

IN THE MATTER OF

the Fast-track Approvals Act 2024 ("FTAA")

AND

IN THE MATTER OF

an application for approvals by **NZ Transport Agency Waka Kotahi** to construct, operate and maintain the State Highway 1 Wellington Improvements project

**STATE HIGHWAY 1 WELLINGTON IMPROVEMENTS PROJECT
TECHNICAL REPORT #9
ARCHAEOLOGICAL ASSESSMENT**

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1. INTRODUCTION

1. My name is Mary O'Keeffe. I have undertaken an assessment of the archaeological effects of the project.
2. I have worked with Richard Te One and Dr Carolyn Hill; together we have contributed assessments in the heritage space. Mr Te One has addressed significance to Tangata Whenua and Dr Hill has addressed historic heritage matters.

Qualifications and experience

3. I have a Bachelor's and Master's degree in Anthropology. I have run my consultancy, Heritage Solutions, in archaeology and historic heritage for 29 years. I have worked on numerous roading assessments, including the Wellington Inner City Bypass, Transmission Gully, and the MacKays to Peka Peka expressway.
4. I am familiar with the project area, both through being a Wellington resident and passing through the area frequently, and also through undertaking various assessments in and around the project area.

Code of conduct

5. I confirm that I have read the code of conduct for expert witnesses contained in the Environment Court Practice Note 2023. This assessment has been prepared in compliance with that code, as if it were evidence being given in Environment Court proceedings. In particular, unless I state otherwise, this assessment is within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Project description

6. The State Highway 1 (SH1) Wellington Improvements project (the Project) is a Road of National Significance (RoNS) which improves SH1 in Wellington City. The proposal includes the construction of improvements to SH1 within Wellington City from north of the Terrace Tunnel to Kilbirnie.
7. The Project will provide for more efficient and reliable access on SH1 and includes duplicate tunnels at The Terrace and Mount Victoria, a new layout at the Basin Reserve as well as improvements along the remainder of the SH1 corridor from north of the Terrace Tunnel to the intersection of Cobham Drive and Evans Bay Parade. The Project aims to unblock critical bottlenecks on the state highway, maintain access for local movements and enable public transport growth.

Scope of assessment

8. My assessment addresses the following matters:
 - i. The methodology I have used to assess the effects of the Project
 - ii. The existing environment
 - iii. Effects of the Project during operation
 - iv. Effects of the Project during construction
 - v. Benefits of the Project
 - vi. Recommended measures to avoid, remedy or mitigate adverse effects; and

vii. Response to pre-lodgement feedback

9. Information required under Schedule 8 of the FTAA in an application for an archaeological authority that would otherwise be applied for under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA):
 1. For the purposes of *section 43(3)(i)*, an application for an archaeological authority must include the following information:
 - a. A legal description of the land or, if one is not available, a description that is sufficient to identify the land to which the application relates; and
 - b. The name of the owner of the relevant land, if the applicant is not the owner of the land; and
 - c. Proof of consent, if the owner has consented to the proposed activity; and
 - d. Confirmation that the application complies with section 46(2)(a), (b), and (d); and
 - e. A description of each archaeological site to which the application relates and the location of each site; and
 - f. A description of the activity for which the authority is sought; and
 - g. A description of how the proposed activity will modify or destroy each archaeological site; and
 - h. Except in the case of an approval described in section 44(b) of the HNZPT Act, an assessment of
 - i. The archaeological, Māori, and other relevant values of the archaeological site in the detail that is appropriate to the scale and significance of the proposed activity and the proposed modification or destruction of the archaeological site; and
 - ii. The effect of the proposed activity on those values; and
 - i. A statement as to whether consultation with tangata whenua, the owner of the relevant land (if the applicant is not the owner), or any other person likely to be affected—
 - i. Has taken place, with details of the consultation, including the names of the parties and the tenor of the views expressed; or
 - ii. Has not taken place or been completed, with the reasons why consultation has not occurred or been completed (as applicable)
10. I note that some of this required information is contained in the accompanying application.
11. This report presents an archaeological assessment of the proposed area of work, but it is only that. The Project area and wider vicinity are known to be of significance to Iwi through tradition or association; this report does not constitute an assessment of Māori values as required by clause 2(h) of Schedule 8 of the FTAA for an application for an archaeological authority. This report addresses built heritage but is only looking at the archaeological potential of those buildings and structures, being the physical and historical potential. It does not address architectural value; this is covered in the historic heritage assessment completed for this Project by Dr Carolyn Hill.
12. I have also assisted with the preparation of the part of the application that addresses the information requirements for applications for archaeological authorities under the FTAA.
13. The overall scope of the Project Area is shown in Figure 1 below.

