

**Mill Road:
2025 archaeological assessment**

**report to
Waka Kotahi NZ Transport Agency**

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s9(2)(a)

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Executive Summary

This assessment of archaeological effects report prepared to support the substantive application for the Mill Road Stage 1 Project (the Project). The original desktop archaeological assessment for Designation 6786 was undertaken in 2013. An addendum was completed in 2015. Neither assessment meets current reporting requirements under NZTA P45 Heritage specification (2024) or Heritage New Zealand Pouhere Taonga (HNZPT) AGS2 specification (2019).

The proposed extent of works contains two known heritage sites: the Alfriston Meeting House (R11/2074) and the Alfriston Post Office (R11/2069) and abuts a third, the St John's Redoubt (R11/534). The known extent of the redoubt has been avoided and although associated features and artefacts may be encountered nearby, the site itself will not be affected.

Due to the density of recorded archaeological sites around Alfriston and the vegetation coverage over much of the alignment, it is possible that additional previously unrecorded sites, associated with both pre-European Māori and 19th century settlement may be encountered during works.

Although any archaeological or historic heritage sites encountered within the proposed area of works, either known or unknown, are likely to be destroyed, subsequent archaeological investigations undertaken during construction will help provide information about the sites.

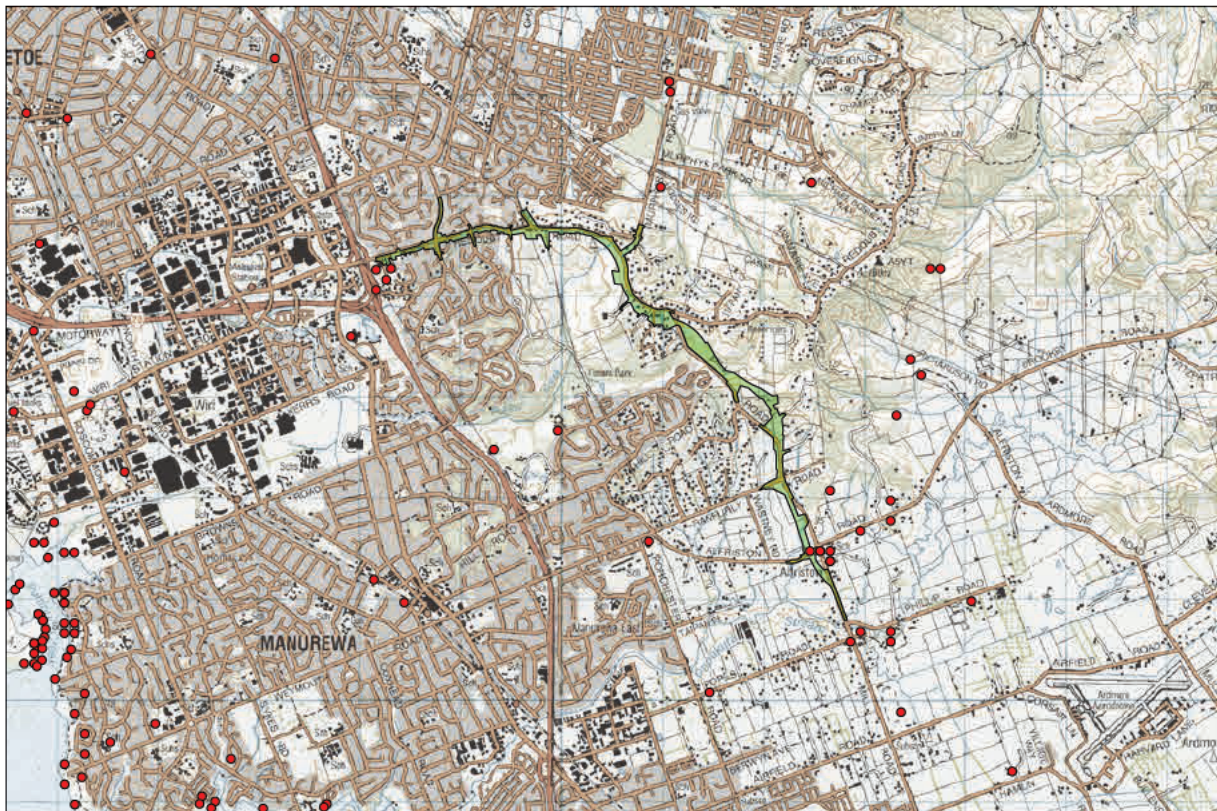


Figure 1. Map of proposed works showing recorded archaeological and heritage items in the vicinity.

1 Introduction

NZ Transport Agency Waka Kotahi (NZTA) have progressed an Investment Case and supporting consenting strategy for the delivery of Mill Road Stage 1. This stage of the project is a 7 km road with associated infrastructure linking Manukau and Alfriston (Figure 1). A desktop assessment for a previous iteration of the project (Tatton and Clough 2013) identified several areas of archaeological and historic heritage along the proposed route including The Alfriston Meeting House, recorded as R11/2074 in the New Zealand Archaeological Association (NZAA) Site Recording Scheme (SRS), which will be affected by the project. NZTA now propose a substantive application to construct the road under the Fast-Track Approvals Act 2024. NZTA commissioned CFG Heritage Ltd to undertake an updated assessment of the project to meet current guidelines under the NZTA P45 Heritage specification for land transport infrastructure (2024) and HNZPT Archaeological Guideline Series No.2 (2019).

2 Assessment approach and methodology

2.1 Preparation for this report

Work undertaken for this report commenced in April 2025. In summary, the preparation for this report has included:

Review of original assessment (Tatton and Clough 2013) and addendum (Tatton et al. 2015) to determine if they meet the requirements of the Heritage New Zealand Pouhere Taonga (HNZPT) AGS2 specification (2019) and the NZTA P45 Heritage Specification for Land Transport Infrastructure.

- Desktop research of the route using multiple online and paper resources which are listed in the methodology section below.

- Field survey undertaken on various dates in May and June 2025 as property access was made available. This field survey concentrated on known historic heritage items, as well as areas where potential archaeological sites may be encountered during works.
- Several workshops undertaken with relevant experts for this project to ensure all potential effects on archaeology and historic heritage were addressed.

2.2 Methodology

The following resources were considered in this assessment:

- All recorded sites in the New Zealand Archaeological Association (NZAA) Site Recording Scheme (SRS) within 200m of the proposed extent of works were accessed from the New Zealand Archaeological Association Site Recording Scheme through ArchSite (<https://arch-site.org.nz>, accessed 12 May 2025) and incorporated into the project specific Geographic Information System (GIS) workspace maintained by CFG Heritage.
- The HNZPT digital library (<https://www.heritage.org.nz/protecting-heritage/archaeology/digital-library>, accessed 12 May 2025) was searched for records of archaeological investigations in the area.
- The HNZPT List / Rārangī Kōrero (<https://www.heritage.org.nz/the-list>) was searched on 12 May 2025 to see if any listed items were within the scope of works
- Old maps and survey plans held by Land Information New Zealand (LINZ) were accessed on 12 May 2025 using QuickMap software.
- Aerial Photographs held by LINZ (<https://data.linz.govt.nz/>), Auckland Council (<https://geomapspublic.aucklandcouncil.govt.nz/>) and Retrolens (<https://retrolens.co.nz/>) were searched on 12 May 2025.
- Local soil information was searched on the S-Map Online database maintained by Landcare Research (<https://smap.landcareresearch.co.nz/>) accessed on 12 May 2025.
- Potential vegetation based on soil information was obtained from the Land Resource Information Systems database (<https://iris.scinfo.org.nz/>) accessed on 12 May 2025.
- Overland flow path and watershed datasets were obtained from the Auckland Council Open Data Portal (<https://data-aucklandcouncil.opendata.arcgis.com/>) on 12 May 2025.
- The Auckland Council GeoMaps GIS viewer (<https://geomapspublic.aucklandcouncil.govt.nz/>) and Auckland Unitary Plan Viewer (<https://unitaryplanmaps.aucklandcouncil.govt.nz/>) were accessed on 12 May 2025 and searched for any areas of Historic heritage significance.
- The files pertaining to CHI items of interest identified through the GeoMaps GIS viewer were requested from and provided by the Auckland Council on 14 May 2025.
- Unitary plan changes were accessed on 12 May 2025 to see if any additional changes have been proposed which are not currently displaying in the Auckland Council GIS layers.
- Several written texts on the history of the area;
- BRIEFING PACK 3 – Management Plan(s) and other approvals Mill Road Corridor – Stage 1 (3 February 2025) (provided by the project team);
- The Previous assessment (Tatton and Clough 2013) and the follow up addendum for the project (Tatton et al. 2015) were used for historical background.
- The Arboricultural Report (Le Claire 2013) that was prepared for the project to check for notable trees.
- NZTA P45 Heritage specification for land transport infrastructure, Version 2 (Dated 10 April 2024)
- HNZPT Archaeological Guideline Series No.2, Writing Archaeological Assessments (Dated July 2019)

2.2.1 Field survey

The extent of the proposed works was subject to a mix of roadside drive by with the built heritage specialists and foot survey, with nine properties targeted for closer inspection of either heritage items or due to their proximity to waterways (Figure 2 and Figure 3). Although allowance was made to utilise a 1 m stainless steel gum spear to identify sub-surface archaeological deposits, no more invasive methods such test pitting was undertaken.

