.100m of archaeological sites R10/1187 (CHI 17736) and R10/1188 (CHI 17737) (Figure 24, Figure 25, Table 3). Site R10/1187 is recognised as being a Site and Place of Value to Mana Whenua within the PAUP (Appendix 4: 3217) (Figure 27).

Sites R10/1187 (CHI 17736) and R10/1188 (CHI 17737) were recently assessed as part of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015). That information is provided here.

R10/1187 (CHI 17736) comprises patches of shell midden evident eroding and slumping from the foreshore bank onto the mudflats over a distance of c.30m. Sections of the midden remain relatively intact, but they do not appear to extend into the bank for more than 0.5m. The midden comprises predominantly cockle, with charcoal and bunt stone also identified.

R10/1188 (CHI 17737) comprises a very small patch of shell midden (less than 1m²) which is visible beneath a mature Norfolk Pine tree. Only cockle was identified. Visual survey and probing did not identify any further remains.

Also noted around the foreshore area were four discrete patches of mixed historic and modern rubbish. Bottles, including black beers, string rim wines, whirly salad oils, case gin and schnapps bottles were present in abundance, as were fragments of ceramic tableware, some with the blue underglaze print of 'Asiatic Pheasant' identified. All of these items date to the latter half of the 19th century and through to the early 20th century. Modern items were also mixed through the debris including coca cola bottles, machine made screw top jars and plastic bottles. Although many of these items could possibly relate to the occupation of the site during the 19th century by the Churchouse family, it is not clear when they were deposited.

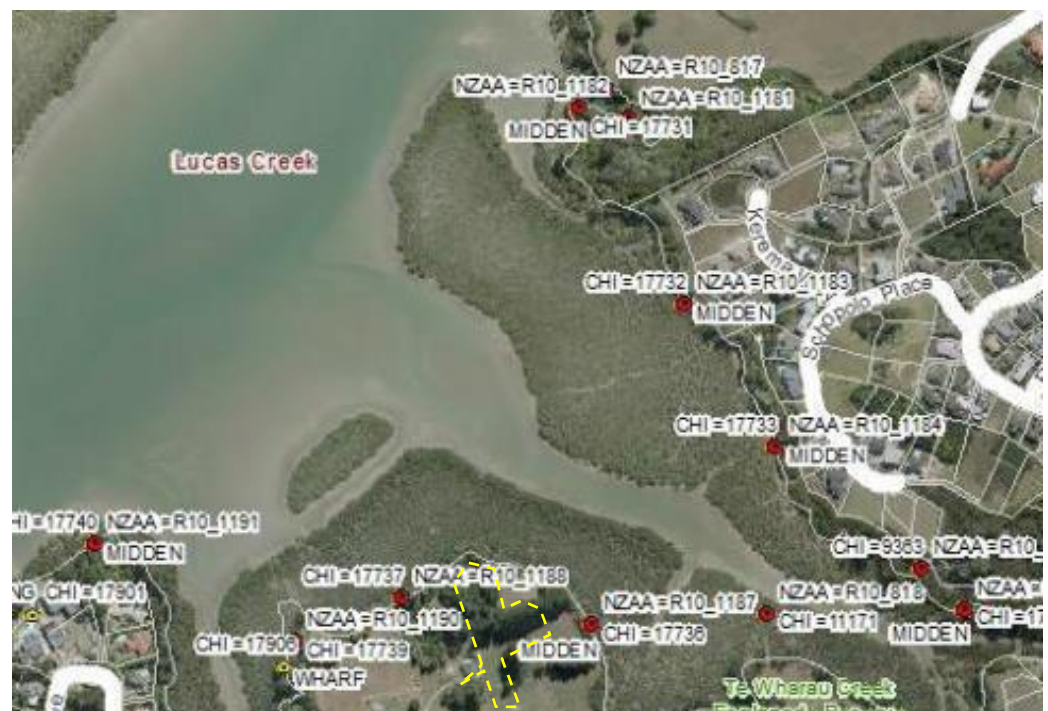
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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Communications with Rachel Ford of Auckland Council determined that at the time of the last survey of the area (Robinson & Ford 2008 in: Brassey 2010), no historic rubbish was identified. This, together with the mixture of modern rubbish suggests that the material has been dumped here more recently and is therefore not historically 'in situ'.

The northern end of this section of the alignment passes within c.100m of shell midden sites R10/817 (CHI 11170), R10/1181 (CHI 17730) and R10/1182 (CHI 11731) (Figure 24, Figure 26, Table 3). These sites are scheduled as sites and places of value to mana whenua within the PAUP (ID 1978, 3211, 3212) (Figure 28).

Figure 24. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016



Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Table 3. Archaeological sites recorded within c.100m of the proposed designation corridor from North Wainoni Park to North Shore Memorial Park

CHI No.	NZAA No.	Site Type	District/Regional Plan Name	NZTM Easting	NZTM Northing
11170	R10/817	Midden	PAUP site and place of value to mana whenua Appendix 4: 1978	1749645	5930486
17730	R10/1181	Midden	PAUP site and place of value to mana whenua Appendix 4: 3211	1749655	5930567
17731	R10/1182	Midden	PAUP site and place of value to mana whenua Appendix 4: 3212	1749605	5930578
17736	R10/1187	Midden	PAUP site and place of value to mana whenua Appendix 4: 3217	1749618	5930049
17737	R10/1188	Midden	N/A	1749423	5930077

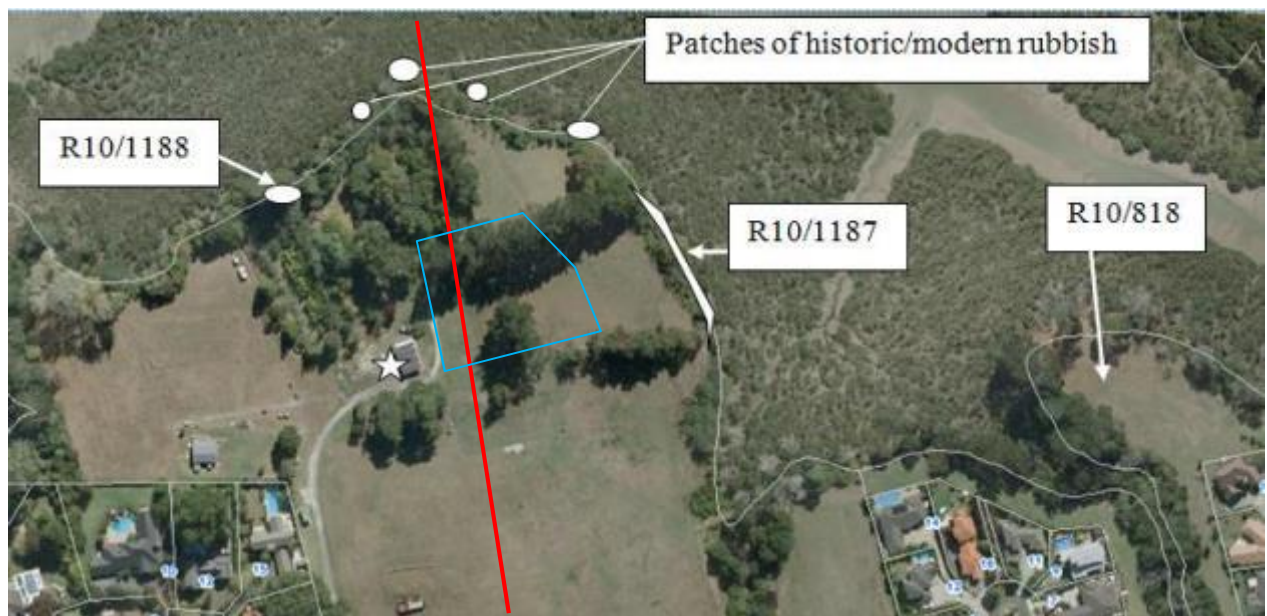


Figure 25. Aerial showing the proposed alignment (red) and proposed pump station site (outlined in blue) in relation to previously recorded archaeological and historic heritage remains at North Wainoni Park. The location of the original farmhouse is marked with a star

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED



Figure 26. Aerial showing the proposed alignment (red) in relation to previously recorded archaeological remains at the southern end of North Shore Memorial Park