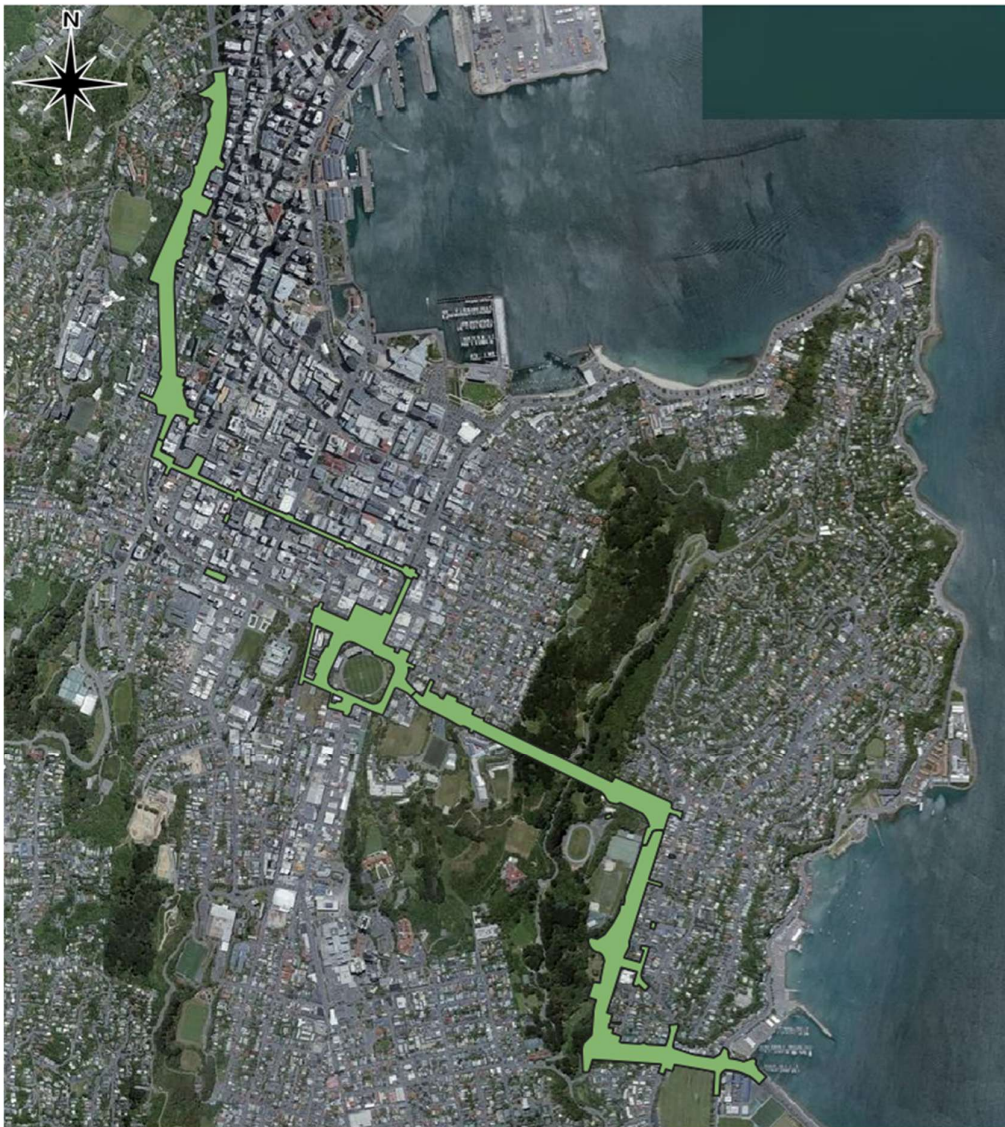


Figure 1 - Project area

2. EXECUTIVE SUMMARY

14. Human occupation of the Project area commenced several centuries ago with the arrival of Māori.
15. European occupation of the area commenced in the 1840s. This occupation created archaeological sites, such as pre-1900 houses and structures.
16. The archaeological landscape of the Project environment is heavily modified. Development and growth of Wellington City through the 19th and 20th centuries have modified virtually all the ground surface of the Project area, with some sub-surface modifications from piping and trenching for services.
17. The physical landscape has been modified in places, through changes in ground level from cutting or filling, culverting or redirection of waterways, and drainage from earthquake uplift or reclamation.
18. No known sites originating from pre contact Māori occupants of the area remain within the Project area.
19. Archaeological sites originating from the 19th Century include houses, drains, domestic rubbish deposits, wooden cobbles as a street surface, and building foundations. There are known archaeological sites and likely to be subsurface unknown sites within the Project area.
20. This report provides an archaeological assessment to support the application under the Fast-Track Approvals Act 2024 (FTAA) for the following approvals:
 - i. Resource consents that would otherwise be applied for under the Resource Management Act 1991 (RMA) (section 42(4)(a) FTAA)
 - ii. An alteration to an existing designation for which a notice of requirement would otherwise be lodged under the RMA (section 42(4)(d) FTAA); and
 - iii. Archaeological authorities that would otherwise be applied for under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) (section 42(4)(i) FTAA)
21. The Project will have minor adverse effects on archaeological values, through the destruction of archaeological structures and sites. A positive effect, however, is the information gained by detailed archaeological investigation of these structures and sites.

Proposed measures to avoid, remedy or mitigate adverse effects, including conditions

22. I understand that the Project design has been selected following options assessment processes that have considered effects on historic heritage, including potential effects on archaeological sites. These options assessment processes are described in the Consideration of Alternatives Technical Report prepared by Mr Phil Peet.
23. Now that the Project route has been selected, it will necessarily impact a number of archaeological sites, as described in this report. In some instances, it may be possible to avoid effects on those sites (for example, by placing appropriate material over any brick culverts that are uncovered during Project works). However, in other cases, it will not be possible to avoid the archaeological effect (for example, a pre-1900 house may need to be removed to provide for the Project works). This means my assessment is in many instances focused on measures to remedy or mitigate unavoidable adverse effects on archaeology. Due to both the high state of historic knowledge of the area, and the high degree of prior modification it is unlikely that any sites may be revealed that require a specific protocol or management outcome.
24. In summary, the measures that I recommend, including the following:

During construction:

- i. Undertake archaeological monitoring of all earthworks in areas identified as having archaeological potential
 - ii. Investigate archaeological features to record and sample archaeological material that may be present; and
 - iii. Move two pre-1900 buildings on Paterson Street off site during construction works, archaeologically investigate their sites, and reinstate the buildings near their original sites.¹ These works will be managed in accordance with a heritage management plan, as recommended in the Historic Heritage Assessment prepared by Dr Carolyn Hill
 - iv. Move the Creche to a new location, ideally nearer to its original site (or in another nearby location favoured by the Ministry for Culture and Heritage, and mana whenua), again in accordance with a heritage management plan
25. Where construction effects may be avoided to known sites or those discovered during construction, options are explored to avoid and protect those sites (e.g. placing materials over any brick culverts that may be uncovered during the Project works).

Following construction:

- i. Undertake interpretation wherever possible, through story boards, display of artefacts, use of historic photos and maps (for example, for Laureston, and adding to existing area interpretation panels already present at the Creche and Basin Reserve)
26. Some of these matters will be provided through the proposed designation and resource consent conditions (e.g. the requirement to prepare a heritage management plan prior to the relocation and reinstatement of identified buildings). However, most of these matters will be provided for through the conditions of the archaeological authorities, which will include a requirement to carry out work in accordance with an archaeological management plan. This is explained further below.
27. This approach will ensure that effects on archaeological sites are appropriately addressed, as required under the RMA.

Information required in support of the application for archaeological authorities

28. This report provides relevant information requirement in support of an application for archaeological authorities as required by Schedule 8 of the FTAA.
29. I have also assisted with the preparation of the application for archaeological authorities included as part of NZTA's substantive application for approvals. I would normally recommend one archaeological authority for a Project for administrative ease, however, due to the scale of this Project, and the requirement to obtain landowner approval before the authority can commence, the approach for this Project is to apply for multiple authorities as follows:
- i. One authority for all land currently owned by the Crown (apart from the category below)
 - ii. One authority for all land owned by the Crown for education purposes and administered by the Ministry for Education
 - iii. One authority for all land currently owned by Wellington City Council; and
 - iv. Separate authorities for all other private land within the Project area

¹ One of these buildings is Ettrick Cottage, which is privately owned and currently offered for sale. If the building is sold and the appropriate approvals are obtained, then the building may be removed from its current location and it will no longer be available for reinstatement as part of this Project. If this occurs, I will update my assessment accordingly

30. NZTA's application is for all of these authorities. The application includes appropriate conditions for managing adverse effects on archaeological heritage, consistent with conditions typically contained in a standard application to HNZPT for an archaeological authority under the HNZPTA. It is proposed that the same conditions will apply to all authorities.
31. The proposed conditions of the archaeological authorities include a condition to carry out work in accordance with the archaeological management plan, which has been prepared. This plan will direct and manage work to be undertaken to record and investigate the archaeological heritage. This plan complements the conditions of the authorities, in that the conditions set out the work that needs to be undertaken, and the management plan provides detail of how this work is undertaken. This management plan is consistent with plans written to accompany standard archaeological authorities granted under the HNZPTA.

3. ASSESSMENT METHODOLOGY

Introduction

32. The methodology utilised for this assessment follows the guidelines laid out in HNZPT's Archaeological Guidelines Series 2: "Writing Archaeological Assessments".² This methodology includes:
- i. Undertaking documentary research into the history of the area, to identify potential types of sites that may be present
 - ii. Undertaking research into archaeological recording and investigations already undertaken in the area
 - iii. Undertaking a site visit to view the area, and to determine the possibility of the presence of further unrecorded sites
 - iv. Assessing the values of known and potential sites, using criteria contained in HNZPT's assessment guidelines
 - v. Assessing the impacts of the Project on those values; and
 - vi. Considering measures for avoiding, remedying and mitigating effects

Site visits

33. I am very familiar with the area of the project, both through previous archaeological work, and from being a long-term resident of the city.
34. I undertook a specific site visit with Dr Carolyn Hill on 25 August 2025, to look at specific locations and discuss heritage aspects.

Sources

35. Data for this report was sourced from a variety of locations:

Archaeological sites

36. Data on recorded sites was obtained from ArchSite, the on-line database for the NZ Archaeological Association. This is a database, and thus contains data on both extant sites and recorded sites that may no longer exist.