2.3 Limitations

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, archaeological sites recorded by hand-held GPS are generally located to ± 5 m.

The Auckland Council CHI is not currently active, with the last upload of data taking place in February 2023 (Rachel Ford, Auckland Council Heritage Unit, pers. coms). These items have a similar accuracy issue as recorded archaeological sites, with some of the items having location issues.

2.3.1 Trees

There were no recorded notable trees in the Auckland Unitary Plan (operative in part) identified during desktop assessment by Tatton and Clough (2013) within the extent of works, which was confirmed by this assessment. Trees were assessed in 2013 as part of the original consent process (Le Claire 2013), which has been read as part of this assessment to confirm no notable trees are within the project extent.



Figure 2. Properties on Redoubt Road that were surveyed.

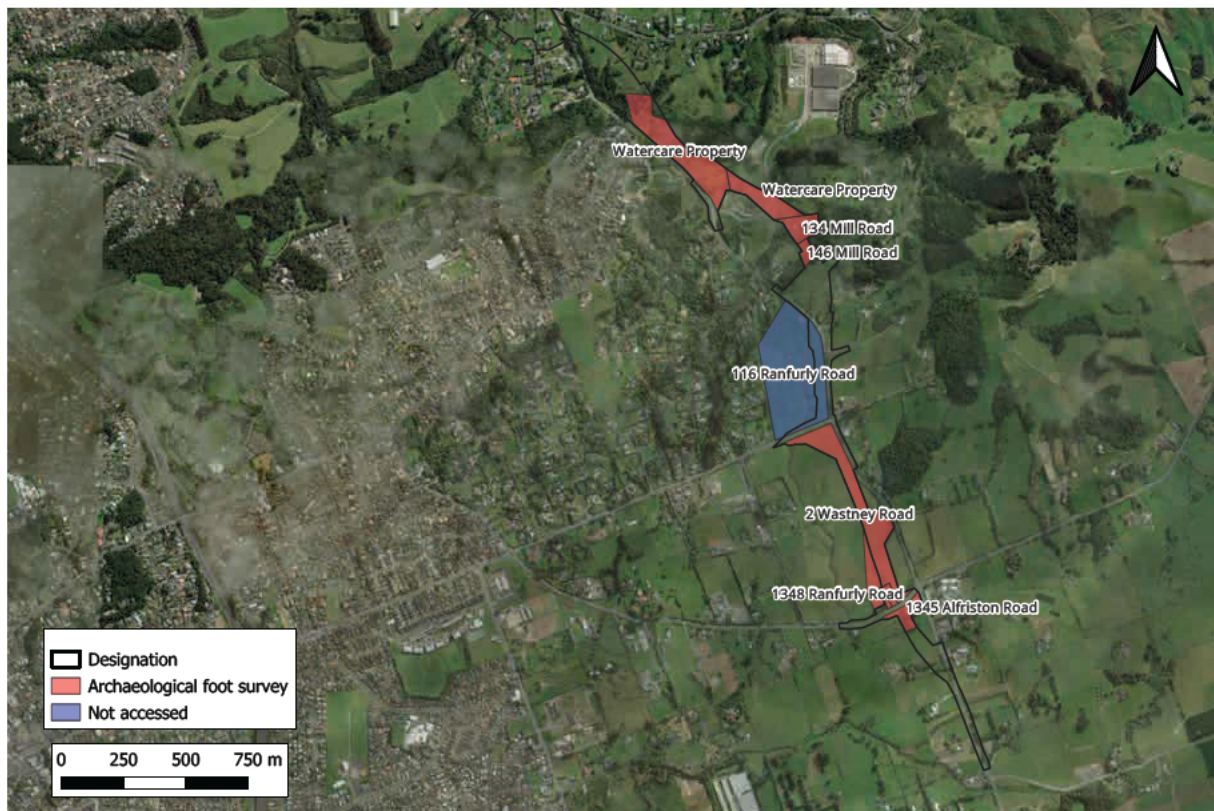


Figure 3. Properties on Mill Road that were surveyed.

3 Past, existing and future environment

The route covers approximately 7 km and runs in a south easterly direction along a prominent ridgeline that extends from the hills that form the Whakakaiwara Peninsula to the east of the project area (Figure 4 and Figure 6). This ridgeline forms the separation between the Greater Tāmaki watershed to the north and the Manukau Harbour watershed to the south (Figure 6). The majority of the project area is dominated by ultic clays which are imperfectly or poorly drained, with the exception of the land immediately around Alfriston which is moderately well drained (Figure 5). The land through the designation is generally not ideal for pre-European Māori horticulture.

Prior to the arrival of Māori, the northern portion of the project area would have supported forest dominated by kauri, taraire, kohekohe and tawa, with the southern portion moving into kahikatea where drainage got poorer. To the south of the project area were wetlands which would have been dominated by harakeke and other wetland vegetation. It is currently a mix of residential and grazing land.

3.1 Pre-European Māori settlement and themes

Only a brief general background is provided here, as only mana whenua can provide in-depth knowledge on the pre-European Māori land use of the area.

The landscape in this area defined Māori settlement, with the ridge along Redoubt Road separating two main watersheds which drain into the two different harbours: the Greater Tāmaki watershed to the north and the Manukau watershed to the south (Figure 6). These different watersheds and associated Māori settlements are discussed below.

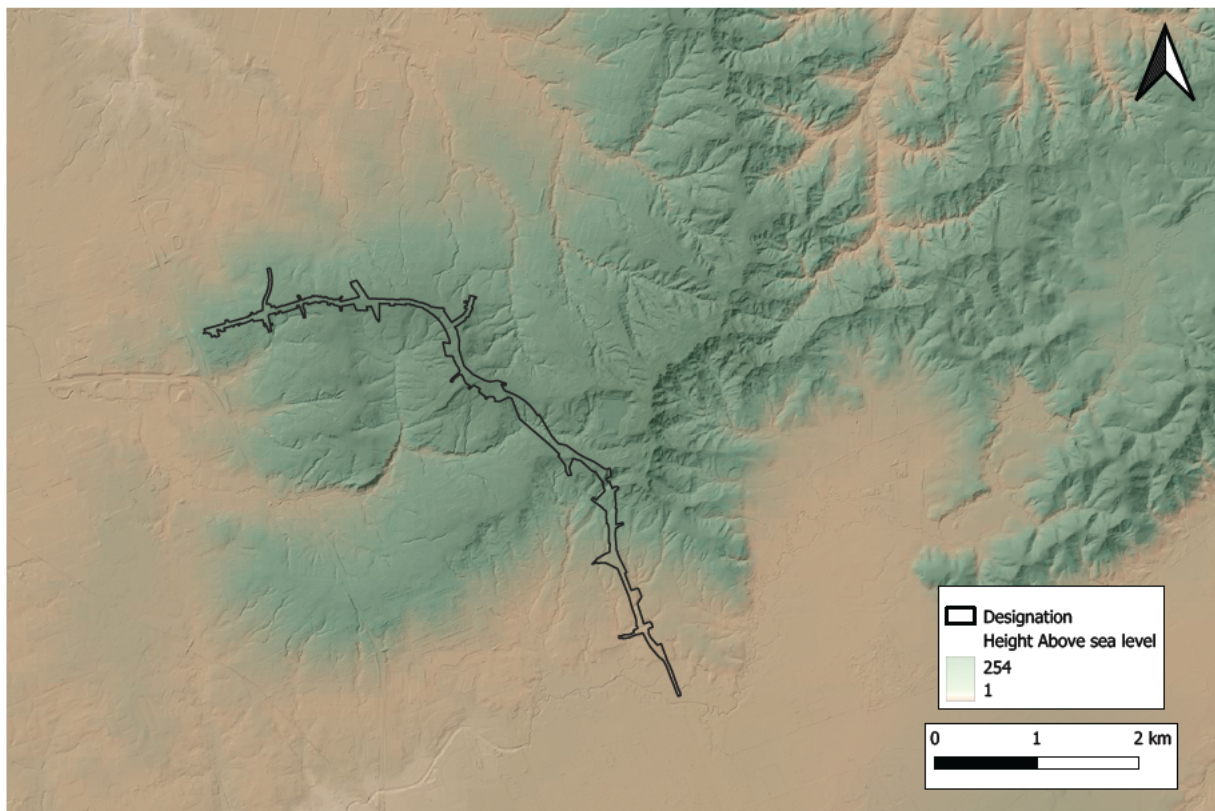


Figure 4. Project area showing the elevation of the landscape.



Figure 5. Project area showing soil types.

3.1.1 Greater Tāmaki watershed

The northern side of Redoubt Road is the headwaters of the Ōtara Creek, which drains into the Tāmaki River. This catchment supported a permanent Māori population associated with Te Puke ō Tara and Mātanginui, two maunga associated with the East Tāmaki Volcanic Field (Figure 6). This area had an extensive stone field gardening system covering much of the modern suburbs of Ōtara, East Tāmaki and Botany with growing structures, walls and other related horticultural areas observed during initial archaeological surveys in the 1980s (Rickard 1985). Unfortunately, most of this has been destroyed through development since the 1980s and fine-grained archaeological mapping and recording do not exist for this once extensive gardening area (Cruickshank 2023a).