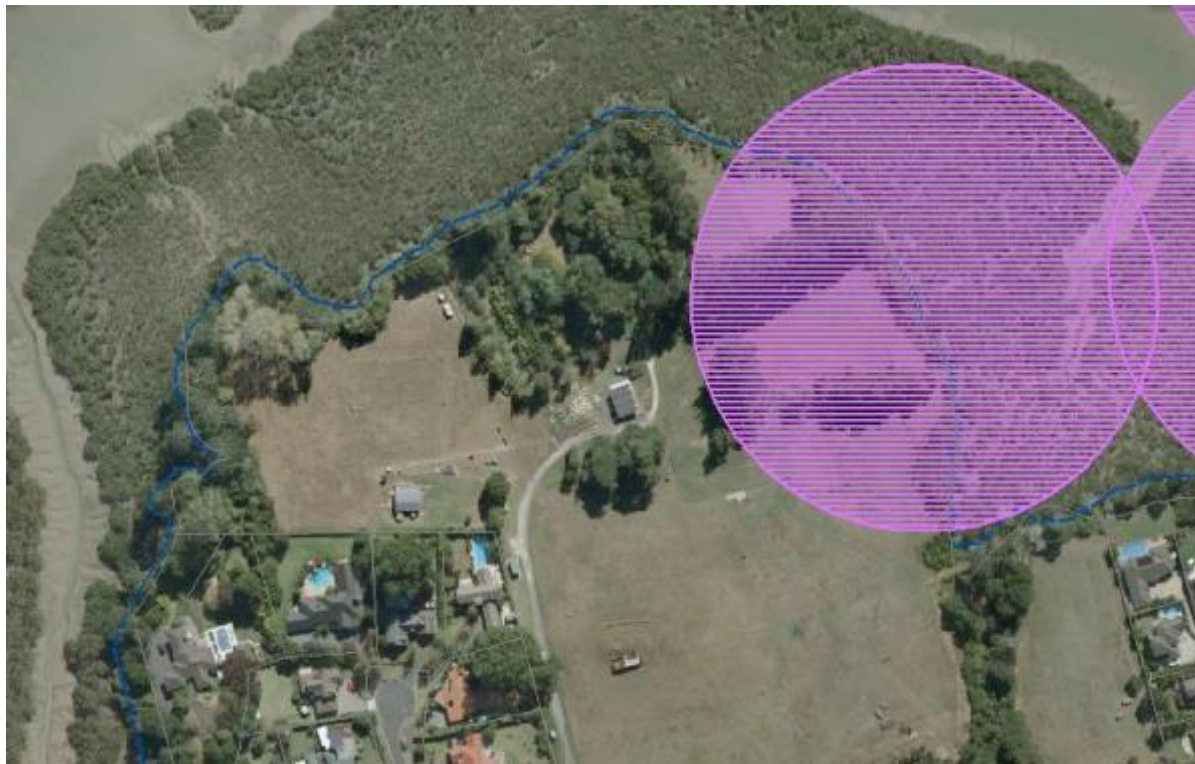


Figure 27. PAUP GIS mana whenua overlay for site R10/1187 – PAUP ID

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED



Figure 28. PAUP GIS mana whenua overlay for sites at southern end of North Shore Memorial Park

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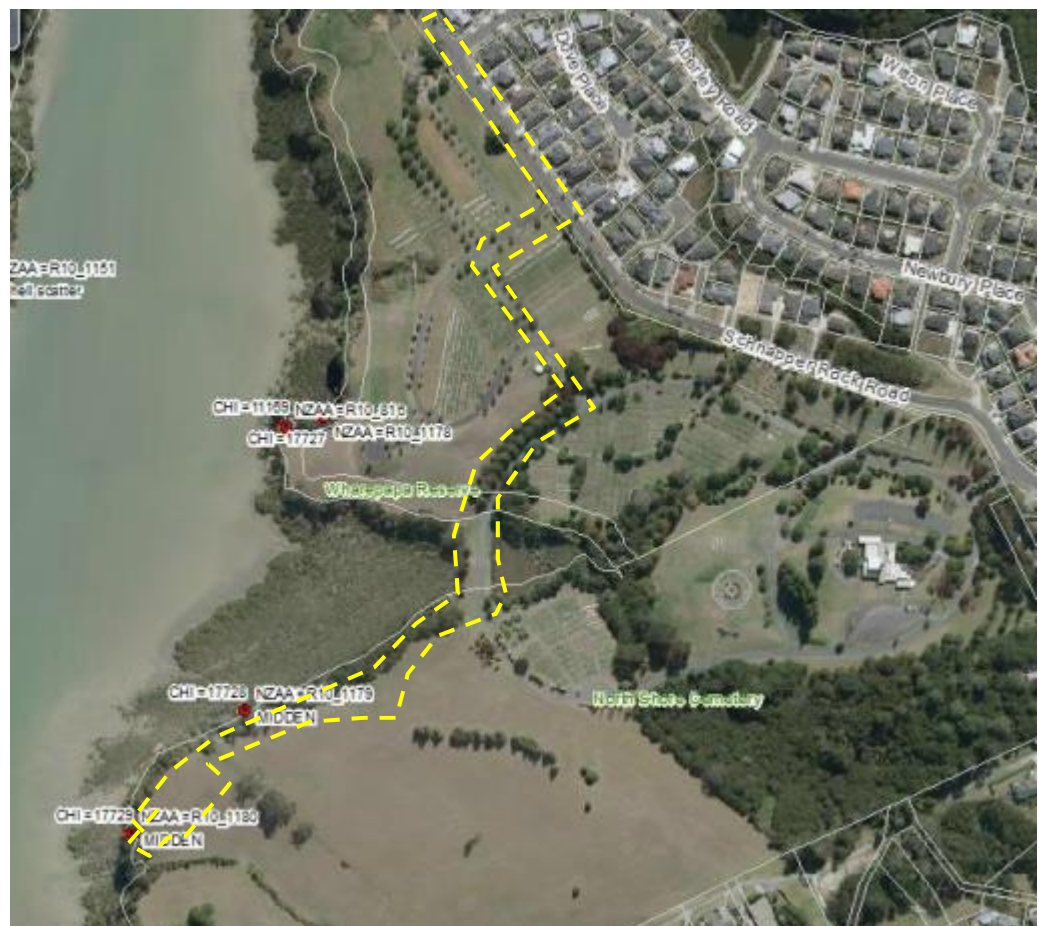
DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.5 North Shore Memorial Park to Schnapper Rock Road

The proposed designation corridor from North Shore Memorial Park to Schnapper Rock Road runs around the western coastal edge at the southern end of the Memorial Park, crossing the inlet over the existing road causeway then progressing through the cemetery north towards Schnapper Rock Road.

There are currently two archaeological sites recorded within c.100m of the proposed designation corridor (R10/1179, CHI 17728; R10/1180, CHI 17729) (Figure 29, Table 4). The sites comprise two shell midden deposits recorded as eroding out of the foreshore bank. Both sites are scheduled as sites and places of value to mana whenua within the PAUP (Appendix 4: 3209 and 3210) (Figure 30). Additional shell midden sites have also previously been recorded along the coastal margins of the Memorial Park, but are located well away from the current project area.

Figure 29. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016



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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Table 4. Archaeological sites recorded within c.100m of the proposed designation corridor from North Shore Memorial Park to Schnapper Rock Road.

CHI No.	NZAA No.	Site Type	Listing Status in District/Regional Plan	NZTM Easting	NZTM Northing
17728	R10/1179	Midden	PAUP site and place of value to mana whenua Appendix 4: 3209	1749710	5930847
17729	R10/1180	Midden	PAUP site and place of value to mana whenua Appendix 4: 3210	1749614	5930744



Figure 30. PAUP GIS mana whenua overlay for sites on western side of North Shore Memorial Park

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.6 Schnapper Rock Road to North Shore Golf Course

This section of the proposed designation corridor runs along the north-western end of Schnapper Rock Road, through the coastal reserve and crossing the inlet via trenchless construction then continuing through the southern end the North Shore Golf Course.

Previous archaeological surveys undertaken within the area include an archaeological investigation of future development areas (Clough 1995), an assessment of the proposed Laurel Oak Drive subdivision (Judge 2013; Judge & Larsen 2016), the Auckland Regional Council coastal survey (Brassey 2010), an assessment of 284 Schnapper Rock Road (Judge 2013b), Albany and the recent assessment of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015).

Archaeological and other historic heritage sites recorded in the general area tend to be focused around the banks of the creek, with very few sites being recorded more than 50m inland. There are currently two archaeological sites recorded within c.100m of the proposed designation corridor (Table 5, Figure 31). The sites comprise one shell midden deposit (R10/815; CHI 11168) and a historic jetty (R10/814; CHI 11167). Site R10/815 is scheduled as a site and place of value to mana whenua within the PAUP (Appendix 4: 1976) (Figure 32). A historic rubbish tip site (R10/1172; CHI 17718) is also recorded just over 100m north-west of the proposed designation corridor on the southern banks of the North Shore Golf Club.

Table 5. Archaeological sites recorded within c.100m of the proposed designation corridor from Schnapper Rock Road to the North Shore Golf Club.

