

VOLUME 4

Takaanini Level Crossings Assessment of Archaeological and Heritage Effects

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Version 1.0

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Glossary of Defined Terms and Acronyms

We note that ‘Takaanini’ (with double vowels is used throughout the Report Acknowledging the ongoing kōrero and guidance from Manawhenua on the cultural landscape. ‘Takanini’ is used where reference is made to a specific and existing named place (e.g., Takanini Road, Takanini Town Centre etc.). Manawhenua is also used throughout the Report as while gifting the programme name as Te Tupu Ngātahi, Manawhenua confirmed this was an appropriate spelling (capital ‘M’ and one word). Notwithstanding this, the term is spelled as two words in other fora and the proposed designation conditions – Mana Whenua.

Acronym/Term	Description
AEE	Assessment of Effects on the Environment report
AT	Auckland Transport
AUP:OP	Auckland Unitary Plan: Operative in Part
CHI	Cultural Heritage Inventory
Council	Auckland Council
GPS	Global Positioning System
HNZPT / Heritage NZ	Heritage New Zealand Pouhere Taonga
HNZPT Act	Heritage New Zealand Pouhere Taonga Act 2014
KiwiRail	KiwiRail Holdings Limited
LINZ	Land Information New Zealand
N/A	Not Applicable
NIMT	North Island Main Trunk rail line
NoR	Notice of Requirement
NoR 1	Notice of Requirement 1: Takaanini Level Crossings Project (Spartan Road, Manuia Road, Manuroa Road, Taka Street)
NoR 2	Notice of Requirement 2: Takaanini Level Crossings Project (Walters Road)
NZAA	New Zealand Archaeological Association
RMA	Resource Management Act 1991
SH1	State Highway 1
SRS	Site Recording Scheme
Te Tupu Ngātahi	Te Tupu Ngātahi Supporting Growth
TLC / the Project	Takaanini Level Crossings Project
Waka Kotahi	Waka Kotahi New Zealand Transport Agency

Executive Summary

This Archaeological and Heritage Assessment Report (**Report**) provides an assessment of the effects of the Takaanini Level Crossings Project (**TLC / the Project**) on archaeology and historic heritage.

This assessment incorporated desktop research and a field survey to determine whether any archaeological or heritage features were likely to be impacted by the proposed works.

Within 500 m of the project areas, three archaeological sites have previously been recorded in the New Zealand Archaeological Association Site Recording Scheme. These are R11/2071, the reported burial site of Ihaka Takaanini, R11/2072, a recreation area, and R12/1, a midden / settlement. Four items are also listed in the Auckland Council Cultural Heritage Inventory (**CHI**) within 500 m, including 20287 and 20288, which are mile posts, and 19740 and 19748, locations associated with the Walsh Brothers' historic flight. Of these, all were outside of the designation boundaries except for CHI item 20287 (Milepost 17).

During the field survey, which was a visual assessment only, it was noted that the areas assessed were highly developed and modified. No evidence of archaeology was visible in any exposed ground surfaces, and no houses or buildings with heritage values were identified. There was no remaining evidence of CHI item 20287 (Milepost 17).

In conclusion, the project areas overall are highly modified. No evidence of archaeology was observed, and no items have come to light during the desktop portion of the study. There is no reasonable cause to suspect that there will be any effects on in situ archaeology or heritage.

Summary of Assessment of Effects and Recommendations

Effect	Assessment	Recommendation
No likely construction or operational effects were identified.	N/A	N/A

1 Introduction

1.1 Purpose and scope of this Report

This Report has been prepared to inform the Assessment of Effects on the Environment (**AEE**) for two Notices of Requirement (**NoR**) being sought by Auckland Transport (**AT**) for the Project under the Resource Management Act 1991 (**RMA**). The Project proposes to construct five new bridges across five project areas: NoR 1 relates to four of the proposed project areas (referred to as Spartan Road, Manuia Road, Manuroa Road and Taka Street) while NoR 2 relates to the remaining project area (referred to as Walters Road). Specifically, this Report considers the actual and potential effects associated with the construction and operation of the TLC on the existing and likely future environment as it relates to archaeological and heritage effects and recommends measures that may be implemented to avoid, remedy and/or mitigate these effects.

This Report should be read alongside the AEE, which contains further details on the history and context of the TLC. The AEE also contains a detailed description of works to be authorised within each NoR, and the typical construction methodologies that will be used to implement this work. These have been reviewed by the author of this Report and have been considered as part of this assessment of archaeological and heritage effects. As such, they are not repeated here. Where a description of an activity is necessary to understand the potential effects, it has been included in this Report for clarity.

1.2 Report Structure

The structure of the Report is set out in Table 1 below. The assessment considers the actual and potential effects of the Project as a whole in the first instance. Where required, the assessment then focusses on the actual and potential effects arising within individual project areas (i.e., Spartan Road, Manuia Road, Manuroa Road, Taka Street which falls within NoR 1 and Walters Road which falls within NoR 2). Where appropriate, measures to avoid, remedy or mitigate effects are also recommended.

Where the individual project areas are discussed, sub-sections are arranged by project area in geographical order along the North Island Main Trunk line (**NIMT**) moving north to south.

Table 1: Report Structure

Sections	Section number
Description of the TLC	2
Overview of the methodology used to undertake the assessment and identification of the assessment criteria and any relevant standards or guidelines	3
Background and context	4.1
Assessment of general archaeological matters for the overall TLC network	4.2, 4.3, 4.4, 4.5, 4.6
Overall conclusion of the level of potential adverse archaeological effects of the TLC.	4.7

2 Project Description

The overall Project proposes the removal and/or replacement of four existing road over rail level crossings at Spartan Road, Manuroa Road, Taka Street and Walters Road in Takaanini. As further discussed in the AEE, the Project responds to functionality and safety issues anticipated at these crossings from the increasing number of train movements along the NIMT. The Project and indicative design also take into account the long-term planned expansion of the NIMT from the current two rail tracks to up to four tracks. The increased rail frequency will lead to greater barrier arm down-time and therefore increased severance and congestion in the area.