Statutory lists

37. Data on registered or listed heritage places was obtained from HNZPT's Rarangi Kōrero Heritage List, and the Wellington City District Plan.

Published sources

38. Key historical texts for Wellington City are Ward's *Early Wellington* (1929), Adkin's *Great Harbour of Tara* (1959) and Humphries and Mews' *Ring Around The City* (2009). These books contain narrative, photos and maps of Wellington in the early part of the 20th century and prior. Other authors have published sources on sites recorded or observed in the early part of the 20th century.

Historical photos

39. The photographic collection of the Alexander Turnbull Library is an important source of information on buildings and features present at points through time, and their location and

² HNZPT, 2019

appearance. Historical photos were examined to trace the development of buildings and land use on the site.

Archaeological work

40. Archaeological investigation and assessments previously undertaken in the city by me and others.

Previous roading projects

41. Transit NZ's Wellington Inner City Bypass Project, including:
 - i. O'Keeffe's three archaeological assessments (Proposed Wellington Inner City Bypass Archaeological Assessment: Archaeological Central Section - Cuba St to Kensington St, Report to Opus International Consultants, 2001; Proposed Wellington Inner City Bypass Archaeological Assessment: Archaeological West Section - Ghuznee St to Kensington St, Report to Opus International Consultants, 2001; and Proposed Wellington Inner City Bypass Archaeological Assessment: Archaeological East Section - Cuba St to Cambridge Terrace, Report to Opus International Consultants, 2001); and
 - ii. the final project report (L Furey (ed), Wellington Inner City Bypass Archaeological investigations Arthur Street, Cuba Street, Tonks Avenue, Volume I Archaeological Excavations, 2010)
 - iii. NZTA's investigation of a second Mount Victoria Tunnel in 2014 (which was put on hold following the Board of Inquiry's decision to decline the RMA approvals needed for the Basin Bridge Proposal), including the following report: O'Keeffe, M. 2014 Mt Victoria Tunnel Duplication Project: Report to NZTA Report 17: Assessment of Archaeological Effects
 - iv. Memorial Park Alliance's Pukeahu Park Project, including the following reports
 - v. Shakles, R. 2017a Archaeological Investigations of the Pukeahu National War Memorial Park, Buckle Street, Wellington, Volume 1: Excavation of Town Acres 226 and 233 - Lower Mount Cook Barracks, Report prepared for the Memorial Park Alliance and Manatu Taonga Ministry for Culture and Heritage
 - vi. Shakles, R. 2017b Archaeological Investigations of the Pukeahu National War Memorial Park, Buckle Street, Wellington, Volume 2: Excavation of Town Acres 263 and 256 - Home of Compassion Creche and St Joseph's R.C. Church, Report prepared for the Memorial Park Alliance and Manatu Taonga Ministry for Culture and Heritage
 - vii. Shakles, R. 2017c Archaeological Investigations of the Pukeahu National War Memorial Park, Buckle Street, Wellington, Volume 3: Archaeological Monitoring of Town Acres 234, 257, 227, 90 and Mt Cook Reserve, Report prepared for the Memorial Park Alliance and Manatu Taonga Ministry for Culture and Heritage
 - viii. Let's Get Wellington Moving Programme's investigation of the Mass Rapid Transit and State Highway Improvements Projects, including the following report: Stevens, C. 2020 Let's Get Wellington Moving, Strategic Highways and Mass Rapid Transit Heritage Landscape Assessment

Historic maps and plans and associated research

42. Historic survey plans held by Land Information New Zealand (LINZ) contain data on both recorded sites and on the environment prior to intense modification, settlement and development. Survey plans can be rich in archaeological or historical detail, as the surveyors of the time often noted many extant features, including settlements, buildings and other landscape sites and features.
43. A key source of data for historic archaeology is Thomas Ward's city surveys. Ward was commissioned in 1889 by the Wellington City Council to undertake a full survey of the city, and recorded all buildings and structures, as well as street layouts. This resulted in a plan of the city comprised of 88 sheets. He notes much useful detail of buildings of the time, including

their construction material, number of storeys, number of rooms of domestic houses, etc. The first survey was completed in 1891 and updated in 1900. Ward's survey was only of the inner city: the outlying areas of Kilbirnie and Hataitai were not included.

44. In preparing this report, I have referred to unpublished research notes prepared by Elizabeth Cox, historian, regarding heritage buildings within the Project area. This research is based on historic maps and plans of the area, including Thomas Ward's city surveys.

Guidance and scope

45. The HNZPTA and RMA work together to manage, protect, and regulate archaeological sites in New Zealand, creating a parallel or integrated process for archaeological assessments. The HNZPTA provides strict protection for all pre-1900 sites and is the primary legislation protecting archaeological sites. The RMA regulates land use, and under section 6(f), the protection of historic heritage from inappropriate subdivision, use, and development is a matter of national importance. 'Historic heritage' includes archaeological sites.
46. The Fast-Track Approvals Act 2024 (FTAA) establishes a consolidated approvals process allowing applicants to obtain multiple statutory authorisations, including archaeological authorities (which would normally be applied for under the HNZPTA) and RMA approvals such as designations and resource consents, through a single application to the Environmental Protection Authority (EPA). Any archaeological approval granted under the FTAA is deemed to have the same legal effect as an authority issued under the HNZPTA, while any designation or resource consent granted is deemed to have the same legal effect as if granted under the RMA.
47. The provisions for archaeological authorities under the FTAA are set out in Schedule 8. These provisions require applications to include specific information about the affected land, the archaeological sites involved, the proposed works, and the potential effects on archaeological, Māori, and other heritage values. The schedule also requires applicants to document consultation with tangata whenua. Meanwhile, the provisions for RMA approvals are set out in Schedule 5 and require the applicant to assess the effects on the environment, and to assess the proposed activity against section 6 of the RMA.
48. All archaeological authority applications lodged under the FTAA must be referred to HNZPT and the Māori Heritage Council under section 51 of the FTAA. Both bodies are required to provide a report to the expert panel convened to determine the application, and the panel must consider that report when making its decision on the application.
49. If an archaeological authority is granted, the panel may impose conditions on it. These conditions may relate to archaeological methodology, site management, investigation, monitoring, and reporting. Authorities may be granted for up to 35 years.
50. Applications for archaeological authorities may also include an application for approval of nominated persons to carry out the activity under the authority. In this case, the application must also include evidence that the archaeologist or approved person responsible for carrying out the work has the required technical competence and, in the case of a site of interest to Māori, has the requisite competencies for recognising and respecting Māori values and access to appropriate cultural support.
51. This report is addressing the archaeological elements of the proposed Project. An 'archaeological site' is defined in the HNZPTA as:

"any place in New Zealand, including any building or structure (or part of a building or structure), that (i) was associated with human activity that

occurred before 1900....; and (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand”

52. Many but not all pre-1900 sites and places in New Zealand are recorded in the NZ Archaeological Association's on-line database of archaeological sites, ArchSite.³
53. The HNZPTA includes what is referred to as 'blanket protection' of archaeological sites. Section 42(1) of the Act states:

“Unless an authority is granted under section 48, 56(1)(b), or 62 in respect of an archaeological site, no person may modify or destroy, or cause to be modified or destroyed, the whole or any part of that site if that person knows, or ought reasonably to have suspected, that the site is an archaeological site.”
54. Sites therefore do not need to be included in any list or schedule, or in ArchSite, to be protected.
55. This report presents an archaeological assessment of the proposed area of work, but it is only that. The Project area and wider vicinity are known to be of significance to iwi through tradition or association; this report does not constitute an assessment of Māori values as required by clause 2(h) of Schedule 8 of the FTAA for an application for an archaeological authority. Cultural values are instead addressed in the Cultural Impact Assessment being prepared for the Project by Mr Richard Te One.
56. This report addresses archaeological sites that are built heritage, but is only looking at the archaeological values of those buildings and structures, being the physical and historical potential. It does not address architectural value; this is covered in a separate assessment of built heritage values completed by Dr Carolyn Hill.
57. Investigation of sites and analysis of their fabric can contribute information that increases the available knowledge of Wellington history and development. Information gained can subsequently be compared and contrasted with other urban locations in New Zealand, to build a story of life in New Zealand in the precontact, contact and colonial periods. Research questions considered during analysis can include:
 - i. What is the survival rate of subsurface sites beneath the current city surface? This can help determine archaeological strategies for future projects and work
 - ii. What types of sites associated with precontact Māori were revealed? What can the nature and location of these sites tell us about how people were interacting with and utilising their environment? How does this compare and contrast with occupation in other coastal areas?
 - iii. Can any evidence of precontact or contact Māori gardening be seen in and around the Basin, where there is traditional evidence of gardening?
 - iv. What information is yielded about the relative wealth and lifestyles of 19th century occupants? Is there a contrast between apparent lifestyle in different parts of the city, reflecting varying affluence and status in different areas?
 - v. Can any changes of personal circumstances be seen through relative changing value of ceramics or other artefacts?
 - vi. What information can be gained about imported vs locally produced goods and materials?

³ <https://nzaa-archsite.hub.arcgis.com/>

- vii. Can domestic rubbish deposits yield specific lifestyle indicators or activities, for example, children, elderly, sick, reuse, recycling, repurposing
- viii. Is there any information yielded from artefacts about activities other than domestic use, for example, religious, drinking, recreation?
- ix. What information can be gained about 19th century infrastructure and construction, from house piles, drains, and other services? How does this compare with present-day methods?

4. EXISTING ENVIRONMENT

Recorded history of Wellington

58. Traditionally Te Whanganui A Tara - the Great Harbour of Tara - was the mouth of the fish, Te Ika a Maui, and was hauled to the surface by Maui. Kupe later visited the harbour, and left his two daughters in the harbour as the islands Matiu and Makoro. The harbour was named by Tara, one of the sons of Whatonga from Mahia, who praised the harbour on his return to Mahia.
59. Traditional and documentary evidence states that the site of what is now Wellington City had a considerable Māori population when the first European observers were making notes and sketches in the late 1700s and through the 1800s. Substantial villages were located at Te Aro, Pipitea, Kaiwharawhara, and Nga-Uranga, usually focussed on stream mouths flowing to the sea. Traditional and ethnographic evidence⁴ notes the presence of many cultivation grounds, fishing areas, canoe landing areas, and kainga.
60. The main streams present on the landscape prior to 1855 are shown in Figure 2.

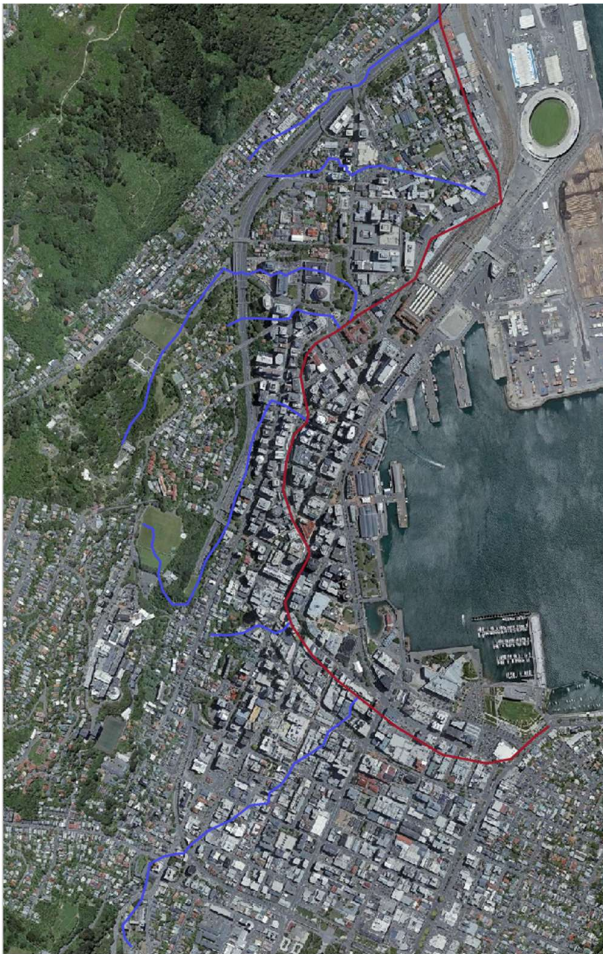


Figure 2 - Streams, 1840 (Streams shown in blue and pre-1855 coastal edge shown in red)⁵

⁴ For example, Adkin, 1959; Best, 1918

⁵ Georeferenced by O'Keeffe, sourced from Survey Office plan 10408

61. Evidence of the lifestyle of the Māori occupants of Wellington, and utilisation of the rich resources available can be seen in recorded and excavated archaeological sites. An example is site R27/194, a midden site located at Seatoun. Archaeological excavation of this site revealed a very large shell midden, containing shellfish, many species of fish, crayfish, and dog bone and bird bone also present. The midden had ovens and fireplaces surrounding it, and stone and obsidian flakes were recovered. Postholes suggest the presence of a structure, possibly a temporary shelter from the weather.
62. The stratigraphy, the consistency of relative abundances of fish and shellfish species and the radiocarbon dates suggest that the site was a single short-term occupation sometime during the 15th and 16th centuries.
63. From about the 1830s Taranaki Whanui were achieving dominance in the area over Ngati Ira and have been the paramount iwi in the region since then.
64. Few physical sites from the pre-contact or contact period have survived to the present day in Wellington City, as they have been largely destroyed or inundated by subsequent development. Archaeological investigations to date suggest that subsequent European activities on and beneath the ground surface, such as construction and landscaping, will have erased previously visible signs of Māori occupation and land use, including gardens and house sites.
65. An important site from the contact period that has survived is the remains of Te Aro kainga, revealed beneath the Bellagio Apartments development in Lower Taranaki Street during site construction works in 2005. The remains of three low rectangular punga structures were found, built immediately on top of the beach gravel which forms the base of the site.⁶
66. Europeans first formally charted Wellington Harbour in 1839 (Cook passed by but did not enter the harbour on any of his three voyages). Following reports from Cook and subsequent sealers, whalers and traders, the New Zealand Company was formed in 1825 to establish agricultural and commercial settlements in New Zealand.
67. The New Zealand Company ships with their load of largely British settlers arrived in Wellington harbour in 1839, with a plan to buy land for a new settlement. Company surveyor Mein Smith's original plan of the city (shown in Figure 3) was laid out in 1840; the city seen in this first plan is largely recognisable as the Wellington of today. A significant difference, however, is the pre-1855 earthquake shoreline, which at that time lay near present-day Lambton Quay and Wakefield Street round to Oriental Bay.