CHI No.	NZAA No.	Site Type	Listing Status in District/Regional Plan	NZTM Easting	NZTM Northing
11167	R10/814	Jetty		1749757	5931572
11168	R10/815	Midden	PAUP site and place of value to mana whenua (Appendix 4: 1976)	1749852	5931570

Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

Figure 31. Aerial showing distribution of recorded archaeological and historic heritage sites within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

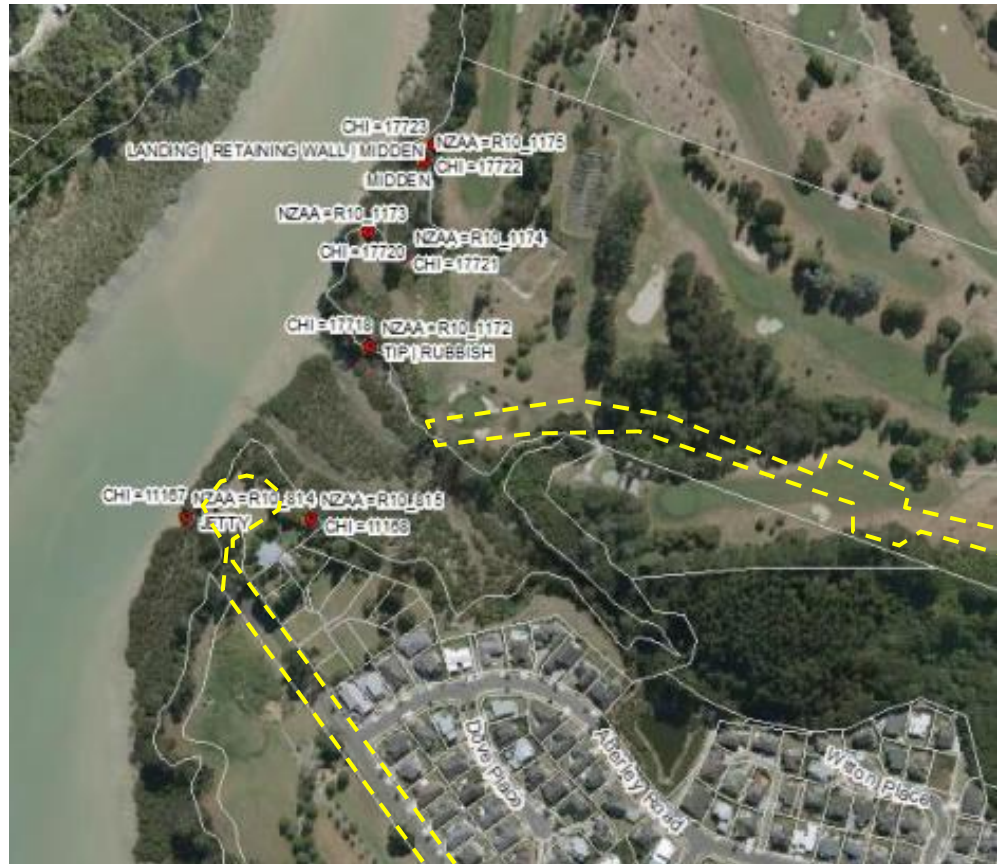


Figure 32. PAUP GIS mana whenua overlay for PAUP site 1976 within Wharepapa Reserve



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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.7 North Shore Golf Course to Appleby Road

This section of the proposed designation corridor runs from the North Shore Golf Course club buildings and along Appleby Road. The majority of this section of the alignment is located along formed and sealed/graveled carpark and roads.

This area was assessed as part of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015), during which no archaeological or historic heritage remains were identified. There are currently no known archaeological or historic heritage remains located within c.100m of this section of the proposed designation corridor (Figure 33).



Figure 33. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.8 Appleby Road to William Pickering Drive

This section of the proposed designation corridor runs from Appleby Road, north along Albany Highway and east along John Glenn Avenue to William Pickering Drive. The entirety of this section of the alignment is located along formed and sealed carpark, driveways and roads.

This area was assessed as part of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015), during which no archaeological or historic heritage remains were identified. There are currently no known archaeological or historic heritage remains located within c.100m of this section of the proposed designation corridor (Figure 34).



Figure 34. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

Continued on next page

DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.9 William Pickering to Bush Road

This section of the proposed designation corridor runs from William Pickering Drive along Piermark Drive to Bush Road. The entirety of this section of the alignment is located along formed and sealed carpark and roads.

This area was assessed as part of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015), during which no archaeological or historic heritage remains were identified. There are currently no known archaeological or historic heritage remains located within c.100m of this section of the proposed designation corridor (Figure 35).



Figure 35. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

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DESCRIPTION OF RECEIVING ENVIRONMENT, CONTINUED

5.2.10 Bush Road to Rosedale Wastewater Treatment Plant

This section of the proposed designation corridor runs from Bush Road through the western edge of Rosedale Park to cross Alexandra Stream and then east towards the Rosedale WWTP. Much of this area has been previously modified through the formation of the WWTP and the park – especially east of the stream alignment.

This area was assessed as part of the Northern Interceptor Phase 1 alignment (Judge & Clough 2015), during which no archaeological or historic heritage remains were identified. There are currently no known archaeological or historic heritage remains located within c.100m of this section of the proposed designation corridor (Figure 36).

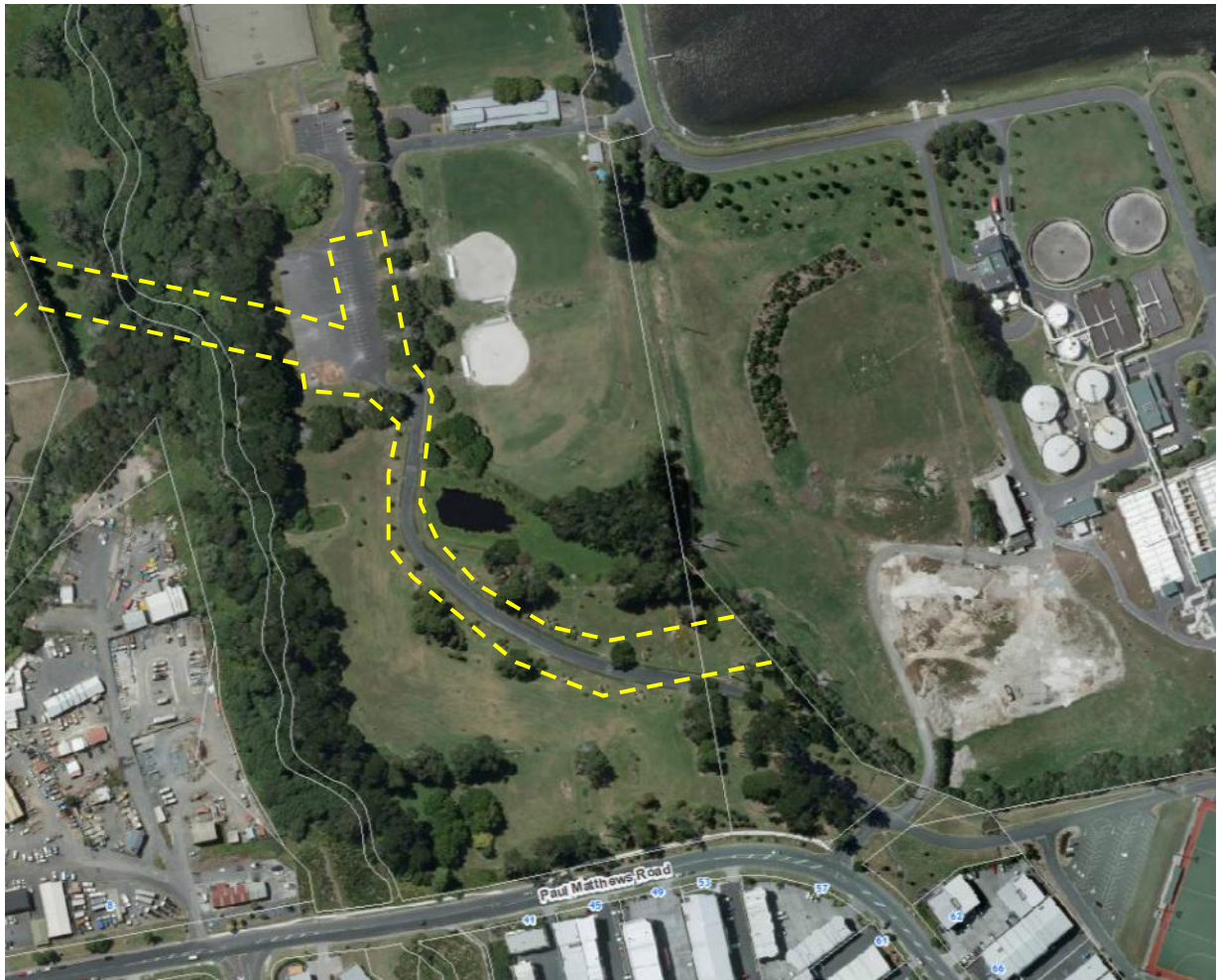


Figure 36. Aerial showing distribution of recorded archaeological and historic heritage sites; no sites are located within general proximity to the proposed designation corridor (shown in yellow). Aerial source: Auckland Council GIS 2016

6. FIELD ASSESSMENT

6.1 Notice of Requirement Northern Interceptor (Waitakere)

6.1.1 *The Concourse to Selwood Drive*

The section of the proposed designation corridor from The Concourse to Selwood Drive runs along existing formed and sealed roadways (Figure 37). The concept design indicates that, at this location, the pipeline is likely to be installed by trenched technologies. No archaeological or other historic heritage sites have previously been identified within the proposed designation corridor, and none were identified as a result of the current assessment. Due to the level of modification undertaken through this area, it is considered unlikely that any previously unrecorded archaeological or historic heritage sites will be exposed as a result of the current proposed works in this location.