3.1.2 Manukau watershed

The southern side of the works area drains into two main waterways, the Puhinui Stream and the Papakura Stream. The Puhinui Stream was a major waterway that runs through the modern suburbs of Manukau and Wiri into the Manukau Harbour, and forms a southern boundary for the Matukurua stonefields, which were part of an extensive gardening system centred around the maunga of Matukutūruru and Matukutūreia (Figure 6). Gardens and habitation areas once surrounded these volcanic cone pā, with evidence identified in the form of hearths, cooking remains and stone or earth and stone walls indicating both short-term field shelters and more substantial whare (Cruickshank 2023b).

The Papakura Stream separates the modern suburbs of Papakura and Manurewa, and although soils were not of as high a quality as those present around the Ōtara and Puhinui Streams, it provided important access to resources associated with wetlands, especially harakeke, tuna (eels) and waterfowl. The Papakura Stream also provided easy access into the Wairoa Valley to the south of the proposed works area (Figure 6), which allowed access to the northern extent of Tikapa Moana-o-Hauraki / Firth of Thames between Maraetai and Kawakawa Bay (Murdoch 1996).

3.1.3 Project area

Due to the dominance of poorly draining soils, the project area itself is unlikely to have supported a permanent Māori population. It is likely that the ridge along Redoubt Road likely had walking tracks for accessing the Whakakaiwara Peninsula and the forest resources that it contained. Recorded archaeological sites in this area do show that there were discrete sites with storage pits and likely temporary settlements on raised lands around the wetlands, and it is likely that there are more unrecorded sites in the area, including around Alfriston.

3.2 *Historic settlement and themes*

Historic settlement near the project area was sporadic prior to the construction of the Great South Road and the North Island Main Trunk (NIMT). Early European settlement mainly consisted of farmsteads, with one main settlement in the project area, Alfriston, dating from the mid-19th century. The Invasion of the Waikato had some minor influence on the area, with the construction of St. Johns Redoubt at the northwest extent of the project area, but this redoubt was not directly involved in fighting.

Into the 20th century the area remained predominantly rural, with an increase in housing due to the construction of the Southern Motorway in the 1960s. These historic settlement themes are discussed in more detail below.

3.2.1 Early contact

Some of the earliest known interactions between Europeans and Māori in the area were with Rev. Samuel Marsden in 1820, when he visited Mokoia Pā in modern-day Panmure and climbed Maungarei / Mt Wellington, where he sighted the Manukau Harbour. He was not able to ascertain

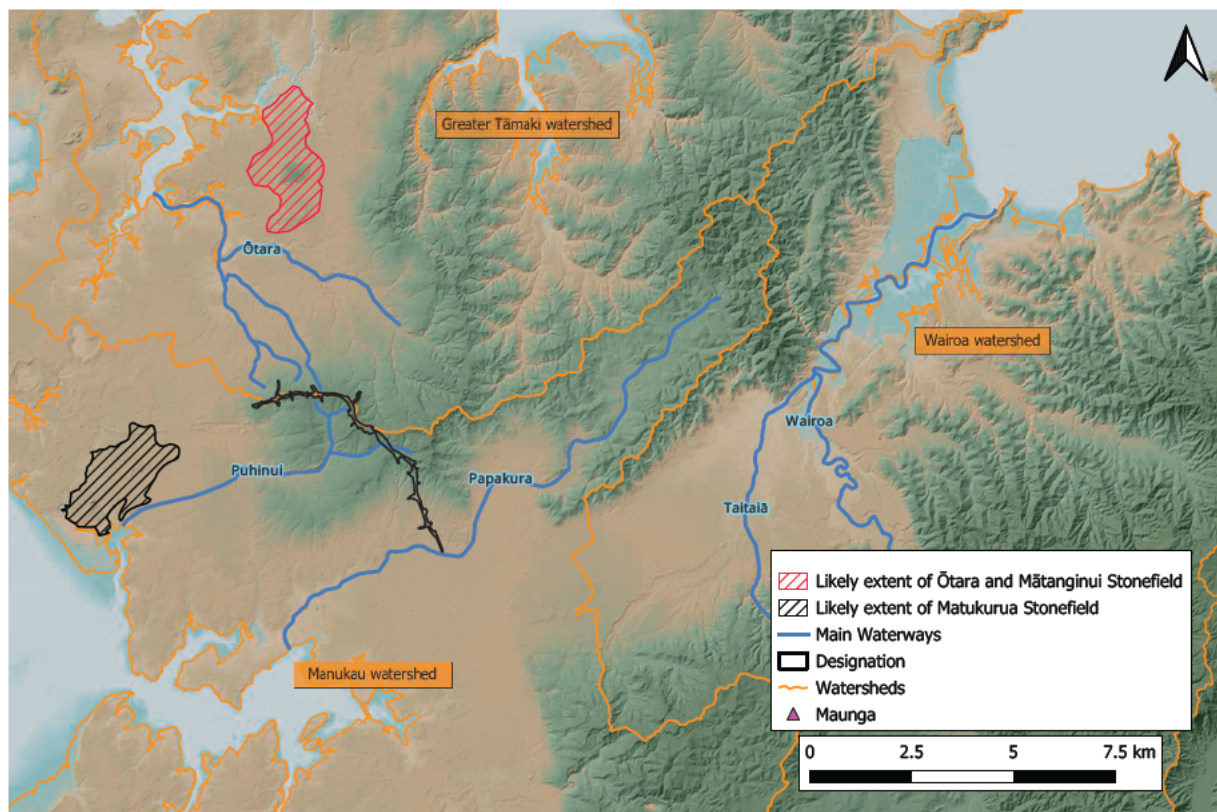


Figure 6. Larger area showing waterways and nearby stonefield gardening systems.

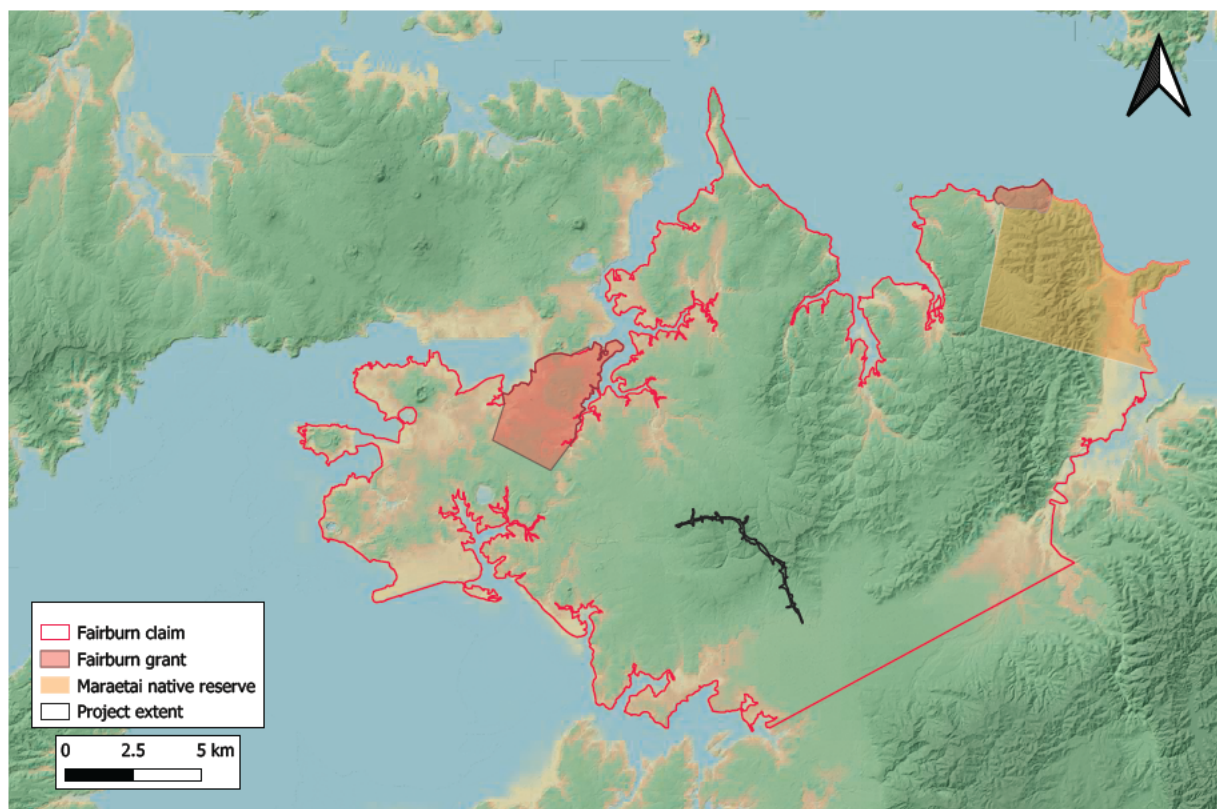


Figure 7. Original extent of the Fairburn claim, and what was eventually granted to him by the Crown. The remainder of the land was taken as 'surplus' and sold as grants.

from Maungarei if the harbours connected, and was taken by Māori down the Tāmaki River, across the Ōtāhuhu portage and out by waka as far as the Manukau Heads (Stone 2001).