⁶ HNZPT Rarangi Korero list entry 7771

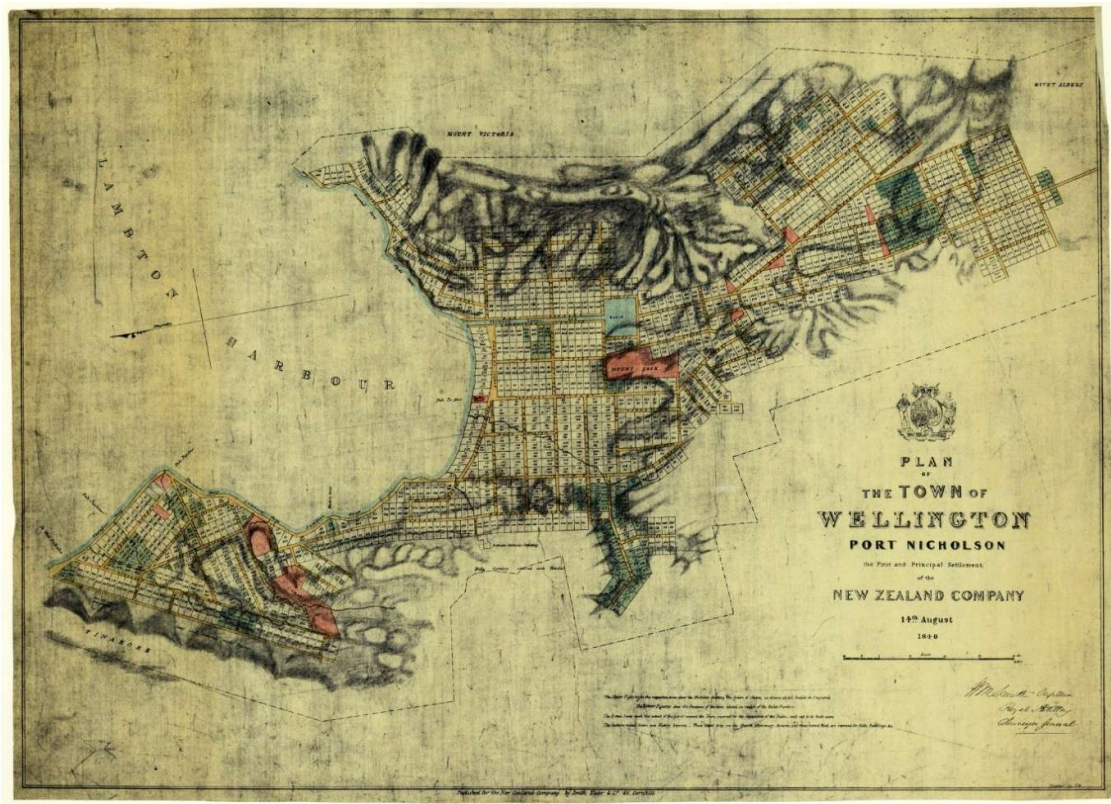


Figure 3 - Mein Smith's plan of Wellington City, 1840⁷

68. Mein Smith's now familiar plan of Wellington was largely designed in London, as can be seen in details of street alignments where in fact topography would not allow. Mein Smith's survey and resulting plan set out the settlement of Wellington into 1100 one-acre blocks, or town acres for sale.
69. In London, the New Zealand Company had already "...offer[ed] for sale by lottery the rights of selection along the lands..."⁸. Selection of town acres, based on Mein Smith's plan, was made at Barret's Hotel on Lambton Quay in July August 1840. Those who had drawn earliest in the ballot chose sections along the valuable Te Aro foreshore.⁹ Those who acquired a town acre also had the right to acquire 100 country acres, nominally surveyed on the land surrounding the city, as far west as Makara, and up both the Hutt valleys and the East Harbour valleys, as seen in Survey Office plan 10456, Figure 4.

⁷ WCC archives

⁸ Ward, 1929: 12

⁹ Martin 2022: 39

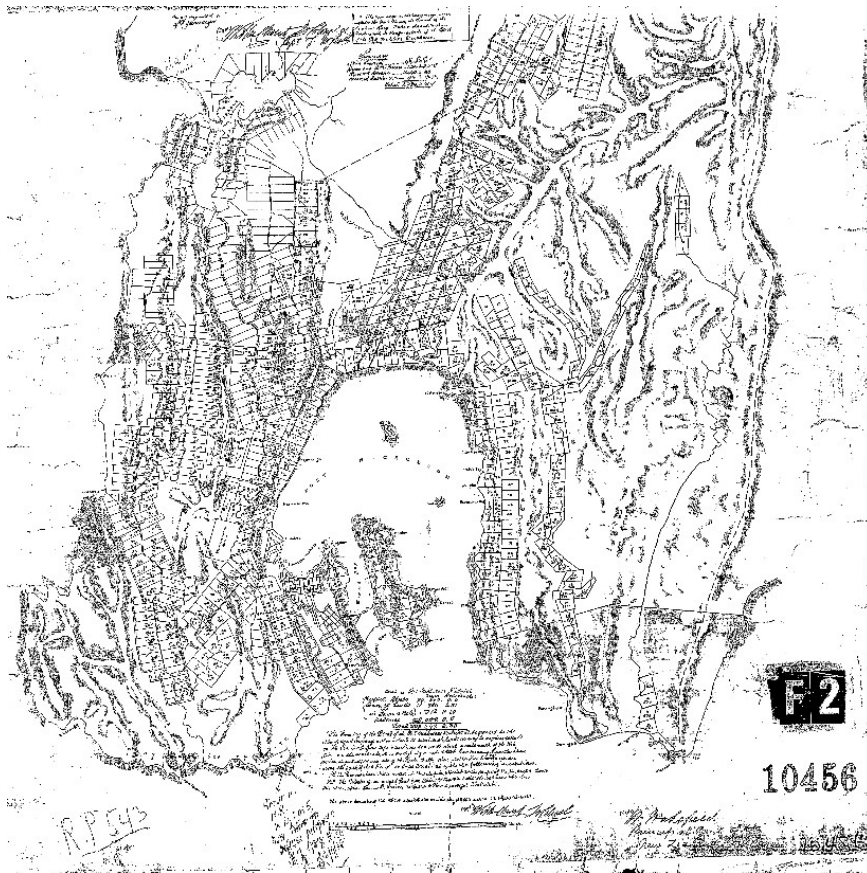


Figure 4 - Country acres¹⁰

70. The plan of the country acres, signed by Wakefield as “Principal Agent of the New Zealand Company” is undated but presumably dates to the early 1840s.¹¹ This plan must have been surveyed on the basis of nominally topographic information, as it shows parcel boundaries in areas where dramatic topography would not facilitate any development, such as the steep ridges of Terawhiti, west of Wellington.
71. The new European settlers started building from the 1840s. Houses and commercial premises were built along the harbour edge at Te Aro, and on Lambton Quay, in the coastal strip between the quay and the hill behind it. Those with a coastal town acre had the huge advantage of being able to construct a private wharf.
72. In the following decades commercial activity spread south along Willis Street into the Te Aro area.
73. In the 1840s and early 1850s Wellington was divided, both geographically and socially. The early settlement was divided in two by forces of nature - the cliffs at Clay Point or Windy Point (today the corner of Willis Street and Lambton Quay) made access round the narrow coastal edge difficult in high tide. Natural elements also made settlement difficult as the Kumutoto Stream (near Woodward Street) periodically flooded and there was limited flat dry coastal land available.

¹⁰ Survey Office plan 10456, n.d. QuickMap

¹¹ This plan definitely predates 1855, as it shows the pre-earthquake shoreline and landscape features

74. However, as McLean notes,¹² the physical division also underpinned a social division. The northern settlement of Thorndon was very much the 'posher' end of town, containing William Wakefield's house, an increasing number of merchants' houses, the immigration barracks, military barracks, and several hotels.
75. As Martin wryly notes: "While Thorndon blossomed with the respectability and beneficence of government, Te Aro's more gritty and working-class world was a reminder of the foundation upon which the city was built".¹³ Te Aro flat, as well as being wet and boggy, was seen as the 'commercial' end of town, with many traders and wharves.