Figure 37.
Looking north
along The
Concourse



6.1.2 *Selwood Road to Huruuru Road*

This section of the proposed designation corridor runs through an existing development site (not accessible), crossing over Huruuru Creek and up the sealed and formed Kopi Place. The concept design indicates that, at this location, the pipeline is likely to be installed by trenched technologies (excluding the creek crossing). The area has been extensively modified through industrial and residential development and through the formation of the north-western motorway.

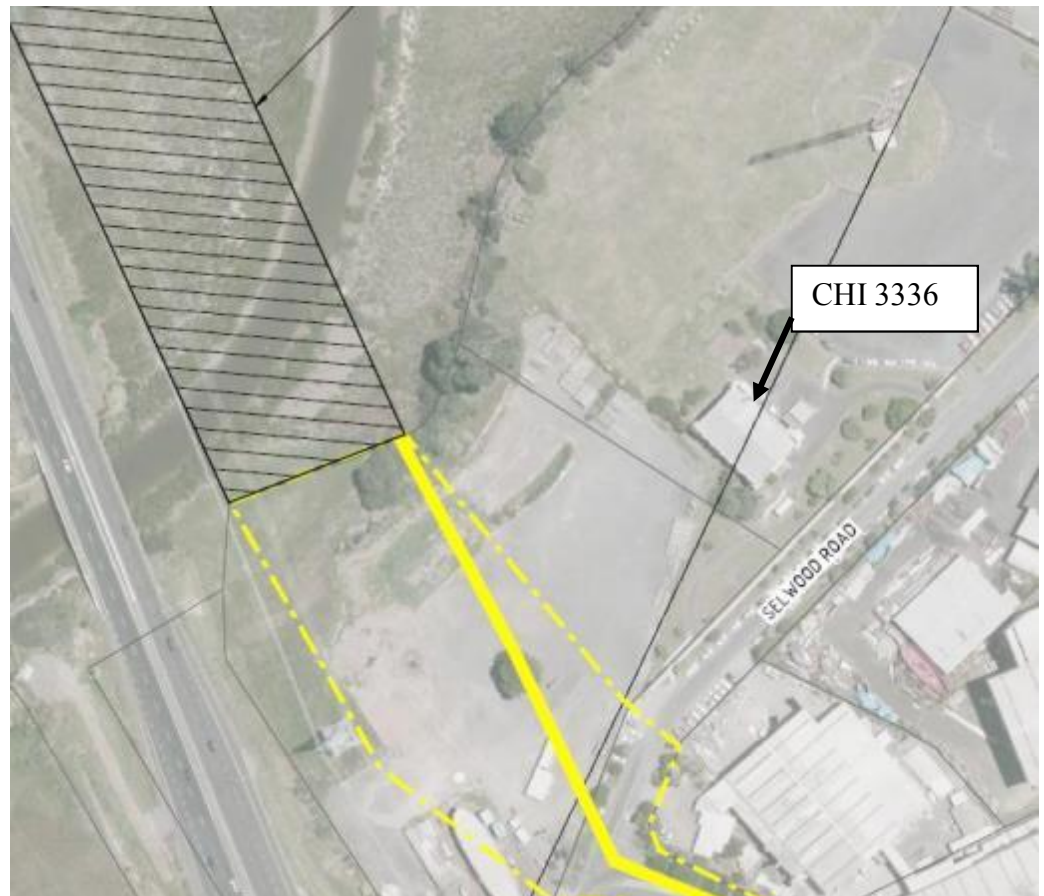
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FIELD ASSESSMENT, CONTINUED

Much of this area was not accessible for survey due to both industrial development/construction yards and vegetation cover (along the banks of the stream). However, previous survey undertaken by Clough & Associates did not locate any archaeological remains within the current project area and it was considered unlikely that archaeological remains would be present in this area due to past modifications (Ussher & Clough 2010).

One CHI site (CHI 3336) has previously been recorded within c.100m of this section of the proposed designation corridor. The site comprises the Radio New Zealand Transmitter Building located at 2-12 Selwood Road. The proposed designation corridor is located c.80m south of CHI 3336 and c.50m+ south of the PAUP historic heritage overlay for the site (PAUP Appendix 9:56) (Figure 38, Figure 39).

Figure 38. Detail from Northern Interceptor Concept Design NoR Waitakere Sheet 2 of 6. Watercare & MWH 2016



Continued on next page

Figure 39. The Radio NZ Transmitter Building on Selwood Road (CHI 3336)



6.1.3 Huruhuru Road to Cedar Heights Avenue

This section of the proposed designation corridor runs along Huruhuru Road, through Lowtherhurst Reserve, crosses a small stream alignment then continues along Cedar Heights Avenue. The concept design indicates that, at this location, the majority of this section of pipeline is likely to be installed by trenched technologies, with the northern section along Cedar Heights Avenue to be constructed through trenchless methods. Both Huruhuru Road and Cedar Heights Avenue are existing formed and sealed roads where intact archaeological remains are unlikely to be present (Figure 40).

Visual survey and subsurface testing through Lowtherhurst Reserve and visual inspection of the exposed creek banks failed to identify any archaeological or historic heritage remains (Figure 41–Figure 43). Test pitting at the southern end of the Reserve showed an 18cm thick layer of lightly compacted mixed loamy topsoil overlying a clay subsoil. It appeared that this area had been modified in recent years with imported topsoil – perhaps during formation of the Reserve. Testing on the southern and northern sides of the creek embankment showed a mixed clay layer to a depth of 12-15cm deep overlying the sterile clay subsoil.

Shell midden site R11/472 (CHI 5933) has previously been recorded c.150m east of the proposed designation corridor through Lowtherhurst Reserve. There is considered to be some low potential for previously unrecorded archaeological remains to be exposed during open trenching within Lowtherhurst Reserve.

Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 40.
Looking south
down Huruhuru
Road



Figure 41.
Lowtherhurst
Reserve



Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 42. Test pitting in Lowtherhurst Reserve



Figure 43. Lowtherhurst Reserve stream



Continued on next page

FIELD ASSESSMENT, CONTINUED

6.1.4 Cedar Heights Avenue to Holmes Reserve

This section of the proposed designation corridor runs along the northern end of Cedar Heights Avenue to Holmes Reserve. The concept design indicates that, at this location, the pipeline is likely to be installed through trenchless methods with shaft locations along Cedar Heights Avenue and two within Holmes Reserve. The area around Cedar Heights Avenue has been extensively modified through the development of the road and housing and is unlikely to retain any archaeological or historic heritage values (Figure 44).

Visual survey and subsurface testing through Holmes Reserve and visual inspection of the exposed creek banks failed to identify any archaeological or historic heritage remains (Figure 45, Figure 46). The Reserve has undergone modification through installation of multiple stormwater lines and manholes.

It is considered unlikely that in situ archaeological or historic heritage remains would be affected as a result of proposed works within this section of the proposed designation corridor.

Figure 44.
Looking south
down the
northern end of
Cedar Heights
Avenue



Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 45.
Looking north
from Royal Road
over Holmes
Reserve



Figure 46.
Exposed soils
along the stream
bank within
Holmes Reserve



Continued on next page

FIELD ASSESSMENT, CONTINUED

6.1.5 Holmes Reserve to Holmes Drive

This section of the proposed designation corridor runs from the northern end of Holmes Reserve, along existing formed and sealed roads, then crosses Manutewhau Stream to meet up with Holmes Drive. The concept design indicates that, at this location, the pipeline is likely to be installed by trenchless methods, with a short section being constructed through trenched technologies on the north and south sides of Manutewhau Stream and a pipe bridge across the stream. This general area has been intensively modified for residential housing and roading (Figure 47). The stream area is currently covered in dense scrub/bush (Figure 48). Visual inspection and subsurface testing (probing) within this area failed to identify any archaeological remains.

It is considered unlikely that in situ archaeological or historic heritage remains would be affected as a result of proposed works within this section of the designation corridor.

Figure 47.
Looking south
along Jaedwyn
Drive



Continued on next page

Figure 48.
Looking south
over the Holmes
Drive side of
Manutewhau
Stream



6.1.6 Holmes Drive to Hobsonville Road

This section of the proposed designation corridor runs from the northern end of Holmes Drive, through St Margaret's Park, beneath residential housing and over to the northern side of Hobsonville Road. The concept design indicates that, at this location, the majority of the pipeline is likely to be installed through trenchless methods with shafts in St Margaret's Park and along Holmes Drive. The area through St Margaret's Park is the only section of this part of the alignment that has not been extensively modified through the development of residential housing and roading. A small section of the Holmes Drive alignment crosses over Manutewhau Stream; however, this section has been previously constructed as a causeway road over the stream, within which the alignment will be constructed through trenched technologies.