The Project primarily involves the construction of five new bridges to support safe and reliable east-west transport movement across the NIMT in Takaanini. This includes dedicated active mode bridges at Spartan Road and Manuroa Road, and two-lane arterial road bridges with active mode facilities at Manuia Road, Taka Street and Walters Road. Manuia Road is a new east-west connection in the network, acting as a replacement for vehicular trips that would have used the closed Spartan and Manuroa Road level crossings. The bridges and associated works/improvements are located across five project areas and will be progressed as two NoR packages (refer to Figure 1 and Table 2).

The indicative design has been prepared for assessment purposes, and to indicate what the final design of the Project may look like. The final design will be refined and confirmed at the detailed design stage. Key features of the works common across project areas include the following:

- Bridge structures across the NIMT with a vertical clearance from existing ground level to road surface of approx.7.8 m;
- Works to tie in with existing roads;
- Batters and/or retaining and associated cut and fill activities;
- Vegetation removal within the project areas to enable construction; and
- Areas identified for construction related activities including site compounds, construction laydown, alternative access, and construction traffic manoeuvring.

Further details of each project area are provided in the following sections below.

Table 2: The TLC project areas and NoR packages

NoR Reference	Project area	Description	Requiring Authority
Takaanini Level Crossings Project NoR 1	Spartan Road	Closure of the existing level crossing, construction of a new bridge with walking and cycling facilities across the NIMT and associated works.	Auckland Transport
	Manuia Road	Construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	
	Manuroa Road	Closure of the existing level crossing, construction of a new bridge with walking and cycling facilities across the NIMT and associated works.	
	Taka Street	Closure of the existing level crossing, construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	
Takaanini Level Crossings Project NoR 2	Walters Road	Closure of the existing level crossing, construction of a new bridge with general traffic lanes and walking and cycling facilities across the NIMT and associated works.	

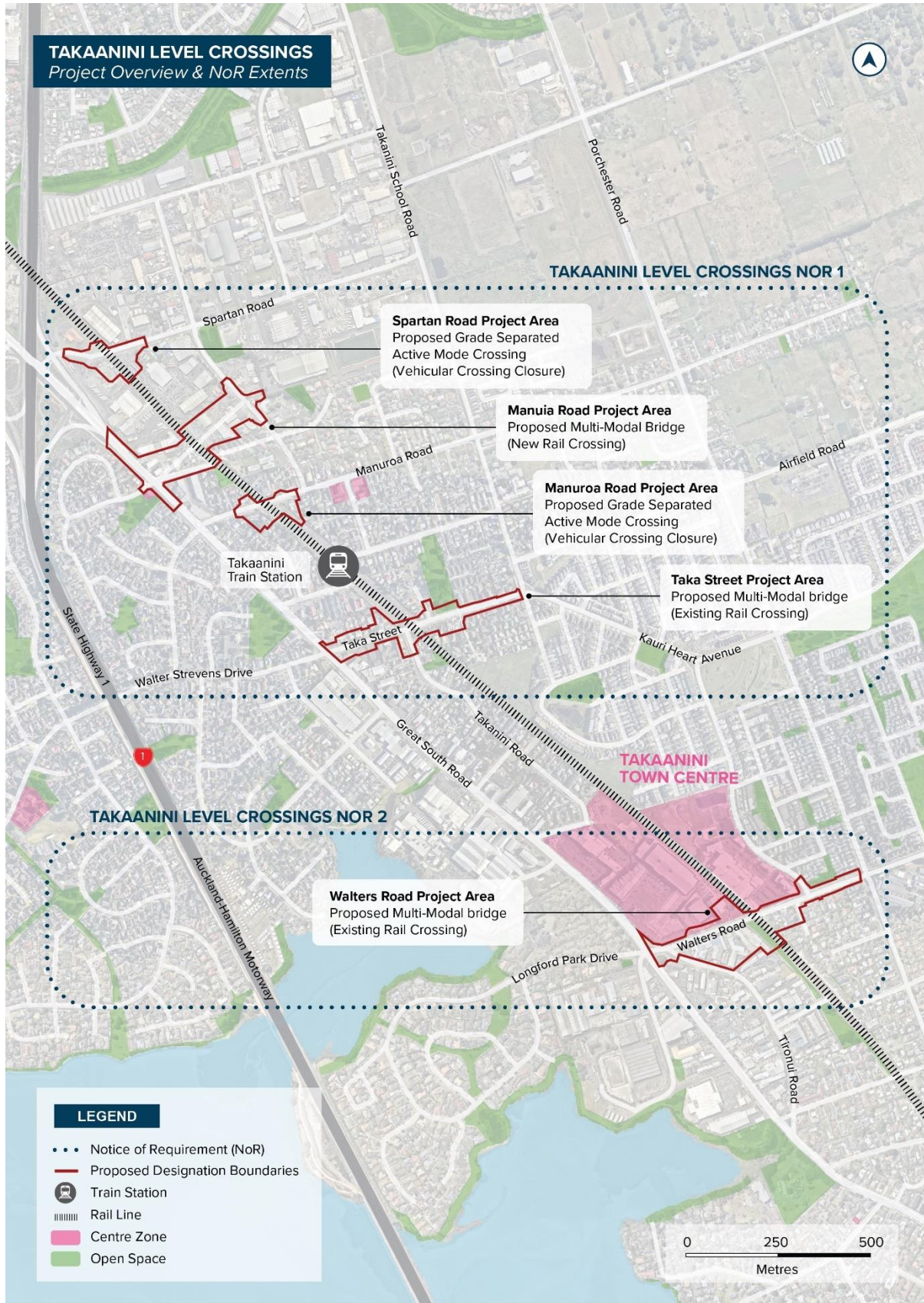


Figure 1: Overview of the Project, project areas and extent of the NoRs


2.1 NoR 1 – Spartan Road, Manuia Road, Manuroa Road and Taka Street

2.1.1 Spartan Road project area

As set out in Table 3 below, the proposed works within the Spartan Road project area include closure of the existing level crossing and replacement with a new active modes bridge across the NIMT.