Over the next two decades, missionaries began to visit and establish themselves in the Manukau area. There were missionaries regularly staying at Ōpaheke (Drury) from 1834 (Brown and Brown 2017), followed by a series of mission stations being set up at various locations both in the Manukau and Firth of Thames, including a station at Maraetai set up by the lay catechist W.T. Fairburn in 1837.

Fairburn also had his name attached to one of the most contentious land purchases at the time. In 1836, due to increasing tensions between different iwi, the Church Missionary Society (CMS) suggested the transfer of land totalling approximately 40,000 acres, to create a buffer stretching from the Ōtāhuhu portage to Papakura and bounded by the Manukau and Waitematā harbours to the CMS (Figure 7). There was a provision for a 5000 acre 'Native Reserve' at Maraetai, but the size of this parcel of land was vastly underestimated by Fairburn, with recent estimates placing it closer to 84,000 acres (Stone 2001: 168).

This transfer of land became known as the Fairburn claim (sometimes purchase), and was contested by the Crown who then reduced it to two much smaller grants totalling approximately 5000 acres at Manurewa/Onehunga and 300 acres at Maraetai (Tonson 1966; Stone 2001). The remaining 'surplus' land (minus the 5000 acre Maraetai Native Reserve), was taken by the Crown for European Settlement and Farming (Stone 2001).

3.2.2 The Great South Road and the invasion of the Waikato

The Great South Road grew informally from approximately 1843 as settlements started to be established in the fertile soils in South Auckland and land was granted by The Crown. These settlements, albeit sparse, led the construction of the road, which had reached Drury by 1855 (Lennard 1986).

These land grants to settlers, and subsequent crown control of the 'surplus' lands associated with them led to the alienation of Māori from their land which led to tensions between them, and settlers and The Crown. By 1856 the concept of a Māori king was being openly discussed. However, the Crown saw the Kīngitanga movement as a direct attack on British sovereignty and by the late 1850s war was all but inevitable.

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. In the 1860s the Taranaki Wars had caused European settlers of Papakura and Drury to be concerned that nearby Māori could "...be so infatuated as to attempt to create disturbance within this Province" (*New Zealander*, 1 December 1860: 6).

George Grey returned to New Zealand in 1861 as Governor and soon began planning the invasion of the Waikato (O'Malley 2016). At this stage, Great South Road was only suitable for all weather conditions to just south of Papakura, after which it was impassable by troops in wet weather. Nervous of the perceived upper hand this gave the Kīngitanga movement, Grey ordered Lieutenant General Cameron to put his troops to work improving and extending the Great South Road to the Waikato River (O'Malley 2016: 150). Just before Christmas 1861, just shy of 2500 troops set to forming and metalling 11 miles of the road from Drury to the Waikato with a stockade at Baird's Farm Camp to put military prisoners to work breaking rock for metal (Barton and Ritchie 2021: 6).

As work progressed on the creation of the Great South Road a series of redoubts were built along the road to protect it and the nearby settlers. One such redoubt was constructed in June 1863 on a hill with expansive views over Wiri, the Manukau Harbour and Great South Road, to protect the road and Auckland from attack. This redoubt was named after the commanding officer of the 1st Waikato militia, Captain J.H.H. St John (later Lieutenant Colonel), and was also known as Burton's Redoubt on account of the nearby Burton's Hotel on the western side of the road (also referred to as the Raglan Hotel). Due to its position well behind the frontline, St John's Redoubt never saw any active engagement, but maintained a regular posting of sentries, and was used as accommodation for militiamen while on route to Drury and beyond. With the exception of false alarms, the closest fighting occurred approximately 1.5 km to the south near Puhinui Stream (Dodd 2006). This redoubt is recorded in the SRS as R11/534.

3.2.3 North Island Main Trunk

From 1870, following the conclusion of the land wars, railway development became a critical infrastructure project, led by future Premier Julius Vogel. The first part of the NIMT, which would eventually link Auckland and Wellington, was a 66 km section of track connecting Auckland and Mercer, which was completed in 1875 (Scoble 2010).

The opening of the Auckland to Mercer section in 1875 also marked the opening of the Manurewa, Papakura and Takanini [sic.] Stations (Scoble 2010). This helped to drive development of agriculture and industry in South Auckland, as they now had a reliable, all-weather connection between these rural settlements and Auckland without having to rely on the Great South Road, which despite the work undertaken by the military during the invasion of the Waikato, was still susceptible to flooding.

3.2.4 Alfriston

The European settlement of Alfriston began in the 1840s. The town was named after Alfriston in Sussex, England, which was the home of one of the earliest European settlers, Doctor George Edward Bodle (Glover 2022).

The European economy of Alfriston was initially based around agricultural / pastoral industry. Bush and scrub were cleared for crops and stock, including wheat which led to the construction of several flour mills (Harlow et al. 2007). As the number of settlers increased, the timber trade grew, with kahikatea and swamp kauri being harvested and used for housing and fencing (Clough and Baquié 2000). Several sawmills were erected, including the Mill Road sawmill (R11/2076). Once land was cleared and the kauri stands diminished, gum digging became common, with demand increasing from the mid-19th century. The Papakura Diggings or the 'Flats' extended from Papakura to Alfriston in the north. In 1890 there was an influx of more than a thousand men who hoped to earn a living gum digging at the Flats and at least two semi-permanent camps were established. Eventually, when the gum had been exhausted, the land was turned into farmland (Harlow et al. 2007).

3.3 *Previous archaeological survey and investigation*

As discussed in Tatton and Clough (2013), the majority of archaeological investigations and surveys have occurred after 2000, as a response to housing and commercial development.

The first comprehensive archaeological study that took place in this area was carried out by Rod Clough and Barry Baquié for the Takanini [sic.] Structure Plan. This survey covered the southern portion of the project area, from Ranfurly Road south. They all of the archaeological sites and heritage items in Alfriston that are discussed below (Clough and Baquié 2000).

The extent of the Mill Road project was subject to archaeological survey after Designation 6786 was obtained for this project (Tatton et al. 2015). The sites at the Alfriston and Mill Road junction were researched further and their condition recorded, but no new sites were recorded within the study area.

Most recently, Hayley Glover assessed the southern portion of the Project Area as part of the Alfriston Structure Plan (Glover 2022). As with the other larger scale assessments in the area (Clough and Baquié 2000; Tatton and Clough 2013; Tatton et al. 2015), this assessment reported that the area is dominated by 19th century European settlement sites, with only one recorded pre-European Māori site within that study area.

3.4 *Future archaeological and historic heritage environment*

The future planning environment is discussed in more detail in the AEE for this project, but it is likely that future growth and infrastructure projects in the wider area will lead to further systematic archaeological and heritage surveys which will increase the number of recorded sites and provide a better understanding of the archaeological and historic heritage landscape.



Figure 8. Heritage items around Redoubt Road.



Figure 9. Heritage items around Alfriston.

Table 1. Historic heritage items within 200m of the project extent.

Name	NZAA	CHI	AUP schedule / Category	Potential effect	Reason
Alfriston Post Office/ Store	R11/2069	13564		Moderate	Potential for subsurface features to exist within scope of work
The Meeting House – Alfriston Meeting House	R11/2074	13569		High	Will be affected by work
Alfriston Presbyterian Church	R11/2063	13558		Nil	Outside scope of works
Smollett Reid Homestead	R11/2064	13559		Nil	Outside scope of works
Alfriston Hall	R11/2065	13560	705 / B	Nil	Outside scope of works
Alfriston School	R11/2066			Nil	Outside scope of works
Alfriston WWI Memorial		17033	705 / B	Nil	Outside scope of works
Pit/Terrace	R11/1958			Nil	Destroyed / Outside scope of works
Ditch/Bank Hedge	R11/1960			Nil	Destroyed / Outside scope of works
St Johns Redoubt	R11/534	4635	1271 / B	Low	Potential for associated features in scope of works
Mill Road Flax Mill	R11/2076	13571		Nil	Outside scope of works
Harvey House / Four Winds		19900		Nil	Outside scope of works

4 Assessment

There are 12 historic heritage places within 200 m of the Project extent identified from NZAA records, CHI and AUP schedules, and the Heritage New Zealand List / Rārangī Kōrero (Table 1, Figure 8 and Figure 9). Four sites are standing built heritage and eight represent potential sub-surface archaeological features. Nine of these sites are outside of the scope of works and will not be affected by this Project. The remaining three items are discussed in further detail below and were subject to field survey.

There were no other items of potential heritage interest identified along the route as part of the desk-based assessment, though some additional places of potential interest were identified through field survey and these are discussed in the fieldwork section below.

4.1 St Johns Redoubt (R11/534)

A history of the St Johns Redoubt has been discussed in detail in Tatton et al. (2015). This site was originally recorded in 1978 by Sue Bulmer based on aerial photographs. It has been visited by archaeologists relatively frequently from then on, with additional recording and monitoring of works in the vicinity, especially associated with the Church of Jesus Christ of Latter-day Saints (LDS) temple development in the past 20 years. The site is scheduled in the AUP (OP) as a Category B item based on its Historical, Knowledge and Aesthetic values.

The redoubt is outside of Designation 6786, with the majority of it located in St Johns Redoubt Historic Reserve, with the western bastion located in the LDS land. Previous investigations have encountered artefacts that have been tentatively associated with the redoubt outside of the defensive ramparts, generally alcohol bottles and clay pipes from the mid-19th century (Farley 2009).