Visual survey and subsurface testing through St Margaret's Park failed to identify any archaeological or historic heritage remains (Figure 49, Figure 50). Test pitting exposed pale grey/brown topsoil with a modern nail and some gravel inclusions overlying the clay subsoil.

There are currently no archaeological or historic heritage sites recorded within close proximity to this section of the proposed designation corridor and it is considered unlikely that in situ archaeological or historic heritage remains would be affected as a result of proposed works within this section of the alignment.

Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 49.
Looking south
along the
proposed
alignment within
St Margaret's
Park



Figure 50.
Example of
typical test pit
undertaken
within St
Margaret's Park



Continued on next page

FIELD ASSESSMENT, CONTINUED

6.2 Notice of Requirement Northern Interceptor (North Shore)

6.2.1 The Knoll to Collins Park

This section of the proposed designation corridor runs from the northern side of SH18 then north up Tauhinu Road and east beneath residential housing towards Collins Park. The concept design indicates that, at this location, the pipeline is likely to be installed through trenchless methods. The extent of this area has been substantially modified through residential development and roading (Figure 51). There is also an additional section of proposed trenched alignment through the property at 15 The Knoll at the eastern abutment of the Greenhithe Bridge. This area is currently under residential development. No archaeological remains were identified within this area.

There are currently no archaeological or historic heritage sites recorded within close proximity to this section proposed designation corridor. It is considered unlikely that in situ archaeological or historic heritage remains will be affected as a result of proposed works within this section of the proposed designation corridor.

Figure 51.
Looking south
down proposed
alignment on
Tauhinu Road



Continued on next page

FIELD ASSESSMENT, CONTINUED

6.2.2 Collins Park to Wainoni Park

This section of the proposed designation corridor runs along the southern side of Collins Park, along Greenhithe Road and through the southern end of South Wainoni Park. The concept design indicates that, at this location, the pipeline is likely to be installed through trenchless method shafts within Collins Park and South Wainoni Park. Much of this area has been substantially modified through residential development and roading, however Collins Park and Wainoni Park remain largely unmodified.

There is currently one recorded historic heritage site located within c.100m of the proposed designation corridor through Collins Park. The site comprises the former Greenhithe School House (CHI 12928, PAUP ID 842). The PAUP historic heritage extent of place is located 50m+ north of the proposed alignment (Figure 52, Figure 53) and c.30m north of the proposed designation corridor. The proposed alignment will have no effect on the site. There are currently no other archaeological or historic heritage sites recorded within close proximity to this section of the proposed alignment.

Visual inspection of the proposed alignment through Collins Park (Figure 54) and the southern end of Wainoni Park (Figure 55) did not identify any archaeological or further historic heritage remains. It is considered unlikely that in situ archaeological or historic heritage remains would be affected as a result of proposed works within this section of the alignment.

Figure 52. Aerial showing historic heritage extent of place for PAUP site 842 (old Greenhithe School building) in relation to proposed designation corridor (yellow) and proposed alignment (red line). Aerial source: Auckland Council PAUP GIS 2016



Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 53.
Former
Greenhithe
School (CHI
12938) as seen
from Greenhithe
Road



Figure 54.
Looking east
along the
southern edge of
Collins Park



Continued on next page

Figure 55.
Looking south-
west over
proposed
alignment within
Wainoni Park



6.2.3 South Wainoni Park

This section of the proposed designation corridor passes through South Wainoni Park. The concept design indicates that, at this location, the pipeline is likely to be installed through trenchless methods. No archaeological or historic heritage sites have previously been identified within the proposed designation corridor at South Wainoni Park. Visual survey undertaken for this assessment did not identify any archaeological or historic heritage remains. Examination of exposed soils showed a thin topsoil layer overlying the orange clay subsoil (Figure 56). It should be noted that survey was restricted within this area due to horses and no test pitting was undertaken. It is considered unlikely that in situ archaeological or historic heritage remains would be affected as a result of proposed works within this section of the proposed designation corridor.

Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 56.
Exposed soils
within South
Wainoni Park



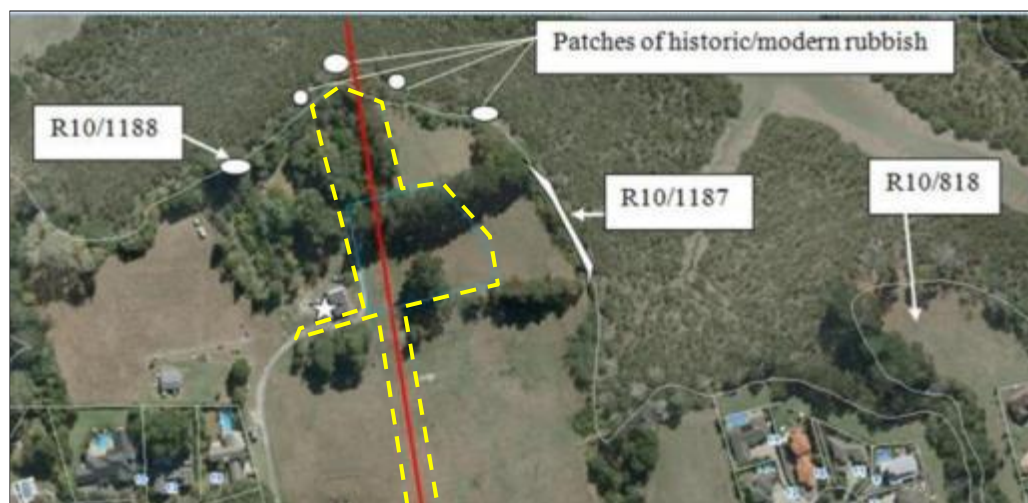
6.2.4 North Wainoni Park to North Shore Memorial Park

This section of the proposed designation corridor runs north from South Wainoni Park through North Wainoni Park to cross the Te Wharau Creek to North Shore Memorial Park. As previously discussed, the section of the alignment through North Wainoni Park has recently been assessed for the Northern Interceptor Phase 1 alignment (Judge & Cough 2015). The proposed alignment and pump station site are located within close proximity to two previously recorded shell midden sites (R10/1187 and R10/1188); however the known extents of these sites are located outside of the proposed designation boundaries.(Figure 57). The works are likely to affect a surface dump of historic and modern rubbish – however this is not archaeologically or historically in situ and therefore is not recorded as an archaeological site.

There is considered to be potential for previously unrecorded archaeological remains to be affected by the proposed works within North Wainoni Park.

Continued on next page

Figure 57. Aerial showing recorded archaeological sites and other areas of interest in relation to the proposed designation corridor (shown in yellow) and areas of works (shown in red and blue)



6.2.5 North Shore Memorial Park to Schnapper Rock Road

This section of the proposed designation corridor runs along the coastal margins of the southern end of North Shore Memorial Park before progressing inland to continue through the cemetery and connect with Schnapper Rock Road.

Visual survey with minor subsurface testing (probing) identified one previously recorded archaeological site (shell midden R10/1180; CHI 17729) along the western edge of the Park (Figure 58, Figure 59). The site was found to be much more extensive than previously recorded and extended for c.60m along the river bank and up to 15m inland. The proposed alignment currently passes beneath the site - the alignment through this section is currently proposed to be of trenchless construction and effects on the site may be able to be avoided.

An additional site (shell midden R19/1179; CHI 17728) was not able to be relocated, but is recorded as previously being visible in the foreshore bank, outside of the proposed designation corridor (Figure 58). Probing undertaken along the top of the foreshore bank within this location failed to identify any archaeological remains.

No other archaeological remains were identified within this section of the proposed designation corridor. There is, however, potential for previously unrecorded archaeological remains to be exposed as a result of the proposed works within the coastal margins of the Park.

Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 58. Aerial showing identified extent of R10/1180 and recorded location of site R10/1179 in relation to the proposed designation corridor (yellow dashed line) and the proposed alignment (red for trenchless construction, yellow for open trenching)

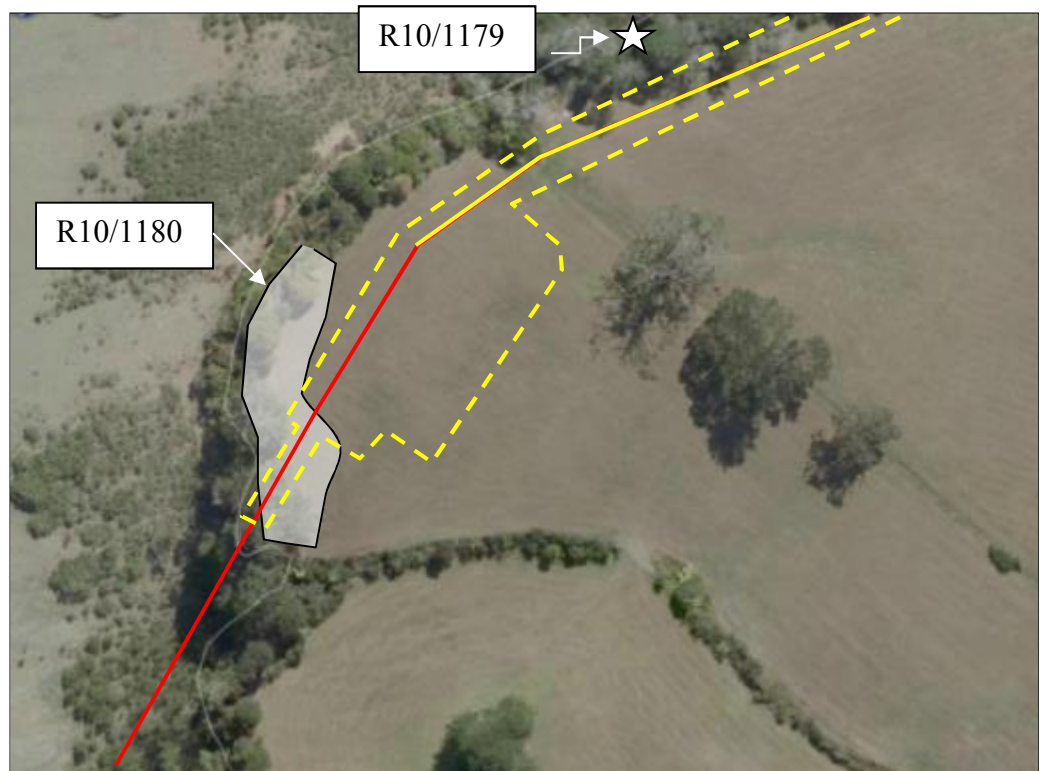


Figure 59. Looking south over the location of R10/1180



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6.2.6 Schnapper Rock Road to North Shore Golf Course

This section of the proposed designation corridor runs along the northern end of Schnapper Rock Road, crosses through Wharepapa Reserve at the end of the point, then over the tidal inlet to the North Shore Golf Club. The concept design indicates that, the works on the southern side of the inlet (Schnapper Rock Road) are likely to be installed by trenched technologies, while the works across the inlet and most of the section through the North Shore Golf Club are proposed to be constructed through trenchless methods.

There are currently two archaeological sites recorded within immediate proximity to the proposed trenching through Wharepapa Reserve at the end of Schnapper Rock Road. The sites comprise one shell midden deposit (R10/815; CHI 11168) and a historic jetty (R10/814; CHI 11167).

Both sites were identified during the current assessment. Site R10/815 comprises a small subsurface deposit of shell midden, relocated through probing over an area of c.2m x 1m. This site is located c.10m south of the current proposed alignment, and along the southern edge of the proposed designation corridor (Figure 60, Figure 62). Site R10/814 is located c.15-20m west of the current proposed alignment and outside of the proposed designation corridor (Figure 60, Figure 63).

No additional archaeological or historic heritage sites were located within this section of the proposed designation corridor. Inspection of the remainder of Wharepapa Reserve and the section of the alignment through North Shore Golf Club did not identify any archaeological or historic heritage remains (Figure 64, Figure 65). There does, however, remain some potential for previously unrecorded archaeological remains to be exposed during proposed works within this section.

Continued on next page

FIELD ASSESSMENT, CONTINUED



Figure 60. Aerial showing location of sites R10/814 and R10/815 in relation to the proposed designation boundary (dashed yellow line) and the proposed alignment (shown in yellow for open trenching and red for trenchless construction). Aerial source: Auckland Council GIS 2016

Figure 61.
Looking west
along the end of
Schnapper Rock
Road



Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 62.
Looking north
through
Wharepapa
Reserve.
Location of
R10/815 (CHI
11168) is marked
with an arrow



Figure 63. Site
R10/814 (CHI
11167)



Continued on next page

FIELD ASSESSMENT, CONTINUED

Figure 64.
Exposed soils
along river bank
at North Shore
Golf Club end of
alignment



Figure 65.
Exposed soils
along edge of
sand bunker
within proposed
alignment at
North Shore Golf
Club



Continued on next page

6.2.7 North Shore Golf Course to Appleby Road

No archaeological or historic heritage sites have previously been identified within the proposed designation corridor from North Shore Golf Course to Appleby Road, nor were any identified as a result of the current assessment. The area has been substantially modified in the past and it is considered unlikely that any previously unrecorded heritage remains would be exposed as a result of the current proposal.

6.2.8 Appleby Road to William Pickering Drive

No archaeological or historic heritage sites have previously been identified within the proposed designation corridor from Appleby Road to William Pickering Drive, nor were any identified as a result of the current assessment. The area has been substantially modified in the past and it is considered unlikely that any previously unrecorded heritage remains would be exposed as a result of the current proposal.

6.2.9 William Pickering Drive to Bush Road

No archaeological or historic heritage sites have previously been identified within the proposed designation corridor from William Pickering Drive to Bush Road, nor were any identified as a result of the current assessment. The area has been substantially modified in the past and it is considered unlikely that any previously unrecorded heritage remains would be exposed as a result of the current proposal.

6.2.10 Bush Road to Rosedale Wastewater Treatment Plant

No archaeological or historic heritage sites have previously been identified within the proposed designation corridor from Bush Road to the Rosedale Wastewater Treatment Plant, nor were any identified as a result of the current assessment. Much of the area has been substantially modified in the past and it is considered unlikely that any previously unrecorded heritage remains would be exposed as a result of the current proposal.

7. DISCUSSION AND CONCLUSIONS

7.1 Summary of Results

7.1.1 Notice of Requirement Northern Interceptor – Waitakere Section

Only one historic heritage site has previously been recorded within c.100m of the NoR – NI (Waitakere). The identified extent of historic heritage site CHI 3336 (the Radio New Zealand Transmitter Building located at 2-12 Selwood Road) is located within 100m of the proposed designation corridor at Selwood Road. The site is scheduled within both the Auckland Council District Plan – Operative Waitakere Section 2003 (ID 1174) and within the PAUP (Appendix 9: ID 56). The site will not be affected as a result of the current proposed works.

Although visual survey and testing did not identify any archaeological or other historic heritage remains within the proposed area of works at Lowtherhurst Reserve, there is considered to be some potential for previously unrecorded archaeological remains to be exposed as a result of the proposed works within this area.

It is considered unlikely that previously unrecorded archaeological and/or historic heritage remains will be exposed elsewhere along the Waitakere Section of the proposed Northern Interceptor alignment as a result of the current proposed works.

7.1.2 Notice of Requirement Northern Interceptor – North Shore Section

Multiple archaeological and historic heritage sites have previously been recorded within c.100m of the full extent of the proposed NoR – NI (North Shore). These sites are clustered in close proximity to the proposed areas of works at North Wainoni Reserve (R10/1187, CHI 17736; R10/1188, CHI 17737), the North Shore Memorial Park (R10/1179, CHI 17728; R10/1180, CHI 17729) and Wharepapa Reserve at the end of Schnapper Rock Road (R10/814, CHI 11167; R10/815, CHI 11168). Of these, R10/815, R10/1179, R10/1180 and R10/1187 are recognised as sites and places of value to mana whenua within the PAUP.

The former Greenhithe School House is also located within c.100m of the proposed alignment within Collins Park. The site is scheduled with both the Auckland Council District Plan – Operative North Shore Section 2002 (Map 17:5) and the PAUP (Appendix 9: ID 842). The current proposed alignment should have no effects on the scheduled extent of this site.

No other archaeological or historic heritage remains were located within c.100m of the proposed designation corridor within the remainder of the NoR – NI (North Shore). However, there is considered to be potential that previously unrecorded archaeological remains may be exposed as a result of the proposed works within North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and the southern end of North Shore Golf Club as a result of the proposed works.

Continued on next page

DISCUSSION AND CONCLUSIONS, CONTINUED

7.2 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.

Assessment of the proposed designation corridor within the PAUP mana whenua overlay at North Shore Memorial Park and Schnapper Rock Road were undertaken with Ngati Manuhuri representative Lorena Cardenas.

7.3 Survey Limitations

It should be noted that archaeological survey techniques (based on visual inspection and minor sub-surface testing) cannot necessarily identify all sub-surface archaeological features, or detect wahi tapu and other sites of traditional significance to Maori, especially where these have no physical remains.

Extensive areas of the proposed works are to be undertaken within existing formed and sealed road alignments and beneath residential housing. These areas cannot be assessed prior to works being undertaken. In addition, areas around Huruhuru Creek could not be properly accessed at the time of survey.

7.4 Archaeological Value and Significance

The general Henderson and Greenhithe areas are considered to have considerable archaeological significance based on the sites remaining that relate to both pre-European Maori and early European settlement of the areas. The Massey, Albany and Rosedale areas have less archaeological significance as relatively few sites have previously been recorded within the proposed areas of works within these areas.

The current proposed alignment passes within close proximity to sites related to all periods of occupation of the area. One of these sites (R10/1180, CHI 17729 – shell midden) is currently located within the immediate area of proposed works at the North Shore Memorial Park, although the alignment is proposed to be installed through trenchless technologies through this section and effects on the site may be able to be avoided. This site is associated with pre-European Maori settlement of the Lucas Creek area and appears to retain moderate archaeological values in terms of its current condition, contextual values and potential information, knowledge and amenity values.