Table 3: Overview of Spartan Road project area

NoR 1 - Spartan Road project area	
Key features	
Overview	<ul style="list-style-type: none"> • Closure of the existing road corridor to vehicular traffic across the NIMT. • Construction of an active mode bridge across the NIMT. • Construction of cul-de-sacs (accommodating footpaths) and works to tie into the existing corridor on either side of the NIMT along Spartan Road. • Ramps and stairs will connect to the bridge on either side (east and west) of the NIMT and will tie into the cul-de-sacs.
Other structures	<ul style="list-style-type: none"> • None
Other road closures / cul-de-sacs	<ul style="list-style-type: none"> • None

Speed environment	<ul style="list-style-type: none"> • 50km/h (where it is trafficked)
Access lanes	<ul style="list-style-type: none"> • None
Intersections	<ul style="list-style-type: none"> • None
Stormwater infrastructure	<ul style="list-style-type: none"> • Kerb and channel along road edge
Typical cross sections	 <p style="text-align: center;">ACTIVE MODE BRIDGE</p>

2.1.2 Manuia Road project area

As set out in Table 4 below, the proposed works within the Manuia Road project area include construction of a new grade-separated road crossing (bridge) across the NIMT. The new bridge will accommodate one vehicle lane in each direction and active mode facilities.

Table 4: Overview of the Manuia Road project area

NoR 1 – Manuia Road project area	
Key features	
Overview	<ul style="list-style-type: none"> • There is currently no existing east-west corridor / level crossing across the NIMT in this project area. • Construction of a new arterial road bridge across the NIMT accommodating two lanes (one in each direction) and separated active mode facilities. • Construction of new arterial road corridors tying into either side of the bridge (east and west of the NIMT) accommodating two vehicle lanes (one in each direction) and separated active mode facilities.
Other structures	<ul style="list-style-type: none"> • Retaining / abutment walls (either side of the NIMT)
Other road closures / cul-de-sac	<ul style="list-style-type: none"> • Reconstruction of existing cul-de-sac at Hitchcock Road (east of the NIMT) to tie into the new intersection at Oakleigh Avenue/ Manuia Road / Hitchcock Avenue (as described below) and upgrade with footpath.
Speed environment	<ul style="list-style-type: none"> • 50km/h
Access lanes	<ul style="list-style-type: none"> • Existing Manuia Road will be reconfigured into an access lane for remaining properties, tying in with the new Manuia Road corridor / bridge (west of NIMT).
Intersections	<ul style="list-style-type: none"> • Upgrade of the existing Great South Road / Challen Close / Manuia Road intersection to provide for signalisation, footpath upgrades and tie in works with the existing roads.

	<ul style="list-style-type: none"> • New roundabout intersection at Oakleigh Avenue / Manuia Road / Hitchcock Avenue with active mode facilities and tie in works.
<p>Stormwater infrastructure</p>	<ul style="list-style-type: none"> • Stormwater culvert and associated flood offset storage area • Kerb and channel along road edge <p><i>Note: NoR has also considered space requirements for future stormwater treatment devices (though subject to future Regional Plan consenting process)</i></p>
<p>Typical cross sections</p>	<p>The diagram illustrates two typical cross-sections of road infrastructure. The top diagram, labeled "TWO LANE ARTERIAL BRIDGE", shows a cross-section with a central two-lane road (yellow with upward and downward triangles), flanked by green bicycle lanes and blue pedestrian lanes. The bottom diagram, labeled "TWO LANE ARTERIAL", shows a similar cross-section but with a central two-lane road (yellow with upward and downward triangles), flanked by green bicycle lanes and blue pedestrian lanes, and includes trees and a kerb on the sides.</p>

2.1.3 Manuroa Road project area

As set out in Table 5 below, the proposed works within the Manuroa Road project area include closure of the existing level crossing and replacement with a new active modes bridge across the NIMT.

Table 5: Overview of the Manuroa Road project area

NoR 1 – Manuroa Road project area	
Key features	
Overview	<ul style="list-style-type: none"> • Closure of the existing road corridor to vehicular traffic across the NIMT. • Construction of an active mode bridge across the NIMT. • Construction of cul-de-sacs (accommodating footpaths) and works to tie into the existing corridor on either side of the NIMT along Manuroa Road. • Ramps and stairs will connect to the bridge on either side (east and west) of the NIMT and will tie into the cul-de-sacs.
Other structures	<ul style="list-style-type: none"> • None
Other road closures / cul-de-sac	<ul style="list-style-type: none"> • None
Speed environment	<ul style="list-style-type: none"> • 50km/h (where it is trafficked)
Access lanes	<ul style="list-style-type: none"> • None
Intersections	<ul style="list-style-type: none"> • None
Stormwater infrastructure	<ul style="list-style-type: none"> • Kerb and channel along road edge