Figure 5 - View of a part of the town of Wellington, New Zealand, 1841¹⁴

76. Residential areas in and around Lambton Quay tended to be egalitarian in the first few decades: for example, historical maps and archaeological evidence shows that both grand mansions and small workers' cottages were located on the plateau of Boulcott Street above Lambton Quay.¹⁵ The raised ridge of Thorndon contained large grand mansions, whereas the low-lying, damp flat of Te Aro quickly developed into a low social status areas of small, cramped workers' cottages.¹⁶ A small 'Chinatown' centred around Haining and Frederick Streets towards the end of the 19th century.¹⁷
77. Settlement of Mount Victoria commenced from about the 1860s, and the suburb was generally affluent.

¹² McLean, 2000: 23

¹³ Martin, 2002: 9.

¹⁴ Alexander Turnbull Library: C-025-009. Drawn by Charles Heaphy, Draftsman to the New Zealand Company. View from Clay Point hill above the junction of modern Willis Street and Lambton Quay. The flat green area in the centre of the picture is the Te Aro flat.

¹⁵ O'Keeffe, 2011

¹⁶ O'Keeffe, 2020b

¹⁷ O'Keeffe, 2020b

78. A significant event that changed the appearance of Wellington was a major earthquake in 1855.
79. On 23 January 1855 the Wellington region was rocked by a magnitude 8.2 earthquake – the most powerful ever recorded in New Zealand.¹⁸
80. The uplift created a new fringe of beach and rock platforms along the Wellington coast (the red line in Figure 2 shows the pre-earthquake shoreline). Many wharves and jetties became unusable, but there were also beneficial effects, through uplifted land. By 1855 Wellington was already running out of commercial space and had undertaken a small reclamation. The newly exposed land facilitated huge reclamation works in the remaining part of the 19th century, undertaken by both public and private bodies, including the Government, the City Council, the Harbour Board, the privately owned Wellington – Manawatu Railway Company, and the Order of Oddfellows. The substantial reclamations can be seen in Figure 6.

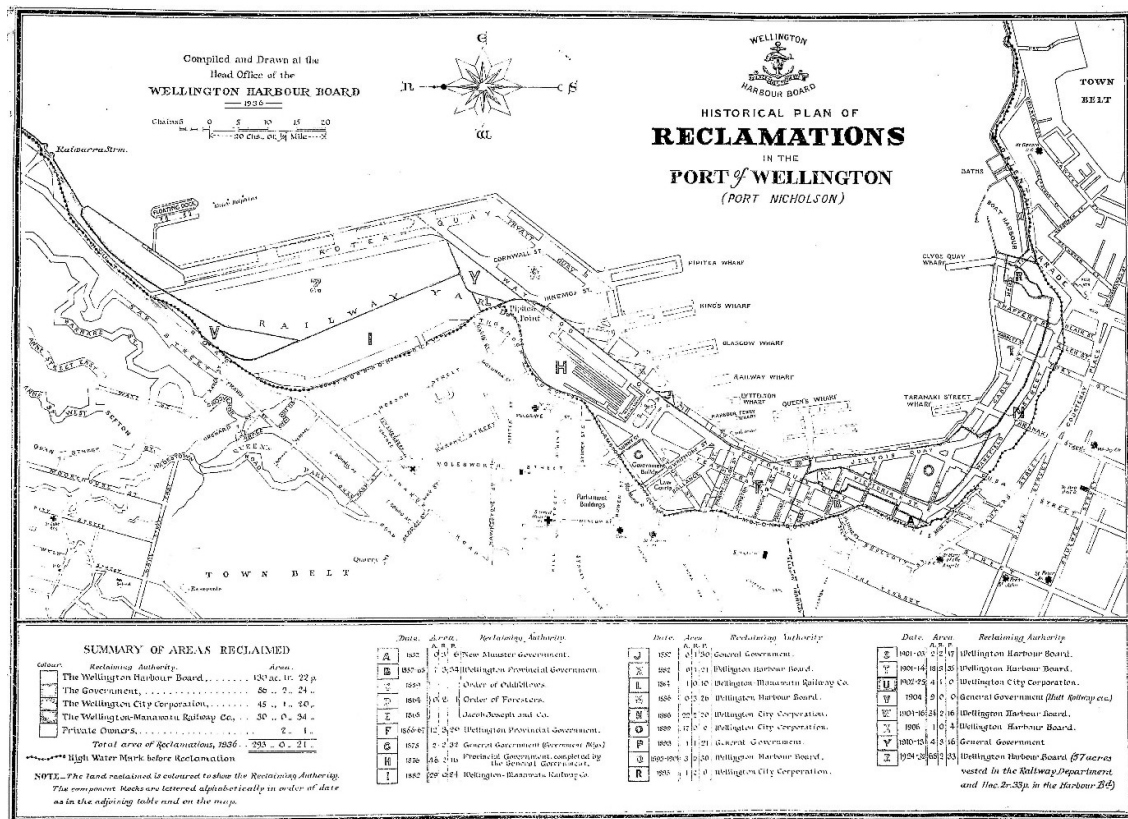


Figure 6 - Reclamations¹⁹

81. The newly exposed strip of shoreline between Wellington and the Hutt Valley also offered a safe road and railway route, whereas parts of the previous coastal route had previously been impassable at high tide. The uplift of the region helped drain the swampy lower reaches of the Hutt Valley creating land there for settlement and development.
82. As a result of the earthquake uplift, many of the streams leading to the harbour either reduced their flow or stopped flowing. Geomorphological evidence of former streams has been

¹⁸ <https://teara.govt.nz/en/historic-earthquakes/page-3>

¹⁹ Survey Office plan 23656. Compiled by the Wellington Harbour Board, 1936. Quickmap

observed in archaeological investigations, for example, work at the Tisdalls site on Willis Street, where gleying²⁰ was observed.²¹

83. A dramatic change also occurred with building material – wooden buildings quickly replaced brick, as brick buildings and structures had been observed to fail in the earthquake.²²

Archaeology of the five Project sections

84. This section discusses the known and potential archaeological sites that may be present in the five Project sections (Terrace Tunnel, Te Aro, Basin Reserve, Mount Victoria, Eastern suburbs).
85. As well as extant buildings, the following archaeological features may be present:

Rubbish pits

86. Prior to organised civic rubbish collection, disposal of inorganic rubbish was generally into pits dug in the grounds around one's house (organic rubbish was fed to pigs or chooks or composted for gardening). Such rubbish pits are commonly found and excavated in archaeological investigations in urban areas throughout the country. The content of these rubbish pits can reveal fascinating and informative evidence on the occupants of the section and their lives: health issues, changing fortunes, relative wealth and status.

Infrastructure and landscaping elements

87. These can include garden edges, and pipes. These elements speak to the development of infrastructure such as piped water, and the use of building curtilages for either functional vegetable gardens, or leisure-oriented flower gardens. The change in garden use can reflect both changing personal fortunes, where the occupant no longer needs to grow their own vegetables, or the increased commercial availability of such food.