There is the potential that similar artefacts may exist in the vicinity of Redoubt Road, especially where driveway upgrades are proposed within the designation.

4.2 *Alfriston Post Office / Store (R11/2069)*

The history of the Alfriston Post Office has been discussed in detail in Tatton et al. (2015).

This site was recorded in 2000 by Barry Baquié based on historical information during assessment for the Takanini [sic.] Structure Plan (Clough and Baquié 2000). The site record notes that the property was both the site of the Alfriston Store and John de Carteret's Homestead. This appears to be incorrect as John de Carteret had no connection to this property. His original house was located on Part Lot 23 further south on Mill Road, with his later homestead occupying Part Lot 15 (Tatton et al. 2015).

The Alfriston Store and Post Office are no longer standing and there has been some confusion as to where the site was actually located. Its location is described on the NZAA site record as opposite the present Alfriston Hall on Mill Road. Recent archival research has confirmed that the NZAA site record description is correct, and it was located at 1345 Alfriston Road. The property is currently an empty lot.

4.3 *The Alfriston Meeting House (R11/2074)*

The Meeting House is discussed in detail in other reports (Tatton et al. 2015 and Barsby and Moyle 2025). the details of which will not be repeated here.



Figure 10. View north over the part of St John's Redoubt Reserve that will be subject to earthworks.



Figure 11. View east of one of the tributaries to the Puhinui Creek.



Figure 12. View south across driveway of 242 Redoubt Road showing built up surface.

4.4 Field survey

4.4.1 St Johns Redoubt Historic Reserve (R11/534)

The reserve was surveyed on 6 May 2025. There is a gravel access road that has been built from Boeing Road, and it appears that the reserve is being used as overflow parking for the LDS Church. The reserve is well maintained and the depression for the defensive ditch and ramparts can be easily interpreted. The northern portion of the reserve where the designation encroaches was inspected but no obvious archaeological features were present.

4.4.2 Tōtara Park

The park was surveyed on 6 May 2025. The survey was restricted to the approximate extent of the designation, with particular focus on the headwaters of the Puhinui Stream. The park is sporadically grazed and was under long grass. The areas around the headwaters of the stream were inspected, but no visible archaeological features were identified.

It was noted that there had been some filling of one of the tributaries which probably occurred at some stage of upgrades of Redoubt Road. This tributary likely ran under 242 Redoubt Road so this property was also surveyed to see if the original ground surface could be seen.

4.4.3 242 Redoubt Road

This property was surveyed on 19 May 2025. It was inspected to see if evidence of the Puhinui Creek tributary was visible. The property appears to have been built up and any evidence of the original ground surface has been obscured beneath the current front yard of the house.



Figure 13. View north of a mown track through gorse for drill rig access.



Figure 14. Example of ground visibility in the Cheeseman's bush properties. Photo scale = 0.5 m.



Figure 15. View north along 116 Ranfurly Road showing ephemeral waterway bisected by Mill Road.

4.4.4 The Watercare Properties

These properties were surveyed on 6, 9 and 19 May 2025. The properties are generally covered in knee-to-waist high kikuyu and dense gorse with poor to no ground visibility, with the exception where the access tracks for the drill rigs had been mown. No archaeological material was noted, but the vegetation coverage of the properties hampered the ability to interpret the landscape.

4.4.5 Cheeseman's Bush (134 and 146 Mill Road)

These properties were surveyed on 22 May 2025. The survey focussed on the Papakura Stream tributary that runs through the properties. Although the area is covered in native bush, visibility was relatively good, with little understorey obscuring the surface. There was water in the tributary, and it is possible that this stream is more permanent than others encountered during the survey. No archaeological features were identified in this area.

4.4.6 116 Ranfurly Road

This property was surveyed on 8 July 2025. This survey focussed on the eastern portion of the property near the ephemeral waterway that runs essentially parallel with Mill Road. The portion of the property sits significantly higher than the creek and appears to be relatively well draining. The northern portion of this ephemeral waterway has been bisected by Mill Road (Figure 15). No archaeological features were encountered during the survey.

4.4.7 2 Wastney Road

This property was surveyed on 4 June 2025. This survey focussed on the eastern portion of the property near the ephemeral waterway that the designation crosses. The soil in the southern portion of the property is noted as being relatively well draining, and although no archaeological features were identified in the property, these areas where flooding is less likely to occur are more likely to contain sub-surface archaeological features, both from pre-European Māori land use and the historic settlement of Alfriston (Figure 15).

4.4.8 1348 Alfriston Road (R11/2074)

This property was briefly inspected on 4 June 2025 while the built heritage assessment for the Alfriston Meeting House (R11/2074) (Barsby and Moyle 2025) was being undertaken. The Alfriston Meeting House will be affected by the project and is assessed separately in Appendix A of this report.

4.4.9 1345 Alfriston Road (R11/2069)

This property was surveyed on 6 May 2025. The modern house that was present during the previous (Tatton et al. 2015), has been removed, and the property is covered with a mix of concrete and imported fill. No evidence of the original structures is visible, but it is possible that associated features such as wells or rubbish pits may be present within the proposed works area beneath the fill.

4.4.10 Summary

Nine properties were subject to archaeological survey, including three which have recorded archaeological sites on them. The only archaeological site with known effects is the Alfriston Meeting House (R11/2074) which will be demolished if a new site cannot be found with an owner who is willing to restore the building. There are still areas where there is potential for encountering archaeological sites, especially features associated with the Alfriston Post Office (R11/2074) or isolated features or artefacts near the St Johns redoubt (R11/534). Although the likelihood is lower for finding evidence of



Figure 16. View west on 2 from Mill Road towards 1350 Alfriston Road showing waterway cutting through moderately well drained soil.



Figure 17. View east along Alfriston Road showing built up fill on 1345 Alfriston Road.

pre-European Māori sites, this cannot be discounted and would likely occur near the semi-permanent waterways such as in Tōtara Park, or on the moderately well drained soils around Alfriston.

4.5 Assessment of values

This assessment assumes that the entire footprint of the Designation will be subject to top-soil stripping. This would expose and modify any archaeological sites within the footprint, with the Alfriston Meeting House (R11/2074) and the Alfriston Post Office (R11/2069) identified as known and potential archaeological sites respectively that would be affected by the works.

In addition to these sites, there is also the potential for previously unrecorded archaeological sites to be encountered during works. The most likely site types would be pre-European Māori midden / oven sites near waterways or on the moderately well drained soils around Alfriston, and 19th century sites associated with early settlement and farming. Although it is possible to encounter artefacts associated with St Johns Redoubt (R11/534), the known extent of the redoubt will not be affected by works, therefore it will not be listed as an affected site.

The following assessment of values is based on the criteria set out in the HNZPT (2019). These values only relate to archaeological values. Other interested parties, in particular mana whenua, may hold different values regarding the proposed works. See the associated cultural values assessments (CVAs) that have been commissioned for The Project.

There are no scheduled sites or historic heritage areas within the proposed extent of works, so no assessment under Section D17.4 of the AUP OP is required.

4.5.1 Alfriston Post Office (R11/2069)

Condition	Any sub-surface features are in an unknown condition.
Rarity	19th century buildings and their associated features are a common site type both nationally and regionally.
Context	Any features encountered would be within the context of the 19th century settlement of Alfriston.
Information	Any sub-surface features, especially any associated rubbish pits would provide insight into the day-to-day life of the people who lived in Alfriston in the 19th century.
Amenity	Any features encountered during works would be destroyed but could be interpreted through signage.
Cultural	This site is associated with 19th century European settlement in the area.

4.5.2 Alfriston Meeting House (R11/2074)

Condition	The building itself is in poor condition, and the condition of any associated sub-surface features are unknown.
Rarity	19th century halls are a relatively common site type both nationally and regionally.
Context	The Meeting House is part of the 19th century settlement of Alfriston, and any associated features that are encountered would also be associated with it.
Information	The Meeting House provides information around construction techniques and any sub-surface features, especially any associated rubbish pits would provide insight into the day-to-day life of the people who lived in Alfriston in the 19th century.
Amenity	The building is currently able to be viewed from the road but there is no signage allowing for public interpretation.
Cultural	The Meeting House is associated with 19th century European settlement in the area.

4.5.3 Previously unrecorded pre-European Māori midden / oven sites

Condition	Any sub-surface features are in an unknown condition.
Rarity	Midden / oven sites are the most common site type both nationally and regionally, but rare in this part of Tāmaki.
Context	Any midden / oven sites that are encountered will be in the context of Māori land use in this area.
Information	In situ midden and oven sites can provide information about the timing of occupation, subsistence patterns, and diet and health of the population prior to the arrival of Europeans.
Amenity	Any midden encountered during works would unlikely be accessible to the public, but any could be interpreted through signage.
Cultural	These sites would be associated with mana whenua.

4.5.4 Previously unrecorded 19th century structures

Condition	Any sub-surface features are in an unknown condition.
Rarity	Any surviving evidence of 19th century settlement or farming in this area would be rare.
Context	Any evidence would be within the context of the 19th century settlement of Alfriston.
Information	Any information retrieved from 19th century structures could inform about 19th century domestic and rural life.
Amenity	The location of any features is likely to be near a public road and could be interpreted through signage.
Cultural	Any historic structures would be associated with 19th century European settlement in the area.