Typical cross sections



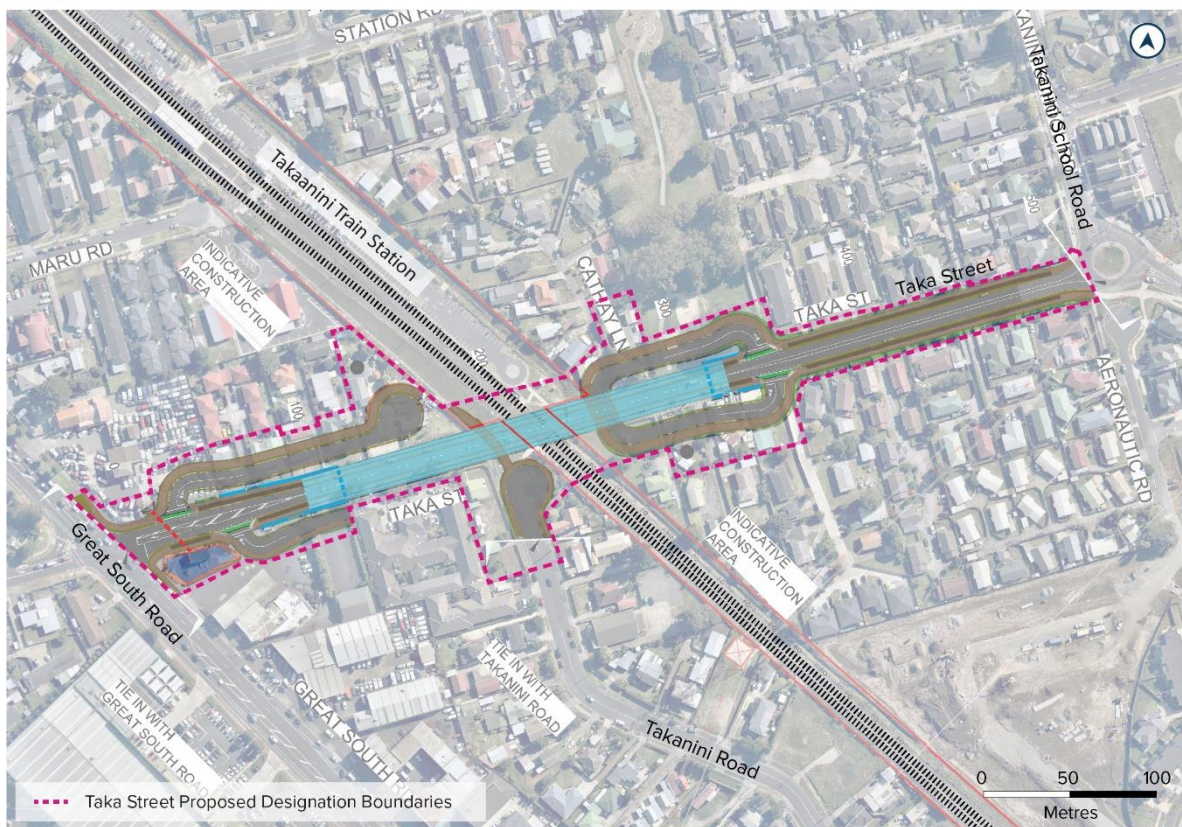
ACTIVE MODE BRIDGE


2.1.4 Taka Street project area

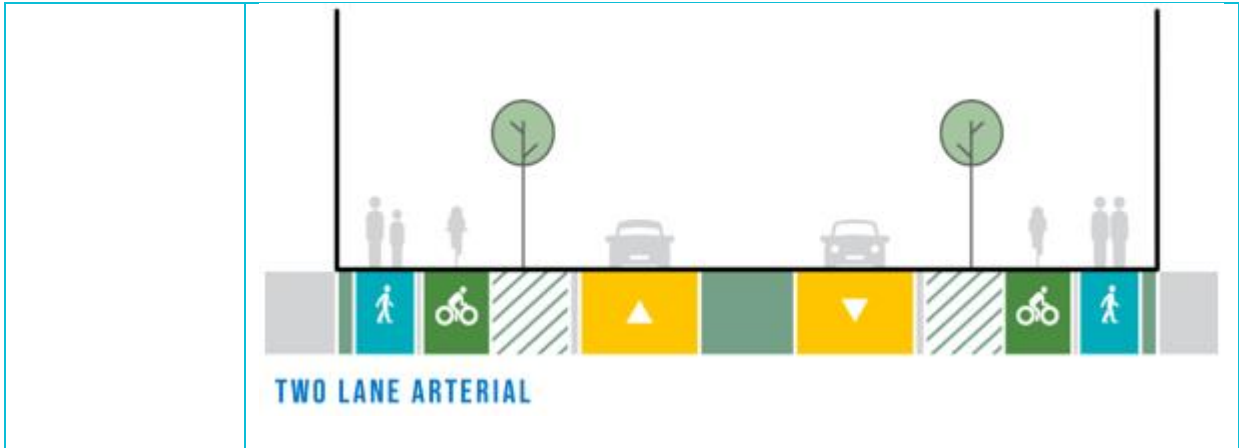
As set out in Table 6 below, the proposed works within the Taka Street project area include closure of the existing level crossing and replacement with a new grade-separated road crossing (bridge) across the NIMT. The new bridge will accommodate one vehicle lane in each direction and active mode facilities.

Table 6: Overview of the Taka Street project area

NoR 1 – Taka Street project area



Key features	
Overview	<ul style="list-style-type: none"> Construction of an arterial road bridge across the NIMT accommodating two vehicle lanes (one in each direction) and separated active mode facilities. Construction of arterial road corridors tying into either side of the bridge and existing intersections (east and west of the NIMT). The corridors will accommodate two vehicle lanes (one in each direction) and separated active mode facilities.
Other structures	<ul style="list-style-type: none"> Retaining / abutment walls
Other road closures / cul-de-sac	<ul style="list-style-type: none"> Closure of existing Takanini Road (north) to vehicular traffic at the intersection with Taka Street bridge i.e., no through-traffic provision. Replacement with a cul-de-sac and works to tie into the existing corridor of Takanini Road to the south. Active modes connection from Takanini Road to Takaanini Station (under the new Taka Street bridge).
Speed environment	<ul style="list-style-type: none"> 50km/h
Access lanes	<ul style="list-style-type: none"> Construction of four access lanes: <ul style="list-style-type: none"> Construction of a new access lane (cul-de-sac) located west of the NIMT and north of the Taka Street road corridor. It accommodates a footpath on the northern side and bi-directional traffic. The access lane will tie in with the Taka Street corridor and allows access to existing properties to remain and Takaanini Station. Construction of a new access lane located west of the NIMT and south of the Taka Street road corridor. It accommodates a footpath on the southern side and bi-directional traffic. The access lane will tie in with the Taka Street corridor and allows access to existing properties to remain. Construction of two access lanes located west of the NIMT (north and south of the Taka Street road corridor and looping under the new Taka Street bridge). They accommodate a footpath on the outer edge and bi-directional traffic. The access lane(s) will tie in with the Taka Street corridor and allows access to existing properties to remain including Takaanini Reserve and Cathay Lane.
Intersections	<ul style="list-style-type: none"> None
Stormwater infrastructure	<ul style="list-style-type: none"> Stormwater culvert and associated flood offset storage area Kerb and channel along road edge <p><i>Note: NoR has also considered space requirements for future stormwater treatment devices (though subject to future Regional Plan consenting process)</i></p>
Typical cross sections	 <p>The diagram illustrates a cross-section of a two-lane arterial bridge. It features a central roadway with two lanes for vehicles, each marked with a yellow triangle pointing in opposite directions. On either side of the roadway are dedicated lanes for active modes: a green lane for cyclists and a blue lane for pedestrians. Silhouettes of a person, a cyclist, and a car are shown above their respective lanes to indicate scale and usage. The entire bridge structure is supported by vertical posts on both ends.</p> <p>TWO LANE ARTERIAL BRIDGE</p>