Continued on next page

DISCUSSION AND CONCLUSIONS, CONTINUED

7.5 Effects of Proposal

The project is currently at the concept stage and defined construction plans are not yet available. The concept plan for the proposed alignment currently crosses within the recorded extent of site R10/1180 (CHI 17729). The current proposal shows the alignment as being trenchless beneath the site. This methodology would likely have no effects on the site, however this should be confirmed once the construction methodology is finalised. Other sites are identified within close proximity to the proposed alignment. Recorded archaeological sites located along or close to the alignment should be avoided wherever possible.

In any area where archaeological sites have been recorded in the general vicinity it is possible that unrecorded subsurface remains may be exposed during surface works. It is considered possible that unrecorded subsurface archaeological sites will be exposed during development within Lowtherhurst Reserve, North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club, and it is therefore recommended that an Authority is applied for prior to the start of earthworks so that potential delays can be avoided should sites be exposed.

Archaeological features and remains 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.

Providing the methodology chosen minimises the effects on the known archaeology, the potential effects on archaeological and historic heritage values are likely to be less than minor.

7.6 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’ (s 6(e)); and ‘the protection of historic heritage from inappropriate subdivision, use, and development’ (s 6(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)).

Continued on next page

DISCUSSION AND CONCLUSIONS, CONTINUED

Historic heritage is defined (s 2) 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 Auckland Council District Plan: Operative North Shore Section (2002), Auckland Council District Plan: Operative Waitakere Section (2003) and the Proposed Auckland Unitary Plan (PAUP) (notified September 2013) are relevant to the proposed activity.

There are currently four sites scheduled within the PAUP as Sites and Places of Value to Mana Whenua located within close proximity to the proposed alignment (Appendix 4: ID 1976, 3209, 3210, 3217).

In addition the ‘Old Greenhithe School’ building (CHI 12928) is scheduled within the Operative North Shore Plan (Map 17:5) and within the PAUP (Appendix 9: ID 842) as a Category B Historic Heritage Place. The Radio NZ Transmitter Building is scheduled within the Operative Waitakere Plan (ID 1174) and within the PAUP (Appendix 9: ID 56) as a Category A Historic Heritage Place. These sites should not be affected as a result of the current proposed works, but if works are proposed within 50m of the defined extents of places of the buildings, consent may be required under the PAUP rules

This assessment has established that the proposed activity may affect archaeological site R10/1180 (PAUP 3210), although the indicative concept design notes that the pipeline will be installed through trenchless construction through this area, whereby potential effects on the site may be able to be avoided. The works also have the potential to affect unidentified subsurface archaeological remains that may be exposed during development. Any effects on previously unrecorded historic heritage remains could be appropriately mitigated through archaeological investigation and recording to recover information relating to the history of the local area. This would require an Authority from Heritage NZ (see below).

The effects of the proposal will depend on the methodology chosen to construct the interceptor around known archaeological sites. This should be kept in mind when finalising the design and construction methodology.

Continued on next page

DISCUSSION AND CONCLUSIONS, CONTINUED

7.7 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)²

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. The development plans for the project are yet to be finalised.

The identified extent of all recorded archaeological and other historic heritage sites should be excluded from future development plans. If any site cannot be avoided, an Authority must be obtained from Heritage NZ before any work can be carried out that may affect a site.

Continued on next page

² 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.

DISCUSSION AND CONCLUSIONS, CONTINUED

There is also considered to be potential for encountering previously unidentified archeological remains during future works associated with the project, in particularly within Lowtherhurst Reserve, North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club. In order to avoid any delays should unidentified subsurface features be exposed by the proposed works, consideration should be given to applying for an authority under section 44(a) of the HNZPTA to cover all works undertaken for this project, as a precaution. This should be obtained before any earthworks are carried out. Those sites that can be avoided would be protected under the conditions of the Authority, and provision would be made for those that cannot, as well as for any additional sites that might be exposed during development. The conditions of the authority are likely to include archaeological monitoring of preliminary earthworks in sensitive areas, and procedures for recording any archaeological evidence before it is modified or destroyed. This approach would have the advantage of allowing any archaeology uncovered during the development of the property to be dealt with immediately, avoiding possible delays.

7.8 Conclusions

7.8.1 NoR – NI (Waitakere)

There is currently one recorded historic heritage site identified within c.100m of the proposed alignment at Selwood Road, Henderson. The site comprises the Radio NZ Transmitter Building. The site is scheduled within the Auckland Council District Plan: Operative Waitakere Section and within the PAUP as a Category A historic heritage building (Appendix 9: ID 56). The building should not be affected as a result of the proposed works. Although no other archaeological or historic heritage sites were identified along the Waitakere Section of the proposed alignment, it is considered possible that unidentified heritage remains may be exposed during development in Lowtherhurst Reserve.

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DISCUSSION AND CONCLUSIONS, CONTINUED

7.8.2 NoR – NI (North Shore)

There are currently six archaeological sites recorded within c.100m of the proposed North Shore section of the alignment. The sites are located at North Wainoni Park (R10/1187 shell midden, R10/1188 shell midden), North Shore Memorial Park (R10/1179 shell midden, R10/1180 shell midden) and Wharepapa Reserve (R10/814 jetty, R10/815 shell midden). Only one of these sites is currently located within the immediate area of the proposed alignment (R10/1180), but this is an area of proposed trenchless construction and there is therefore scope for avoiding the site.

One historic heritage building is also located within c.100m of the proposed alignment through Collins Park. The site comprises the former Greenhithe School house, which is scheduled within the Auckland Council District Plan: Operative North Shore Section and as a Category B historic heritage site within the PAUP (Appendix 9: ID 842). There should be no effects on the site.

There is considered to be some potential for previously unrecorded archaeological remains to be uncovered as a result of the proposed works within North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and the North Shore Golf Club.

8. RECOMMENDATIONS

It is recommended:

- That the detailed development plans should take into account the locations of the recorded archaeological sites and ensure that they are avoided to the extent possible.
 - The effects of the proposal will depend on the methodology chosen to construct the interceptor around known archaeological sites. This should be kept in mind when finalising the design and construction methodology.
 - That if any of the recorded sites cannot be avoided, an Authority must be applied for under Section 44(a) of the HNZPTA and granted by Heritage NZ prior to the start of any works that will affect them. (*Note that this is a legal requirement*).
 - That because it is possible that subsurface archaeological remains may be exposed during development (particularly at Lowtherhurst Reserve, North Wainoni Park, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club), an Authority should be applied for under Section 44(a) of the HNZPTA as a precaution prior to the start of earthworks. This would establish appropriate procedures for the management of any archaeological remains discovered, reducing the potential for delays during the development process.
 - That earthworks at Lowtherhurst Reserve, Wainoni Park North, North Shore Memorial Park, Wharepapa Reserve and North Shore Golf Club should be monitored by an archaeologist to establish whether any unrecorded subsurface archaeological remains are present.
 - That an Accidental Discovery Protocol should apply to any areas not covered by the archaeological Authority.
 - That in the event of koiwi tangata (human remains) being uncovered, work should cease immediately in the vicinity of the remains and tangata whenua, Heritage NZ, the 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, tangata whenua should be consulted regarding the possible existence of such sites along the length of the proposed alignment, and regarding the scheduled sites and places of value to mana whenua in the vicinity of the alignment.
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APPENDIX A: SITE RECORD FORMS

CHI Places Number	11167	NZAA Site Number	R10_814
NZMS 260 map number	R10	Date of visit	03 Dec 2008
NZMS 260 map name	Auckland	Type of site or area	JETTY
NZMS 260 map edition	2006	Name	Schnapper Rock Wharf
Grid references Easting:	2660214	Northing	6493286
1. Aids to relocation of site (attach a sketch map):			
Schnapper Rock Reserve Schnapper Rock Road Lucas Creek Upper Waitemata Harbour			
2. State of site and possible future damage:			
NZAA Condition: Partly damaged, continuing minor damage Additional information by Micheal Taylor (04 May 1993). Condition unknown - some remains. Additional information by Russell Foster (March 2003). Good, as in original SRF. Iron pipe referred to in site description not visible, probably height of tide. Additional information by James Robinson and Rachel Ford (December 2008). Some posts still remain though will degrade over time. Site can only be seen at low tide.			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
Wharf/Landing. SE1377. Informaion source: book, not visited, reported only.			
Additional Notes:			
Additional information by Russell Foster (March 2003). Site recorded is the jetty. Cut track should also be regarded as part of site. Grid Ref for top of track is 2660238 6493284. Recommendations: Site needs further research to identify origin and use. Site probably warrants inclusion in District Plan. Could also suit interpretation, following research into history. Additional information by James Robinson and Rachel Ford (December 2008). Site was relocated. The remaining structure consists of 5 posts in a line that could once have supported the main jetty. Four other posts follow the clay outcrop landing. It is very likely that this remnant clay area was used as a landing. If so then site 11167 may also be the documented site CHI 239 (MAR 258) - since merged into this record and deleted. CHI 239 mentions a wharf/landing on Schnapper Rock Road Reserve mentioned in the Management Plan for Reserves in Albany Ward (SE 1377). The site is also located on historic map SO2474 with the annotation "Good landing - Deep Water".			
4. Owner		Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)		Book Brief visit	
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)		ARC CHI	
6. Reported by	Michael Taylor Anonymous Russell Foster James Robinson and Rachel Ford	Date recorded	04 May 1993 1995 Mar 2003 03 Dec 2008
Filekeeper		Date (NZAA SRF Entry Date)	
Address			
7. Keywords	JETTY MARINE STRUCTURE LUCAS CREEK UPPER WAITEMATA SCHNAPPER ROCK ROAD HISTORIC CMA LBD ACZ WHARF		