Wells

88. Prior to reticulated water supply landowners dug wells for water provision, often shared between neighbours. Several of these have been archaeologically recorded or investigated in Wellington. The introduction of reticulated water was in part a response to a typhoid outbreak in the city on the 1880s.
89. After wells are no longer needed for water supply, they are often used for rubbish deposition. I recorded one such well in Boulcott Street, that contained over 300 archaeological artefacts.²³

Terrace Tunnel

90. The Terrace Tunnel was constructed in 1978. The tunnel was opened as part of an extension of the Wellington Urban Motorway through Thorndon, which had been constructed in the 1960s. The motorway was placed in part along a natural gully at the base of Te Ahumairangi Hill/Tinakori Hill.
91. Images of the motorway's construction (for example Figure 7) show the considerable swathe the construction project cut through Thorndon.

²⁰ Gleying occurs when the oxygen supply in the soil is restricted due to moisture levels in the soil being at saturation point.

²¹ Refer O'Keeffe, 2011

²² A previous earthquake in 1848 damaged many brick buildings and structures. Most were rebuilt in wood which was observed to have performed better in the quake. Subsequently the death toll and damage in the 1855 earthquake was not as substantial as it otherwise might have been

²³ O'Keeffe, 2011



Figure 7 - Wellington motorway under construction²⁴

92. A heritage site that was adversely affected by motorway construction was the Bolton Street Cemetery. The cemetery was Wellington's first burial ground, opened in 1840 and closed in the 1890s. The original plan for one unified burial ground fell afoul of social prejudices of the time, and in 1851 the 'town cemetery' was split into three sectarian areas known as Bolton Street Cemetery (for Church of England burials), Sydney Street Cemetery (the public one for 'non-conformists') and the Jewish Cemetery. An eloquent expression of 19th century British social prejudice played out on the other side of the globe is seen in the Roman Catholic Cemetery being located in a completely different (and undesirable) location: the Mount Street Catholic Cemetery was placed on what was then the edge of the city, and on a steep hill, resulting in considerable slope creep for the graves.²⁵

²⁴ Aerial view of Wellington Urban Motorway under construction, taken ca 26 August 1969 by an unidentified Evening Post staff photographer. Alexander Turnbull Library EP/1969/3580/33-F

²⁵ O'Keeffe, 2020a

93. Part of Bolton Street Cemetery was located within the gully where the motorway was to be placed. During motorway construction about 3,700 burials, many newly discovered, were exhumed. Most of these remains now lie in a large vault beneath the Memorial Lawn situated behind the Museum, while a small number were reinterred at Karori or Makara Cemeteries at the request of relatives. All recovered gravestones and monuments were relocated throughout other parts of the Cemetery, except for a few claimed by relatives.²⁶ These closely packed relocated gravestones can easily be identified, as there is not enough space between them for a buried person.



Figure 8 - Bolton Street Cemetery, 1979²⁷

²⁶ <https://boltoncemetery.org.nz/history/>

²⁷ Workmen with mobile crane relocating the gravestones of John Plimmer, Henry Blundell and Edward Gillon in Bolton Street Cemetery, alongside the Wellington Urban Motorway. Photograph taken 10 March 1979 by Evening Post staff photographer John Nicholson. Alexander Turnbull Library EP/1979/0844/36-F



Figure 9 - Bolton Street Cemetery, 1969²⁸



Figure 10 - Bolton Street Cemetery, 1969²⁹

²⁸ Part 2 of a 2-part panorama showing roadworks through Bolton Street Cemetery in preparation for the Wellington Motorway. Photograph taken circa 30 Jan 1969 by an unidentified staff photographer for the Evening Post. Alexander Turnbull Library EP/1969/0464a-F

²⁹ Part 1 of a 2-part panorama showing roadworks through Bolton Street Cemetery in preparation for the Wellington Motorway. Photograph taken circa June 1968 by an unidentified staff photographer for the Evening Post. Alexander Turnbull Library EP/1969/0464-F

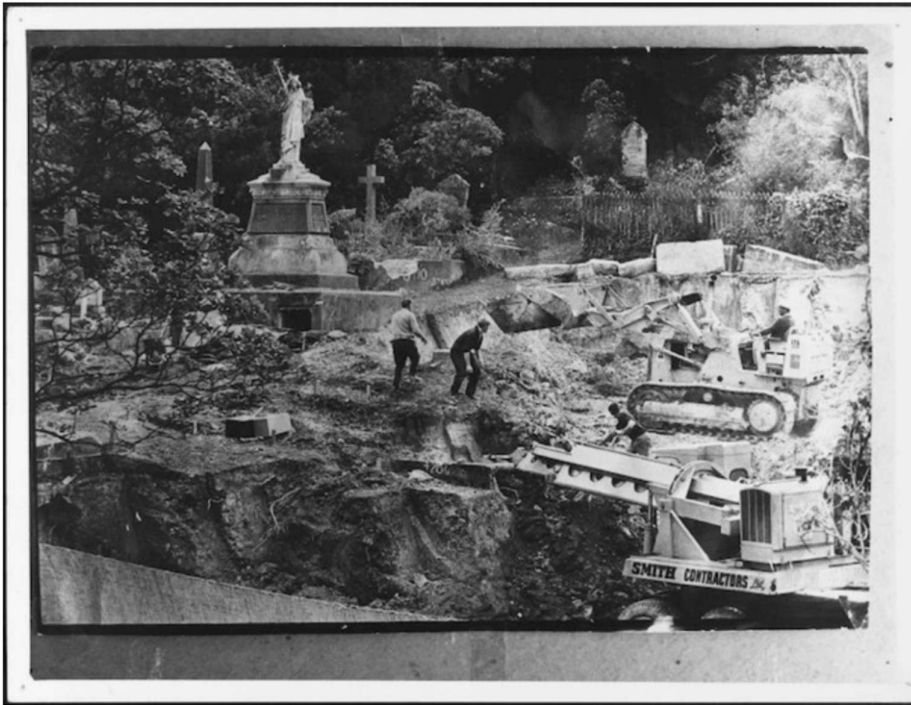


Figure 11 - Bolton Street cemetery, 1969³⁰

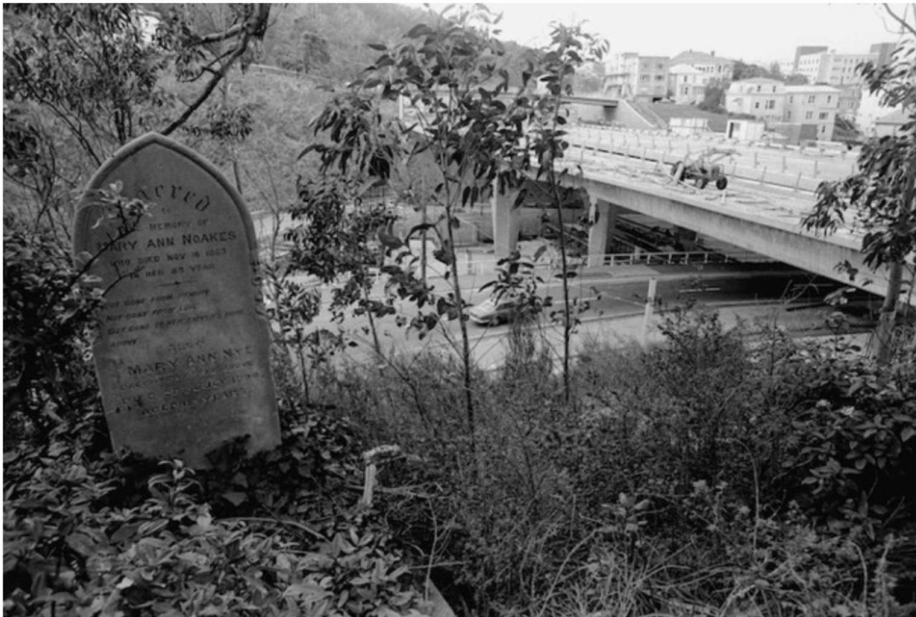


Figure 12 - Bolton Street Cemetery, 1976³¹

³⁰ Road works through the Bolton Street Cemetery in preparation for the Wellington Motorway. Shows earth moving vehicles working below a statue on the Flyger family grave. The city sexton, P J E Shotter, is nearest the statue. Photograph taken circa 18 April 1969 by an unidentified staff photographer for the Dominion newspaper. Alexander Turnbull Library PAColl-5522-3-001