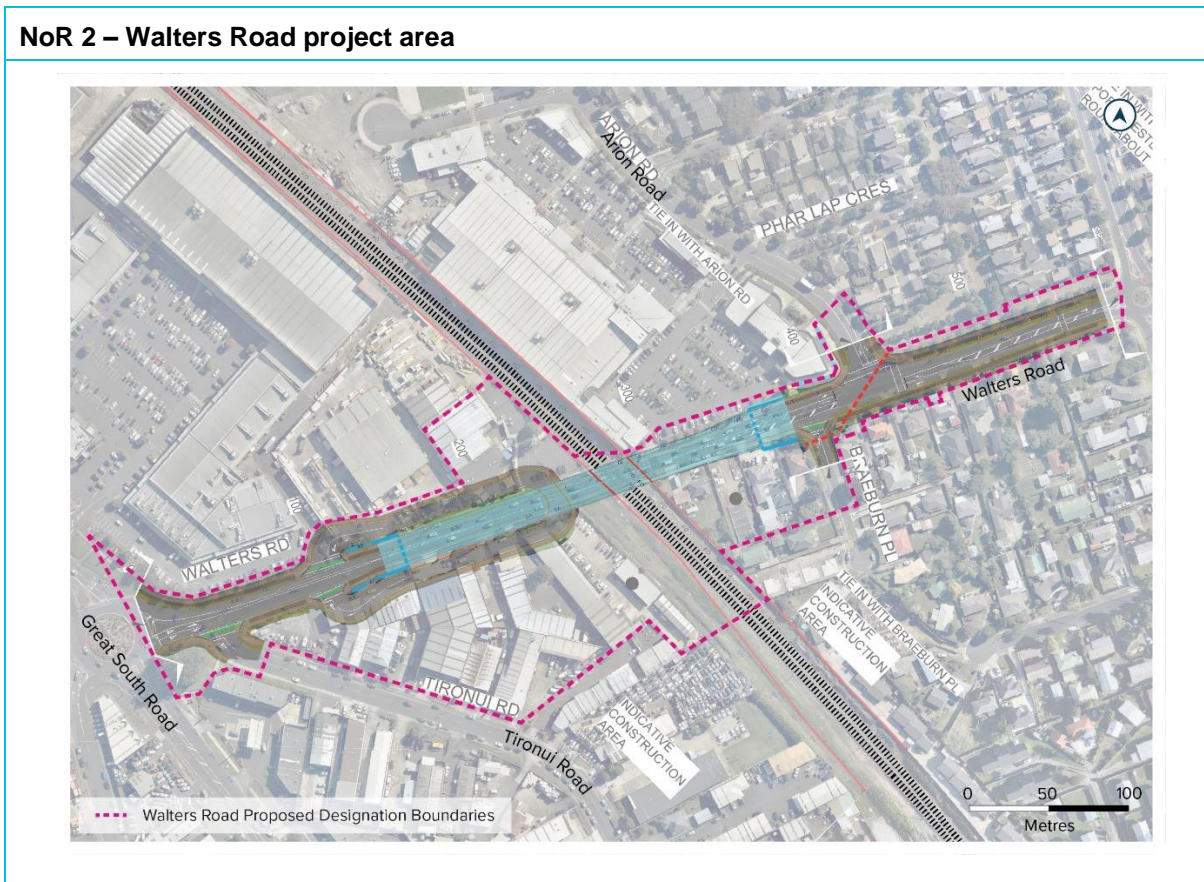



2.2 NoR 2 – Walters Road

2.2.1 Walters Road project area

As set out in Table 7 below, the proposed works within the Walters Road project area include closure of the existing level crossing and replacement with a new grade-separated road crossing (bridge) across the NIMT. The new bridge will accommodate one vehicle lanes in each direction and active mode facilities.

Table 7: Overview of Walters Road project area



Key features	
Overview	<ul style="list-style-type: none"> • Construction of an arterial road bridge across the NIMT accommodating two vehicle lanes (one in each direction) and separated active mode facilities. • Construction of arterial road corridors tying into either side of the bridge and existing intersections (east and west of the NIMT). The corridors will accommodate two vehicle lanes (one in each direction) and separated active mode facilities.
Other structures	<ul style="list-style-type: none"> • Retaining / abutment walls
Other road closures / cul-de-sac	<ul style="list-style-type: none"> • None
Speed environment	<ul style="list-style-type: none"> • 50km/h
Access lanes	<ul style="list-style-type: none"> • Construction of two access lanes located west of the NIMT (north and south of the Walters Road corridor and looping under the new Walters Road bridge). They accommodate a footpath on the outer edge and bi-directional traffic. The access lane(s) will tie in with the Walters Road corridor and allow access to remaining properties.
Intersections	<ul style="list-style-type: none"> • Upgrade of the existing Arion Road / Walters Road intersection to provide for footpath upgrades and works to tie into existing Arion Road. • Upgrade of the existing Braeburn Place / Walters Road intersection to provide for footpath upgrades and works to tie into existing Braeburn Place. • Upgrade of the existing Tironui Road / Walters Road intersection to provide for footpath upgrades and works to tie into existing Tironui Road.
Stormwater infrastructure	<ul style="list-style-type: none"> • Stormwater culvert • Kerb and channel along road edge <p><i>Note: NoR has also considered space requirements for future stormwater treatment devices (though subject to future Regional Plan consenting process)</i></p>
Typical cross sections	 <p>The diagram illustrates a cross-section of a two-lane arterial bridge. It features a central roadway with two lanes for vehicles, each marked with a yellow triangle pointing up and down. On either side of the roadway are dedicated lanes for active modes: a green lane for cyclists and a blue lane for pedestrians. The entire bridge structure is supported by concrete pillars. Below the diagram, the text 'TWO LANE ARTERIAL BRIDGE' is written in blue capital letters.</p> <p>TWO LANE ARTERIAL BRIDGE</p>



3 Assessment Methodology

3.1 Preparation for this Report

In preparing this Report, the following was undertaken:

- Reviewed the Takaanini Level Crossings Project Specialist Briefing Pack (2022);
- Undertook a site visit on 30 August 2022 with the Project team and other technical specialists (attended by Arden Cruickshank);
- Undertook a field assessment of the project areas on 15 September 2022; and
- Attended a number of hui regarding the Project (with the Project team and Manawhenua).