CHI Places Number	11168	NZAA Site Number	R10_815
NZMS 260 map number	R10	Date of visit	03 Dec 2008
NZMS 260 map name	Auckland	Type of site or area	MIDDEN
NZMS 260 map edition	2006	Name	
Grid references Easting:	2660309	Northing	6493284
1. Aids to relocation of site (attach a sketch map):			
Schnapper Rock Road Lucas Creek Upper Waitemata			
2. State of site and possible future damage:			
NZAA Condition: Partly damaged, risk of severe damage March 2003. Hardly visible, most surface shell eroded away. Dec 2008. No surface evidence of midden			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
Additional Notes:			
Additional information by Russell Foster (March 2003). Behind 284 Schnapper Rock Road. Site marked by large Magnolia Tree. GPS GR above is 7 m due magnetic south of tree. Most of surface midden eroded away, only odd shell fragment visible, but subsurface shell will still be present. Site appears to be entirely within esplanade reserve. No archaeological evidence found within private property at 284 Schnapper Rock Road. Probably only small midden. Magnolia tree marks site location Recommendations: Incorporate into District Plan. Additional information by James Robinson and Rachel Ford (Dec 2008): Magnolia tree relocated. No midden visible on the surface in the surrounding area.			
4. Owner		Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)		Brief visit	
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)		ARC CHI	
6. Reported by	Russell Foster James Robinson and Rachel Ford	Date recorded	1995 Mar 2003 03 Dec 2008
Filekeeper		Date (NZAA SRF Entry Date)	
Address			
7. Keywords	MIDDEN LUCAS CREEK UPPER WAITEMATA HARBOUR		
8. New Zealand Register of Archaeological Sites (for office use)			
NZHPT Site Field Code			
Latitude S		Latitude E	
AA	Type of site	BC	Present condition and future danger of destruction
--	Local environment today		Security Code
AE	Land classification	ML	Local body

CHI Places Number	17728	NZAA Site Number	R10_1179
NZMS 260 map number	R10	Date of visit	04/12/2008
NZMS 260 map name	Auckland	Type of site or area	MIDDEN
NZMS 260 map edition	2006	Name	
Grid references Easting:	2660166	Northing	6492561
1. Aids to relocation of site (attach a sketch map):			
North Shore Memorial Cemetery Schnapper Rock Road Albany Upper Waitemata			
2. State of site and possible future damage:			
The site is eroding from the coastal bank and already appears to have slumped from further up the bank. Site will continue to erode due to its position on the coast.			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
Located on the southern side of an inlet on the eastern side of Lucas Creek at the southern end of the North Shore Memorial Cemetery. The site is made up of an in-situ midden about 1.3m up the slope. Contents are 50% fragmented with mostly cockle present and some mudsnail and oyster, all of which are in a grey soil matrix. Occasional charcoal fragments and fire cracked rock are also present.			
Additional Notes:			
4. Owner		Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)		Brief Visit	
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)		CHI	
6. Reported by	James Robinson and Rachel Ford	Date recorded	04 Dec 2008
Filekeeper		Date (NZAA SRF Entry Date)	
Address	ARC Pitt St Auckland		
7. Keywords	CHARCOAL COCKLE FIRECRACKED ROCK LUCAS CREEK MIDDEN UPPER WAITEMATA		
8. New Zealand Register of Archaeological Sites (for office use)			
NZHPT Site Field Code			
Latitude S		Latitude E	
	Type of site		Present condition and future danger of destruction
	Local environment today		Security Code

CHI Places Number	17729	NZAA Site Number	R10_1180
NZMS 260 map number	R10	Date of visit	04 Dec 2008
NZMS 260 map name	Auckland	Type of site or area	MIDDEN
NZMS 260 map edition	2006	Name	
Grid references Easting:	2660070	Northing	6492458
1. Aids to relocation of site (attach a sketch map):			
North Shore Memorial Cemetery Schnapper Rock Road Albany Upper Waitemata			
2. State of site and possible future damage:			
Site is eroding into creek and may possibly be part of previous slump/slip of the bank. The small section of midden seen up the bank is in thick vegetation indicating the possibility that there may be more.			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
The midden is exposed at MHWS at/in roots of a tree and 2m further up the slope indicating a possible slip of the bank. The site contains mostly fragmented shell, primarily cockle with some mudsnail. Tiny fragments of fire cracked rock are present. The matrix varies from grey to dark.			
Additional Notes:			
4. Owner		Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)		Brief Visit	
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)			
6. Reported by	James Robinson and Rachel Ford	Date recorded	04 Dec 2008
Filekeeper		Date (NZAA SRF Entry Date)	
Address			
7. Keywords	MIDDEN COCKLE LUCAS CREEK UPPER WAITEMATA		
8. New Zealand Register of Archaeological Sites (for office use)			
NZHPT Site Field Code			
Latitude S		Latitude E	
	Type of site		Present condition and future danger of destruction
	Local environment today		Security Code
	Land classification		Local body
ACC Heritage Number			

CHI Places Number	3335	NZAA Site Number	
NZMS 260 map number	R11	Date of visit	
NZMS 260 map name	None	Type of site or area	BUILDING - INDUSTRIAL
NZMS 260 map edition		Name	Radio New Zealand - Transmitter Building BCNZ transmitter building
Grid references Easting:	2655863	Northing	6482703
1. Aids to relocation of site (attach a sketch map):			
2 - 12 Selwood Road Massey			
2. State of site and possible future damage:			
very good			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
This symmetrical building is a purpose built structure in late Art Deco style. 1930s. it still contains the original 1936 vintage value transmitters and remote site studios of the now definite New Zealand Broadcasting Service, Plaster walls, corru iron roof. Located in Northwest Massey			
Additional Notes:			
Additional information by Graeme Murdoch (2009): One of only two purpose built facilities associated with the early years of public radio broadcasting remaining in the Auckland region. An art deco masonry building constructed in 1936. In intact excellent condition and retains 1930s transmitter equipment. Associated with the 1YA mast.			
4. Owner	BCNZ Broadcasting	Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)			
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)			
6. Reported by	Waitakere City Council Graeme Murdoch	Date recorded	17 Dec 1993 2009
Filekeeper		Date (NZAA SRF Entry Date)	
Address			
7. Keywords	ART DECO Draft Regional Schedule 2009 NZBS Proposed Auckland Unitary Plan PROPOSED PLAN SCHEDULE PROPOSED PLAN SCHEDULE STUDIO TRANSMITTER BUILDING UP Category A* UPID00056		
8. New Zealand Register of Archaeological Sites (for office use)			
NZHPT Site Field Code			
Latitude S		Latitude E	
	Type of site		Present condition and future danger of

CHI Places Number	12928	NZAA Site Number	
NZMS 260 map number	R10	Date of visit	
NZMS 260 map name	None	Type of site or area	BUILDING - EDUCATIONAL
NZMS 260 map edition		Name	Old Greenhithe School Building Greenhithe School Building (former)
Grid references Easting:	2659645	Northing	6490455
1. Aids to relocation of site (attach a sketch map):			
Greenhithe Road Collins Park Greenhithe North Shore			
2. State of site and possible future damage:			
3. Description of site (supply full details, history, local environment, references, sketches, etc. If extra sheets are attached include a summary here)			
Additional Notes:			
4. Owner		Tenant/Manager	
Owner Address		Tenant/Manager Address	
5. Nature of information (heresay, brief or extended visit, etc.)			
Aerial photographs (reference numbers, and clarity of site)			
Photographs (reference numbers, and where they are held)			
6. Reported by	Sally Burgess	Date recorded	
Filekeeper		Date (NZAA SRF Entry Date)	
Address			
7. Keywords	EDUCATIONAL BUILDING Proposed Auckland Unitary Plan PROPOSED PLAN SCHEDULE SCHOOL UP Category B UPID00842		
8. New Zealand Register of Archaeological Sites (for office use)			
NZHPT Site Field Code			
Latitude S		Latitude E	
	Type of site		Present condition and future danger of destruction
	Local environment today		Security Code
	Land classification		Local body
ACC Heritage Number			