4.5.5 Heritage landscape values

As discussed in section 3.1, Māori settlement and landscape use in the area was conditioned by waterways, which acted as transportation routes and access into areas of cultivation. While a lot of the lowland areas were poorly drained and therefore would not have been attractive for settlement, they would have been exploited for their birds and other wetland resources. Although there is the potential for pre-European Māori sites to be found in the proposed extent of works much of the connection mana whenua would have to this land would be intangible and is better described including landscape values in the CVA's.

As discussed in section 3.2, The main historic themes in the vicinity of the project are the creation and use of the Great South Road, the NIMT and subsequent rural settlement of the area including the settlement of Alfriston.

The invasion of the Waikato is one of the most significant events that have happened both regionally and nationally, and although St John's Redoubt played a minor role in the campaign, it nonetheless is intrinsically linked to the Waikato Wars.

Alfriston is a relatively early settlement for South Auckland, and although focus was on an agricultural and pastoral economy, the geography meant that flax milling and kauri gum featured heavily during the last half of the 19th century. Since then, the area has retained much of its rural character although this is being systematically lost through housing development.

4.6 Assessment of construction effects

As discussed above, there are three main aspects to the heritage landscape of the proposed works area; the infrastructure involved in the invasion of the Waikato around the beginning of Redoubt Road, the settlement of Alfriston at the southern extent of works and Māori landscape use.

The project has taken the significance of these themes into account, with specific conditions in Designation 6786 imposed around management of heritage items including the St John's Redoubt

(R11/534) and the Alfriston Meeting House (R11/2074) during the design process. The avoidance of heritage items where possible is also described in the associated assessments initially developed to support the NoR process (Tatton and Clough 2013; Tatton et al. 2015). It should also be noted that any effects on Māori heritage values can only be assessed by mana whenua and will be discussed in the CVAs developed for this project.

The proposed construction works include road widening, service upgrades, shared use path installation, bridge and pavement installation and replacement and stormwater upgrades. The entire extent of works will be topsoil stripped at a minimum, with cuts up to 11 m deep in places. The nature of the works is such that any archaeological sites or features that are exposed in the construction footprint will be modified or destroyed, as avoidance is unlikely to be achievable. A Historic Heritage Management Plan (HHMP) has been prepared and appended to this assessment, which outlines levels of recording, sampling, and reporting according to current archaeological practice. Site specific effects are discussed below.

The proposed works area contains two known heritage sites: the Alfriston Meeting House (R11/2074) and the Alfriston Post Office (R11/2069) and abuts a third, the St John's Redoubt (R11/534). Due to the density of recorded archaeological sites around Alfriston and the vegetation coverage over much of the alignment, it is possible that further previously unrecorded sites, both associated with pre-European Māori and 19th century settlement may be encountered during works.

Although any archaeological or historic heritage sites encountered within the proposed area of works (either known or unknown) are likely to be destroyed, the subsequent archaeological investigations undertaken would help provide information about the sites. This information could be presented to the public through the use of interpretive panels or displays.

4.6.1 Alfriston Post Office (R11/2069)

The exact location of the post office is unknown, but it is possible that sub-surface features associated with the 19th century use of the property may be encountered. There is a proposed cut of 1 m beneath ground surface, and due to the presence of imported fill, earthworks are likely to be greater to remove this unsuitable material to create a more stable surface. Due to the nature of the works, any archaeological features would not be able to be avoided and would likely be destroyed. This can be mitigated by investigating and recording any features encountered following accepted archaeological practice.

4.6.2 Alfriston Meeting House (R11/2074)

The intended approach is for the building to be lifted and relocated to an alternative location outside of the designation, if a suitable site and new owner who is willing to renovate the building can be found. If this is not possible, the building will require demolition. In this scenario, it will be subject to Level II recording prior to, and during demolition as per HNZPT AGS1 guidelines. These are discussed in more detail in the HHMP.

Once the building has been removed, it is possible that sub-surface features associated with the 19th century use of the property may be encountered. Due to the nature of the works, any archaeological features would not be able to be avoided and would likely be destroyed. This can be mitigated by investigating and recording any features encountered following accepted archaeological practice.

4.6.3 Potential pre-European Māori Midden / Oven

The potential effects on these sites are unknown but due to the nature of works associated with road construction it can be assumed that if any midden / oven sites are encountered during works that they will not be able to be avoided and would likely be destroyed. This can be mitigated by investigating and recording any sites encountered following accepted archaeological practice.

4.6.4 Potential 19th Century archaeological sites

The potential effects on these sites are unknown but due to the nature of works associated with road construction it can be assumed that if any 19th century sites are encountered during works that they will not be able to be avoided and would likely be destroyed. This can be mitigated by investigating and recording any sites encountered following accepted archaeological practice.

4.7 *Recommended measures to avoid, remedy or mitigate construction effects*

During the initial NoR phase of works, several heritage items were identified which could be affected by the Project. The designation boundary abuts, but does not encroach into the scheduled extent of St John's Redoubt (R11/534) and will avoid the known extent of the site. There were also several historic heritage buildings which were noted, which have either been avoided (for example Harvey House; CHI item 19900), or are located on the northern extent of Murphys Road which has been omitted from this stage of works.

Based on the consideration of the statutory documentation listed in Section 4 related to historic heritage and the assessment of potential adverse effects on heritage, the following mitigation and management measures are recommended:

A Historic Heritage Management Plan (HHMP) has been prepared for this project and will be implemented during construction.

4.8 *Assessment of operational effects*

There are no identified adverse operational effects on archaeological sites or heritage items other than what may arise during the normal course of asset maintenance. The future environmental conditions arising from operation of the road network will be similar to the existing conditions of the identified and extant heritage sites in the vicinity. Such aspects would be expected to be addressed through other mechanisms such as asset maintenance plans. It is not recommended that any conservation plans or other asset maintenance measures are established for the Alfriston Meeting House. If a suitable site and new owner who is willing to renovate the building can be found, these plans should be the responsibility of the asset owner.

4.9 *Recommended measures to avoid, remedy or mitigate operational effects*

There are no identified adverse operational effects on archaeological sites or historic heritage items.

5 **Summary and conclusion**

There are three main aspects to the heritage landscape of the proposed works area; pre-European Māori landscape use, the infrastructure involved in the invasion of the Waikato and the settlement of Alfriston. The proposed works area contains two known heritage sites: the Alfriston Meeting House (R11/2074) and the Alfriston Post Office (R11/2069) and abuts a third, the St John's Redoubt (R11/534). The known extent of the redoubt has been avoided and although associated features and artefacts may be encountered nearby, the site itself will not be affected.

Due to the density of recorded archaeological sites around Alfriston and the vegetation coverage over much of the alignment, there is reasonable cause to suspect that additional previously unrecorded sites, both associated with pre-European Māori and 19th century settlement may be encountered during works.

Although any archaeological or historic heritage sites encountered within the proposed area of works (either known or unknown) are likely to be destroyed, the subsequent archaeological investigations undertaken would help provide information about the sites. This information could be presented to the public through the use of interpretive panels or displays.

In conclusion, the overall effects of the project on historic heritage are considered negligible. With appropriate mitigation measures in place, including implementation of the HHMP, the Project will deliver positive heritage outcomes.

Where relocation of the Alfriston Meeting House is not feasible because no alternative site and willing third party (new owner) can be found to accept the building in its current condition and undertake any necessary renovation or remedial works to enable its adaptive reuse, demolition will be required. In this case, archaeological recording and investigation as per HNZPT AGS1 guidelines will ensure that heritage values are documented. There is no change to overall effects of the project on historic heritage in this scenario.

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Appendix A: Alfriston Meeting House Built Heritage Assessment



CFG Heritage Ltd
132 Symonds Street
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Auckland 1010

By email:

3 December 2025

To whom it may concern,

Re: Alfriston Meeting House

Plans for the Mill Road Corridor Stage 1 Project (the Project) necessitate the demolition or relocation of the Alfriston Meeting House to allow for the construction of a new roundabout at the Mill Road-Alfriston Road intersection.

This letter report has been prepared for CFG Heritage, on behalf of the New Zealand Transport Agency (NZTA), solely for the purpose of:

- Assessing the condition of the Alfriston Meeting House.
- Commenting on its potential for relocation and providing a high-level overview of the work required prior to relocation.
- Providing advice – founded in conservation principals – on how to stabilise the building and prepare it for future renovations following its move.

The following items are excluded from the scope:

- Inaccessible or enclosed/concealed areas; destructive investigation.
- Advice from other consultants, such as a structural engineer.
- Building services.
- Environmental hazards.
- Detached and/or associated structures or systems.
- An assessment of compliance with legal requirements (e.g., Building Code, HNZPT Act, Resource Management Act).

Methodology and Limitations

A survey of the Meeting House was carried out by Andrew Barsby and Jeremy Moyle (both Origin Heritage) on the 4th of May, and the morning of the 5th of May. The survey consisted of a visual inspection of the building's interior and exterior, as accessible from ground level. Phones were used for photography and verbal notes were recorded. A drone was also used to capture aerial photography and inspect elevated parts of the building. Drone photographs were also used for photogrammetry. Some sketches were made to document specific assembly details and the overall layout of the building.