3.2 Methodology

The following digital data sources were consulted during research:

- Site records from the New Zealand Archaeological Association (**NZAA**) Site Recording Scheme (**SRS**) were obtained from ArchSite (<https://nzarchaeology.org/archsite/>);
- Records of previous archaeological investigations on Takaanini and in the wider vicinity were obtained from the Heritage New Zealand Pouhere Taonga (**HNZPT**) digital library (<https://dl.heritage.org.nz/greenstone3/library/collection/pdf-reports/>);
- Historic maps and plans held by Land Information New Zealand (**LINZ**) were accessed using QuickMap;
- Aerial Photographs held by LINZ, Auckland Council (**Council**) and in other online archives were searched (<https://data.linz.govt.nz/>; <https://www.aucklandlibraries.govt.nz/Pages/heritage-photographs.aspx>; <https://kura.aucklandlibraries.govt.nz/>);
- Historic aerials were accessed from Retrolens (<https://retrolens.co.nz/>); and
- The Council Cultural Heritage Inventory (**CHI**) and the Auckland Council GeoMaps GIS viewer were searched for any areas of cultural significance in the vicinity (<https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html>).

As noted above, a field assessment of the proposed five project areas at Spartan Road, Manuroa Road, Manuia Road, Taka Street, and Walters Road was undertaken on 15 September 2022. The proposed areas were walked over and inspected for evidence of archaeological material or features and historic structures which could be affected by the proposed works. No invasive techniques such as test pitting or probing were employed, due to the high likelihood of encountering services. The field survey was limited to road reserves and publicly accessible areas.

3.2.1 Limitations and accuracy of data

Archaeological sites have been recorded since the 1950s and the quality of site information is variable. Sites were initially recorded on 100 yd grid references, which were converted to 100 m grid references as the map data became metricated in the 1980s. This has led to sites potentially only having a 200 m accuracy.

Since the mid-1990s, sites recorded by hand-held Global Positioning System (**GPS**) are generally located to ± 5 m. To ensure all archaeological sites that could be impacted by works are assessed, a 200 m buffer was placed around all of the Project areas and all sites contained within that buffer were subject to categorical desktop assessment to see if they were likely to be impacted by the proposed

extent of works. Any sites within 200 m of the Project which could not be ruled out by this method will be considered as within the Project corridor until able to be proven otherwise.

3.3 Statutory Requirements

3.3.1 Heritage New Zealand Pouhere Taonga Act 2014

All archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 (**HNZPT Act**) and may not be destroyed, damaged, or modified without an authority issued by Heritage New Zealand Pouhere Taonga (**HNZPT**).

An archaeological site is defined in the HNZPT Act as:

(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).

3.3.2 Resource Management Act 1991

The RMA requires District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provides for the wellbeing of today's communities while safeguarding the options of future generations. The protection of historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (Section 6f of the RMA).

Historic heritage is defined in section 2 of the RMA as:

Those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from any of the following qualities: archaeological, architectural, cultural, historic, scientific, or technological.

Historic heritage includes:

- *historic sites, structures, places, and areas*
- *archaeological sites;*
- *sites of significance to Māori, including wāhi tapu;*
- *surroundings associated with the natural and physical resources (RMA Section 2).*

These categories are not mutually exclusive, and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

3.3.3 Auckland Unitary Plan: Operative in Part

The Auckland Unitary Plan: Operative in Part (**AUP:OP**) contains several applicable provisions regarding historic heritage. In the AUP:OP, archaeological sites are defined in accordance with the definitions outlined in the HNZPT Act.

A scheduled historic heritage place can be an individual feature, or encompass multiple features and/or properties, and may include public land, land covered by water and any body of water. A historic heritage place may include cultural landscapes, buildings, structures, monuments, gardens and plantings, archaeological sites and features, traditional sites, sacred places, townscapes, streetscapes, and settlements. The criteria for the identification and scheduling of these places is discussed in Chapter B5 2.2 of the AUP:OP.

Additionally, there are heritage provisions in Chapters E26 Infrastructure and E11/E12 land disturbance of the AUP:OP.

4 The TLC NoRs – Overall network

This section assesses common or general archaeological and heritage matters across the entire TLC network i.e., the combination of road closures and/or grade separated crossings across the five project areas. This section also recommends measures to avoid, remedy, or mitigate actual or potential adverse effects considering the network as a whole.

4.1 Background/Context

The Project is within Takaanini which is located at the south-eastern edge of the Manukau Harbour, on the eastern side of the Pahurehure Inlet. It is located in between Manurewa, to the north, and Papakura, to the south, and these places have a collective history.

4.1.1 Pre-European Māori history

Pre-European Māori occupation across the Manukau lowlands was extensive and was focused in large part along waterways and coastlines, with gardening taking place in those areas with fertile volcanic soils, such as the large gardening complex at the Matukurua Stonefields or the foothills of the Hūnua Ranges. An in-depth history of pre-European settlement of the wider Manukau lowlands area has been discussed in previous reports (see Murdoch 1990; Te Roopu Kaitiaki o Papakura 2007).

Settlement of the Manukau lowlands can be traced back to the arrival of the Tainui waka, which entered the Manukau Harbour in the 14th century (Murdoch 1990). The Harbour is thought to have been first pointed out by a priest aboard the waka, Taikehu, and was named by the Tainui captain Hoturoa (Williams 2016). The strategic location meant that multiple different iwi occupied the area intensively with seasonal settlements (Harlow et al. 2007; Murdoch 1990).

Takaanini was mostly swampland upon settlement, cut with a myriad of small waterways. These wetlands would have been rich in resources and used for hunting waterfowl and eels, for transportation, storage, and near the edges of some wetlands, the cultivation of taro. There was also once a large kauri forest across Takaanini, as ancient stumps have been unearthed. It is likely the forest was destroyed by a natural catastrophe, well before human settlement (Craig 1982).

The Papakura portage was located between Takaanini and Papakura, starting from the Pahurehure Inlet, following Old Wairoa Road, heading to the Wairoa River at Clevedon (Te Roopu Kaitiaki o Papakura 2007). The Papakura Stream which runs just north of the project areas was also an important transport route and another source of fish, eels, and water birds, as well as building and weaving materials (Te Roopu Kaitiaki o Papakura 2007).

One important 17th century figure who was present in Takaanini was Tainui chief, Maki. Maki was from Kawhia but later lived near Waikato Heads and had interactions with the tribes of Manukau. Maki aimed to reassert Tainui claims to the Manukau area, so he went and lived with chief Whauwhau, in his kainga at Takaanini. When Maki was visited by Taihua, one of his kin from Tamaki, he learned that Taihua's son had been killed by Whauwhau's people. Maki and his people went on to kill Whauwhau and gain a foothold in the area (Craig 1982).

4.1.2 19th and 20th century history

The earliest European settlers nearby in Papakura were the Cole, Willis, and McLennan families, who started a colony in the late 1830s, but European settlement of the area did not begin in earnest until the late 1840s. By 1848 there were 23 European settlers in Papakura. A nearby settler, Johnson, notes that Takaanini, as well as nearby Kirikiri, remained a Māori village, its location marked by a distinctive patch of tall trees (Craig 1982).

By the 1850s, there was a growing number of European settlers wanting to purchase land in Papakura, and many Māori were alienated from their land. A missionary from the Wesleyan Mission Station, which was built at Orua Bay in the late 1830s, visited the Māori settlement of Takaanini in the late 1840s and noted that many Māori had fled the area for fear of hostility from their European neighbours (Craig 1982).

By 1856, the concept of a Māori king was being discussed openly, as a way of unifying Māori and to provide a stronger political position to iwi and hapū that were being targeted by European land prospectors. However, the Crown saw the Kīngitanga movement as a direct attack on British sovereignty and by the late 1850s the seeds of the land war had already taken root. The Kīngitanga movement opposed the sale of Māori land and although some were receptive to leasing, the Crown saw this as a further obstruction to development.

Construction of Great South Road from Auckland began in 1843 under the orders of Governor Grey who was preparing for war with Māori (Walrond 2010). The road was constructed by British Army troops and provided access to north Waikato from Auckland. By 1855, the road construction was complete to Drury, and Grey had by then obtained additional British troops and armour-plated steamers (Walrond 2010).

Tensions between Māori and Europeans in the Auckland and Waikato districts gradually increased and in July 1863, Governor Grey issued an ultimatum to the Waikato tribes around Auckland to immediately swear an oath of allegiance to the Queen and to put down their arms. Those who did not comply were told to remove themselves to the Waikato, beyond the Mangatāwhiri, effectively declaring themselves as rebels against the Government (O'Malley 2019). Papakura became a military garrison and there was an influx of people moving into the area.

When the land wars began, Ihaka Takaanini, namesake of the Takaanini area, was chief of Te Ākitai Waiohū, and a group of people led by Ihaka Takaanini and the Mohi Te Ahi a Te Ngu of Ngāti Tamaoho set up a kainga named Te Aparangi near the Kirikiri Stream (Murdoch 1990). In July of 1863, Te Aparangi was raided by British forces and the kainga destroyed. Those at Te Aparangi were captured as prisoners (Campbell and Ross-Sheppard 2013). A year later Ihaka Takaanini died and is buried at an unknown location on what was Pa Farm, now between the Auckland – Hamilton Motorway and Great South Road (Clough and Baquié 2000). The recorded point on the SRS for Ihaka Takaanini's burial is near Walter Strevens Drive, between State Highway 1 (**SH1**) and Great South Road but the point is based on loose information and the record acknowledges his burial could be elsewhere nearby.

The land wars, land confiscation and subsequent subdivision played an important role of European settlement of the area. Land east of the railway was subdivided and made part of The Waikato Immigration Scheme, a farming incentive to attract immigrants to the area, making land clearance necessary for farming. Surrounding the swamps in Takaanini were Kauri and Kahikatea, as well as swamp kauri in the swamp. This timber was processed for housing and fencing (Clough and Baquié

2000). The swamp was drained in the 1860s, and dairy farming began. Once the land was clear of timber and swamps were accessible, kauri gum digging also began, which became very popular from the late 1860s. In the 1890s there were around 1000 gum diggers around Alfriston, Takaanini, and Papakura who all camped in the area (Clough and Baquié 2000). At Takaanini, the main camp was centered along Porchester Road (Craig 1982).

4.1.3 Archaeological background

Rod Clough and Barry Baquié briefly assessed the cultural heritage landscape of Takaanini in 2000, and many of the cultural heritage sites are also archaeological sites (Clough and Baquié 2000). Here they determined there are very few significant known archaeological sites in the area, but those that are significant are mostly pre-1900 European houses and industry buildings. One of the sites closest to the Project is recorded site R11/2071, the recorded burial location of Ihaka Takaanini, chief of Te Ākitai. The true location of his burial is unknown. It is said he was buried in a Māori cemetery on what was called Pa Farm. Clough and Baquié (2000) record that in their communication with Gordon Broome, that Pa Farm was later Walter Streven's farm, which is an area between the Auckland - Hamilton Motorway and Great South Road. The SRS location has been shifted twice since recorded, the record acknowledges the location is unknown. Further south, Russell Foster assessed a proposed subdivision in 2006 which determined most archaeological evidence that is available suggested that pre-European Māori occupation was greater south towards Pukekiwiriki Pā and none were at risk within the subdivision (Foster 2006a). Foster also assessed the extension of waste and stormwater works nearby (Foster 2006b). No new sites were recorded during the works.

4.1.4 Results of desktop research

Within 500 m of the proposed designation boundaries, three archaeological sites have previously been recorded in the NZAA SRS. These are R11/2071, the reported burial site of Ihaka Takaanini, R11/2072, a recreation area, and R12/1, a midden / settlement. Four items within 500 m of the proposed designation boundaries are also listed in the Auckland Council CHI, including 2087 and 2088, mile posts, and 19740 and 19748, locations associated with the Walsh Brothers' historic flight. These items are assessed below briefly.