Weather conditions were poor on the first day – overcast, drizzle with periods of heavy rain and strong winds. The second morning was calm and clear.

The following limitations were identified for this project:

- Historical sources documenting the site are limited, and the precise details of the building's evolution are unclear.
- Some reasonably recent renovations appear to have used materials and styles similar to their historic antecedents, making it difficult to confidently identify historic fabric.
- Hay bales stored inside the building prevented the inspection of parts of the floor and interior walls.
- The survey was conducted from ground level, although the Internal stairs were able to be accessed to inspect the loft. A drone was used to capture aerial images and to create ortho-rectified images.
- No access equipment was available on site, limiting close examination of elevated areas beyond what could be seen from the loft or via drone photography.
- The non-intrusive nature of the survey meant that enclosed or concealed areas could not be closely inspected.

For the purposes of this investigation the elevation facing Alfriston Road is considered the South Elevation.

Current Condition

Roof covering, structure and flashings

The roof of the Meeting House is a single gable roof pitched at 45 degrees. It is clad with short-run corrugated roof sheets. These are galvanised steel. The roof sheets have corrosion to almost their entire outer surface and are a deep reddish/brown colour as a result (Figure 4). There is no evidence of a paint finish. On inspection from the loft, the underside of the roof sheets shows no sign of corrosion. There are holes to all the lower sheets on the west side just above the gutter line where the last purlin touches the roofing (Figure 5). These holes are due to corrosion. The east side in comparison is in a far better condition with only one hole noted at gutter level. There appears to be slight corrosion at the ridge line also. The galvanised ridge flashing is also corroded and lifting slightly in areas.

The roof sheets are fixed with lead-headed nails – several of which are missing, leaving small holes. A couple of roof sheets were lifting in the strong breeze due to the lack of fixings.

The biggest defect to the roof, aside from the holes on the lower west side, is the missing roof sheet on the south end of the west elevation which leaves a large hole for weather to come in (Figure 4). This has been missing for quite some time evidenced by the considerable decay of the timber beneath (purlins, top plate, rafter, wall framing, floorboards).

The roof sheet above the main door (north end of the east elevation) has been cut, leaving a section missing (Figure 6). An examination of an earlier photograph¹ shows that there was a chimney on this elevation – and so the roof sheet was cut to accommodate it.

The rafters and purlins are clearly visible in the loft. The rafters measure 145mm x 45mm and the purlins are made up of two 145mm x 20mm timbers on the flat. All timber of the roof structure appears to be dry and sound except at the south end where the roof sheet is missing.

There are no fascia boards, except for a very short section on the west elevation (Figure 5). Soffit boards remain intact on the east elevation but are decayed on the west. The historic photograph also indicates that it had bargeboards and coverboards at each gable end; these are now all missing.

The bay window on the east elevation has what appears to be shingles on the roof (Figure 7). These appear to be in poor condition.

¹ In Wilson, Lorna W. *The Vintage Years: A Record of Alfriston-Brookby Since the 1850s*. Alfriston: Historical Book Committee, 1974.

Rainwater fittings

There are no longer any gutters or down pipes to either the east or west elevations – only one gutter bracket remains (Figure 5).

Exterior walls

The external walls are clad in painted shiplap weather boards measuring approximately 220mm X 20mm. Following probing with a screwdriver, it appears that the weather boards are generally sound – a little soft in some cases and in need of painting but otherwise can be retained. An exception is the north elevation where the front door is. Here some of the lower weather boards are decayed (Figure 8). It should be noted that the upper weather boards were not able to be reached, as the inspection was from ground level only. Several galvanised steel strips have been fixed over the vertical joins in the weather boards to prevent water ingress (Figure 9). These are largely intact and are not corroded.

The west elevation is much altered (Figure 10). Approximately half of the façade is covered in plywood, with vertical cuts in the weather boards at both ends. One piece of plywood is loose, and it appears that another piece has detached showing the exposed wall studs (145mm x 45mm). Wall studs are also exposed beside the door. These appear to be sound and are not decayed. The boxed corner detail at the south-west corner is decayed (Figure 11). A cabbage tree is growing through this elevation.

All elevations are missing the bottom row of weather boards – exposing the bottom of the studs, base plates and the ends of the joists (Figure 8). On the east elevation the lower sections of the studs are black due to bio growth and excessive moisture and are badly decayed (Figure 12). A short distance vertically further up the studs the timber appears to be sound. Repairs will need to be undertaken to remove the decayed timber from the lower studs and add new timber. The base plate on the south elevation is bowed (Figure 9 and Figure 13). It appears that the two central piles have dropped, and it was also noted that a nail through the end joist had missed picking up the base plate.

The cladding to the base of the bay window is very badly decayed and has mostly disappeared (Figure 14). This is plywood which suggests previous intervention. The base plate and framing are also decayed. There is evidence of previous repairs including the fixing of galvanised Z nails.

Windows

East elevation

The single timber sash window with vertical glazing bars has a broken pane to the upper sash window which is boarded over (Figure 15). The two panes to the lower sash window are intact, however, the bottom rail is decayed. The remainder of the frame and glazing bar are sound. The external architraves and sill are intact. As with all the joinery, the paint is peeling exposing bare timber. Bio growth is also evident – especially to the bottom rails and the sills. Urgent painting is needed for protection against the weather. A galvanised steel flashing is fixed to the top of the window. This appears to be intact and functioning as weather protection.

The bay window consisting of two narrow single-paned sash windows to the sides and one large sash window to the centre, with vertical glazing bars (Figure 15). The whole pane of glass is missing to the lower sash window on the left side. A pane is broken on the upper sash window in the centre of the bay (Figure 16). The timber frames, including the slender glazing bars are intact and sound, but need painting. Putty is also missing from the glazing. There is extensive timber decay to the sill on the right side of the bay window. This needs to be replaced. The hardware (sash rings and closing latches) to the bay window is intact.

North elevation

There is a large timber double sash window central to the north elevation (Figure 17). A slender vertical glazing bar divides each window into two. All four panes of glass are intact. Whilst the frame, glazing bars and architraves are intact, they are somewhat soft with peeling paint and exposed timber. The sill is green with bio growth. A galvanised steel flashing is fixed to the top of the window. This appears to be intact.

The upper window to the loft is a smaller six-paned window (Figure 18). From the ground extensive lichen growth can be seen. All panes of glass are intact. A limited inspection from inside the loft was possible revealing the sill and sides of the frame to be sound. The remainder of the window could not be inspected closely.

South elevation

The south elevation has one large double sash window to the ground floor (Figure 19) and one louvre window providing ventilation to the loft (Figure 20). The double sash window needs painting, however, all timber elements including the glazing bars are intact. There is also a galvanised steel flashing at the head of the window. All panes of glass are intact.

The upper louvre window could not be inspected closely. It is covered with chicken wire and has a galvanised steel flashing at the head. It appeared to be in reasonable condition, perhaps in part due to being sheltered by the eaves.

Doors

West elevation

The door on the west elevation is in very poor condition. Some of the detailing is loose; the door is bowed and very weathered; panels are split; bio growth; corroded hinges (Figure 21). The door is relatively thin and appears to be an internal door. There is also no threshold which also suggests that it is not an external door.

North elevation

This door is not original (Figure 22). In fact, it is not obvious where the front door was located as the north elevation originally had a fireplace and chimney where the existing door now is. The current door is timber with a veneer facing. It has five inset panels and a textured glass top light in the array of a fan. It is in poor condition. The lower panel is missing and is covered by a plastic sheet; the two smaller panels above are also missing; paint has either weathered off or is peeling; the veneer is also peeling in many locations. There is a peep hole, a Bakelite door handle, a modern lock and bolt with padlock. The threshold is decayed.

Floor structure, interior walls, ceilings

CFG have indicated that the building was reportedly re-piled in 2010 – possibly to a higher level as the building now sits well above ground level. The new treated timber piles (125mm x 125mm) and bearers (two 190mm x 45mm, side-by-side) are easily visible and are connected with stainless steel Z nails (Figure 23). The bearers run in the north-south direction. New floor joists (145mm 40mm) can also be seen, although several older joists are also visible. Some of these appear to be decayed. It is likely that at the time of reinstating the floor these joists were in good enough condition to retain (Figure 24).

It appears that interventions earlier than 2010 were carried out to the sub-floor using galvanised Z nails and nail plates as opposed to the stainless versions used *circa* 2010 (Figure 23). These have been cut through during the re-piling process.

The floorboards are in relatively good condition and firm underfoot, although not all floor surfaces could be inspected due to the hay bales stored inside. They measure 140mm wide and 20mm thick. On close inspection it could be seen that the floorboards have been recycled as there are rows of nail holes visible from a previous incarnation. The boards are varnished. This finish is mostly intact, however there are dark patches, likely caused by moisture. Similarly, dark stains have formed around the former nail holes. Foil-backed building paper has been installed when the floor was re-laid onto the new joists (Figure 23-Figure 24). There did not appear to be any notable borer infestation in either the floorboards or the framing floor framing timber.