While the NIMT was originally built and completed by 1875, the Takanini Railway Station is not a pre-1900 archaeological site. The original station having been built in 1913, then named Lupton's Crossing (Scoble 2010). A post office opened on site in 1915 and was there for 5 years. The 1913 station building was demolished and removed in 1970 (Scoble n.d).

4.1.4.1 NZAA sites

R11/2071 – Burial

This site was recorded in 2000 by Barry Baquié. Ihaka Takaanini, Te Ākitai Waiohua Chief, was said to have been buried in an urupā on Pa Farm, which later became Walter Strevens' farm. The precise location of this site is unknown; it is only known to be somewhere between SH1 and Great South Road. The site record was updated in 2002 by Matt Felgate and in 2006 by Russell Foster, but no new information was provided as to Ihaka Takaanini's burial location.

This site is outside of the designation boundaries and will not be assessed further.

R11/2072 – Glenora Park

This site was first recorded by Barry Baquié in 2000 and refers to the Glenora Park raceway. The raceway was built in the 1860s and the first races held in 1872. The original grandstand which was located on the eastern side of the track burnt down in the 1880s, with a new grandstand built on the western side (Tonson 1966). Baquié reports that in 1899 the western grandstand was home to many of the gum diggers in the area and burned down that same year. A replacement grandstand was again built and was deconstructed and rebuilt at Clevedon sometime after 1914. A new racetrack was built in 1924 and it is not known how much of the original may survive beneath the surface.

The Glenora Raceway was also the site of the Walsh Brothers' historic flight of the country's first powered airplane in 1910 and there is a stone cairn commemorating this on site.

This site is outside of the designation boundaries and will not be assessed further.

R12/1 – Midden / settlement

This site was briefly recorded by DeSimmons in 1961 as a midden and possible settlement, having been destroyed and built over. Matt Felgate, Greg Walter, and Vanessa Tanner updated the site record in 2002, noting that while the dairy factory would have likely destroyed anything in its location, the foreshore was largely unmodified and could have remnants of archaeology.

This site is outside of the designation boundaries and will not be assessed further.

4.1.4.2 CHI items**19740 – Walsh Brothers' flight**

This item refers to the 1911 Walsh Brothers' historic flight of the New Zealand's first powered aeroplane at Glenora Park (R11/2072) and the stone cairn commemorating this. This item was listed in the CHI by Bruce Ringer in 2012.

This item is outside of the designation boundaries and will not be assessed further.

19748 – Glenora Park Grandstand

This is a duplicated listing referring to the 1860's Glenora Park Grandstand (R11/2072), recorded in the CHI by Bruce Ringer in 2012.

This item is outside of the designation boundaries and will not be assessed further.

20287 and 20288 - Mileposts

In the 1860s, a series of 22 mileposts were constructed along Great South Road to mark the mileage from Auckland to Drury. They were triangular in shape and made from totara. Only 2 mileposts remain standing; these are mileposts 15 and 22, but 15 has been moved from its original position and 22 is suspected to be a later replica. Item 20287 refers to the location of Milepost 17 and Item 20288 refers to the location of Milepost 18 though both mileposts are no longer present.

Item 20287 (Milepost 17) has been identified within the designation boundaries. Item 20288 (Milepost 18) is outside the designation boundaries and will not be assessed further.

4.1.5 Results of field assessment

All five proposed project areas were walked over from the footpaths and publicly accessible areas. No private properties were accessed during this survey. Across the overall network, the land has been extensively developed and modified with roads, the NIMT railway, housing, and commercial and industrial buildings (Figure 2). Most of the survey area consists of impervious surfaces, limiting the survey somewhat to the street berms, railway corridor and at Takaanini Reserve (between Station Road and Taka Street) (Figure 3). No evidence of archaeology was visible at any exposed ground surfaces.

Houses within the project areas were also viewed from the roadside to determine if any may have archaeological or heritage values but all houses were relatively modern, with most being single storey weatherboard / fibrolite houses (Figure 4). The main theme of the neighbourhood appears to be a lack of consistency in age, fabric, and design of houses. The location of CHI item 20287 (Milepost 17) was walked over but there was no evidence related to the milepost visible (Figure 5).



Figure 2: View east down Spartan Road, showing industrial area.



Figure 3: View of exposed ground near railway corridor and park and ride at Manuroa Road, used for drainage.



Figure 4: Common style of housing within the project areas.



Figure 5: Approximate location of Milepost 17 (CHI 20287).

4.2 Positive archaeological and heritage effects

No positive archaeological or heritage effects have been identified.

4.3 Assessment of construction effects

The project areas overall are highly modified. No evidence of archaeology was observed, and no items have come to light during the desktop portion of the study. There is no reasonable cause to suspect that the proposed works will affect any in situ archaeology or heritage.

4.4 Recommended measures to avoid, remedy or mitigate construction effects

As there is no reasonable cause to suspect archaeological or heritage features will be impacted by the anticipated works, no measures to avoid or mitigate any effects are needed. Works must be undertaken under the Accidental Discovery Rule in Chapter E11.6.1 of the AUP:OP.

4.5 Assessment of operational effects

The project areas overall are highly modified. No evidence of archaeology was observed, and no items have come to light during the desktop portion of the study. There is no reasonable cause to suspect that there will be any operation effects on in situ archaeology or heritage.

4.6 Recommended measures to avoid, remedy or mitigate operational effects

As there is no reasonable cause to suspect archaeological or heritage features will be impacted by any operational effects, no measures to avoid or mitigate any effects are needed.

4.7 Summary and Conclusions

Through desktop research and a site-walkover, it was determined that there is no reasonable cause to suspect that archaeological or heritage features will be impacted by the anticipated works, in large part because the project areas are highly modified. All known archaeological sites fall outside of the proposed designations except for one CHI item which is within a proposed designation but has been destroyed with no physical remains (20287 – milepost).

A summary of the assessment of effects and recommendations for the overall network is displayed in Table 8 below.

Table 8: Summary of Assessment of Effects and Recommendations - Overall network

Effect	Assessment	Recommendation
Construction		
No likely construction effects identified	N/A	N/A
Operational		
No likely operational effects identified	N/A	N/A

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