The interior walls of the front room have a timber dado rail running horizontally around the room at a height of approximately one meter. It is painted yellow. Beneath this the wall is clad with vertical tongue and groove panels, 140mm wide, also painted yellow. Both the rail and the panelling appear to be in reasonable condition. Above the panelling the walls are painted plaster board. There is moderate wear and tear, staining and debris on the walls – mainly pieces of hay. The back of the plaster board of the west wall is exposed, above where the plywood has been fixed, and is in a fragile condition.

The rear (south) room has painted plaster board to the north, east and south walls – painted blue, with no panelling. The west wall however is entirely clad with horizontal tongue and groove panelling, painted blue. The staircase and landing to the loft also project from this west wall. There is dirt, cobwebs, wear and tear and some graffiti on rear room walls, and significant tearing and water damage to the upper wall on the west elevation. This damage is due to the water ingress where the roof sheet is missing. The ceilings throughout are board and batten, though this appears to be formed from battens laid over plasterboard sheeting. Apart from being stained and dirty this ceiling appears to be in reasonable condition.

Requirements for Relocation

Although this condition assessment has identified numerous defects, three previous interventions have added strength and resilience to the structure, making relocation more feasible. These are:

- The internal wall (presumably added when the building became a residence) provides lateral bracing.
- The added ring beam and flooring structure in the loft acts as a diaphragm and offers additional bracing.
- The floor structure, including replaced floor joists and bearers, contributes to overall resilience.

The introduction of temporary bracing to the building should further support the building's relocation without compromising its structural integrity. In addition to generally strengthening the building for transport, this temporary bracing will need to be designed to specifically address some of the structural defects identified during the condition survey. Namely:

- Decayed lower portions of studs on the east elevation.
- Decayed wall, ceiling/floor, and roof elements in the south-west corner where the roof sheet is missing.
- Decayed portions of floor joists.

Other actions that should also be carried out prior to removal include:

- Replacement of the missing roof sheet at the south-west corner, or sufficient temporary cover to prevent further water ingress prior to removal – **must be urgently undertaken to prevent further structural deterioration before the building is removed.**
- Securing the remaining roof sheets to ensure they do not detach during transport.
- Temporary removal of window sashes to avoid any potential damage caused by building flex during transport.
- Removal of hay bales stored within the building.
- Removal of the cabbage tree growing through the west elevation.

A professional building relocation expert with experience in moving similar timber structures should be engaged to provide further advice and carry out the relocation successfully. A structural engineer may also be consulted to advise on bracing design.

Post-Relocation Work

Following the building's relocation to an alternative site, the following actions are recommended for the new owner to address the defects identified in the condition assessment:

Roof covering, structure and flashings

- Remove and replace decayed sections of the roof structure at the south end of the west-facing roof where the roof sheet is missing, including decayed purlins; top plate; and end rafter
- Replace the missing roof sheet on the west roof face.
- Either source recycled short-run sheets to replace the lower sheets to the west facet **or** cut off the corroded lower end of the affected sheets (200 – 300mm) and install a short section, or 'slip' underneath – secured well with new fixings.
- Replace ridge flashing like-for-like with a new galvanised flashing.
- Secure loose roof sheets and fixings/ replace with new roof screws.
- Install new timber cover boards and bargeboards at gable ends. Timber dimensions to be estimated based on historic imagery and a detailed inspection of the relevant area.
- Install new fasciae along the building's eaves and replace any rotten sections of soffit board. New timbers to match existing dimensions.
- Paint all new external timber soffits, bargeboards, etc.
- Replace decayed timber shingles with tray roofing, if pitch is sufficient, or membrane roofing if not.

Rainwater fittings

- Install new fascia boards to both elevations.

- Install new ogee gutters – galvanised steel, including to the bay window roof. Sizing to satisfy NZBC E1.
- Install new down pipes – galvanised steel. Sizing to satisfy NZBC E1. Connect new down pipes to a rainwater disposal system or soak pit.

Exterior walls

- Replace all decayed and split weather boards – to the same dimensions and profile.
- Reinstall weather boards to cover the base plates and wall framing at the bottom of the walls – all elevations.
- Replace all decayed and split box corner sections, including the scribed detail – to the same dimensions and profile.
- Test for lead paint and allow for safe handling and remediation protocols if identified.
- Remove all loose paint; treat with biocide; clean with house wash solution (do not waterblast), prep and paint all exterior cladding.
- Cut out all decayed timber in the wall framing – note all the lower studs on the east elevation are decayed and need to be removed and new studs added. Replace decayed wall framing in the loft where the roof sheet has been missing.
- Remove plywood and further investigate the opening in the west elevation to see if there is evidence of a window or perhaps a lean-to being there.
- Depending on what is discovered and plans for future use, reinstall weather boards/window/lean-to or watertight temporary cladding solution.

Windows

East elevation

- Replace the decayed bottom rail to the single window.
- Replace the decayed sill to the bay window.
- Test for lead paint and allow for safe handling and remediation protocols if identified.
- Prep and paint the frames, sills and architraves. Replace window putty (using a linseed-based product). Replace broken panes.

North elevation

- Apply biocide kill off bio growth.
- Test for lead paint and allow for safe handling and remediation protocols if identified.
- Prep and paint the frames, sills and architraves. Replace window putty (using a linseed-based product).

South elevation

- Apply biocide kill off bio growth.
- Test for lead paint and allow for safe handling and remediation protocols if identified.
- Prep and paint the frames, sills and architraves. Replace window putty (using a linseed-based product).
- Further inspect the louvres – repair/ replace as necessary.
- Replace chicken wire.

Doors

West elevation

- Replace the weathered and damaged door to the west elevation – preferably source a 4-panel exterior door from the same era. Detail as required to make weathertight (e.g. add temporary head flashing) until more developed renovation plans are in place.

North elevation

- Replace the weathered and damaged door to the north elevation – preferably source a 19th century 4-panel exterior door. Replace threshold with matching equivalent.

Floor structure, interior walls, ceilings

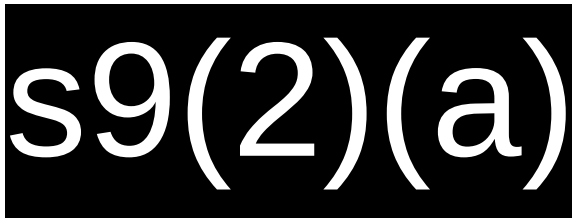
- Replace the decayed floor joists.
- Improve connection of baseplate and last floor joist at the south elevation.
- Repair the upper west wall in the rear (south) room – after the building has been made weathertight.
- Clean down the interior walls and ceiling.

Conservation Principles

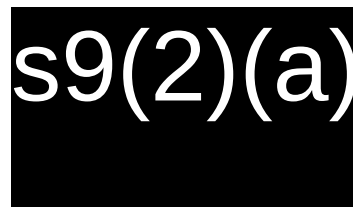
Any work on the Meeting House – temporary bracing for removal, repairs, maintenance, and ongoing management – should adhere to the following principles as far as reasonably practicable:

- **Minimum intervention** – Retain original/existing material and character as possible.
- **Respect for historic fabric** – Materials, building form, and layout should be preserved.
- **Like for like work** – Where interventions are required, they should be undertaken using comparable materials, forms, and techniques.
- **Reversibility** – New work should be reversible.
- **Legibility** – Ensure that additions and repairs are distinguishable from the original while sympathetic to it.
- **Maintenance** – Regular maintenance should be prioritised as the most cost-effective conservation approach.

The previous heritage assessment of the Meeting House² contains information on its history and heritage values that should be considered as part of any work on the building.



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² Tatton, Kim, Jen Low, and Rod Clough. Redoubt Road-Mill Road Corridor Project: NOR Heritage Assessment Addendum. Unpublished report for AECOM, 2015.

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Figure 1. Location of the Meeting House within the wider area.



Figure 2. Extent of the meeting house site (in red) adjacent to the Mill Road-Alfriston Road intersection.



Figure 3. Meeting house, looking south-west, with Alfriston Road in the background.



Figure 4. West and south elevations of the meeting house showing the corroded roofing and missing sheet.



Figure 5. Eaves at the north-west corner. The holes in the roof sheet, decayed remnant of fascia, and single remaining gutter bracket are all evident.



Figure 6. North elevation gable with notch cut out of roofing for former chimney.



Figure 7. Bay window with shingle roof.



Figure 8. Decayed weatherboards on the north elevation.



Figure 9. South elevation. Note the steel strips visible over joins in weatherboards and the bowed baseplate.



Figure 10. West elevation.



Figure 11. Decayed boxing at south-west corner.



Figure 12. Blackened and decayed stud at the base of the east elevation.



Figure 13. Bowed bottom plate on south elevation, looking east.



Figure 14. Decayed cladding at the base of the east elevation bay window.



Figure 15. East elevation.



Figure 16. Detail of lower sash of the central part of the bay. Note the broken pane in the upper sash and missing putty.



Figure 17. Window on north elevation.



Figure 18. Loft window on north elevation.



Figure 19. Window on south elevation.



Figure 20. Louvre window on south elevation.



Figure 21. Detail showing biogrowth, splitting, and loose bolection moulding.



Figure 22. Door on north elevation.



Figure 23. Subfloor: the c. 2010 bearers and piles fixed with stainless steel Z nails are visible on either side of the image. The member at the centre of the image is interpreted as relating to earlier renovations and is fixed with galvanised Z nails.



Figure 24. Subfloor image showing a mixture of new and old joists and floorboards above.