³¹ View of Wellington Motorway under construction, taken from Bolton Street Cemetery, Wellington, ca 10 July 1976 by an unidentified Evening Post staff photographer. A headstone marking the grave of Mary Ann Noakes and Mary Ann Nye can be seen in the foreground. Alexander Turnbull Library EP/1976/2436/28-F

94. As well as impacts on the Bolton Street Cemetery, the motorway also adversely affected pre-1900 buildings located along the eastern side of Tinakori Road, with some houses being demolished, and others having their rear sections truncated.
95. One house that was affected by having its rear section truncated is the Katherine Mansfield Birthplace, located at 25 Tinakori Road. Archaeological excavations at the rear of the house, between the house and gully edge were undertaken by Kevin Jones in 1987.³² Jones recovered and analysed numerous artefacts of domestic origin, as well as building material, and household rubbish. Further excavations by Jones in 1993 revealed aspects of the house's lean-to, and plumbing system.³³
96. The motorway constructed in the 1960s-1970s was originally planned to have two portals as part of the Terrace Tunnel, as seen in the technical drawings held by the Alexander Turnbull Library. The proposed southern portals are shown in Figure 13, and the proposed northern portals are shown in Figure 14 and Figure 15.

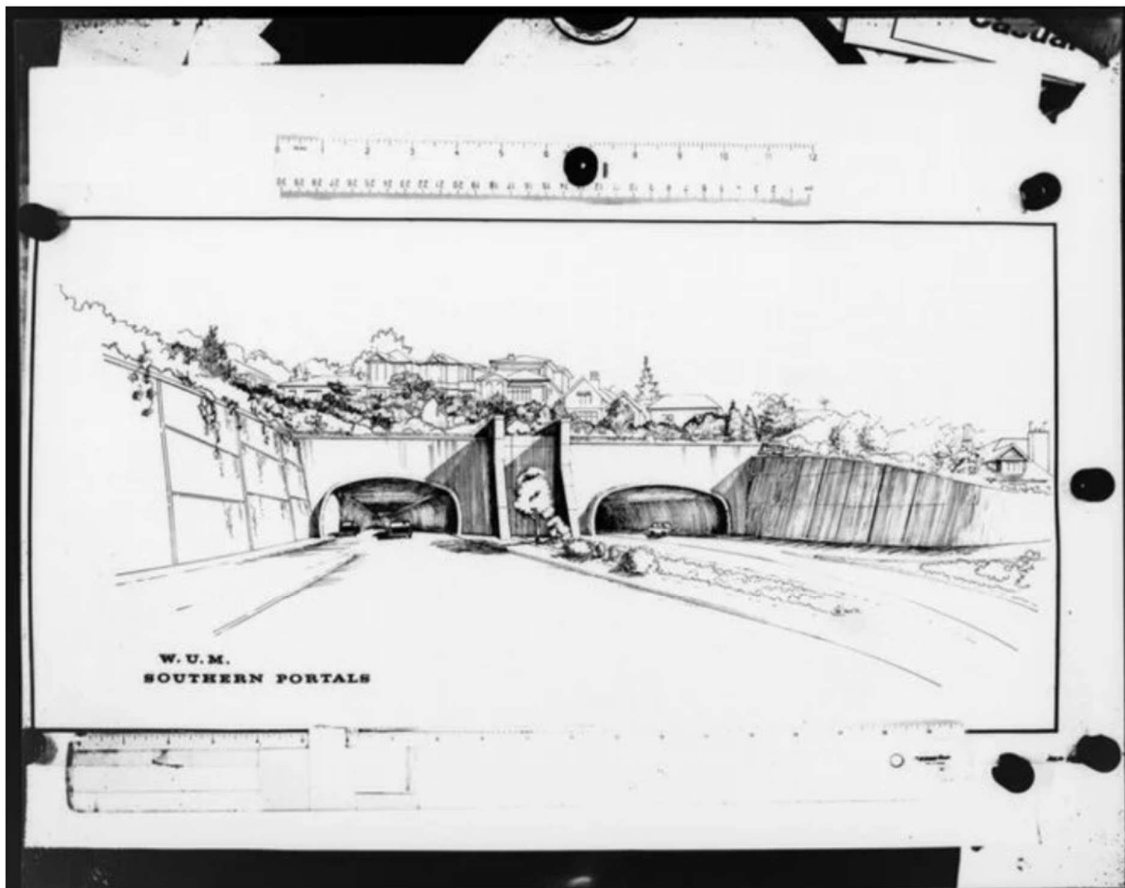


Figure 13 - Technical drawings for Wellington Urban Motorway extension, 1973³⁴

³² Jones, 1987.

³³ Jones, 1994

³⁴ Alexander Turnbull Library 1/2-229481-F

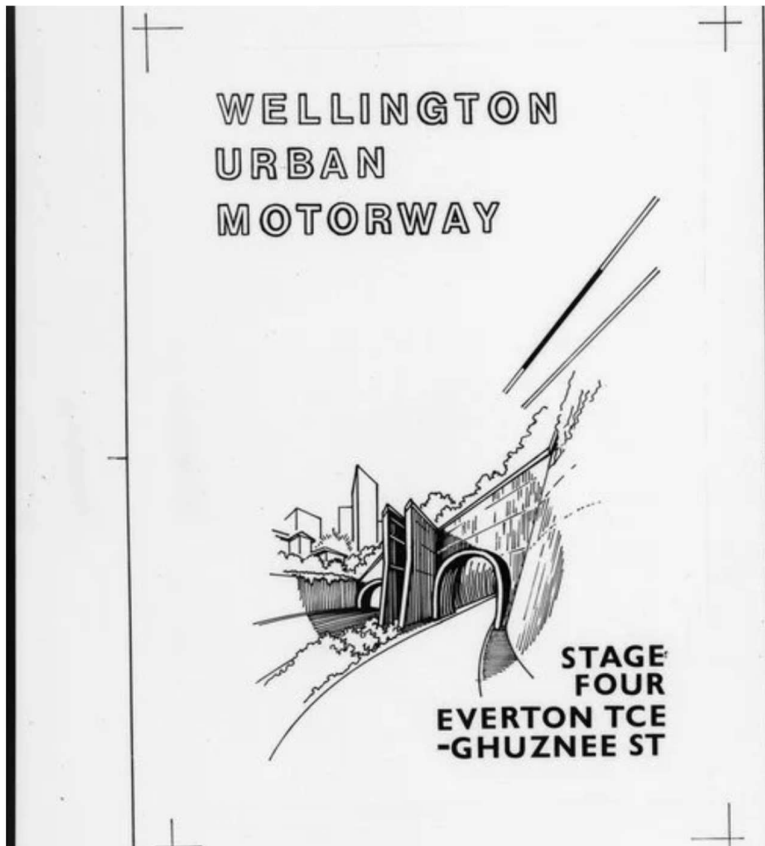


Figure 14 - Technical drawings for Wellington Urban Motorway extension, 1973³⁵

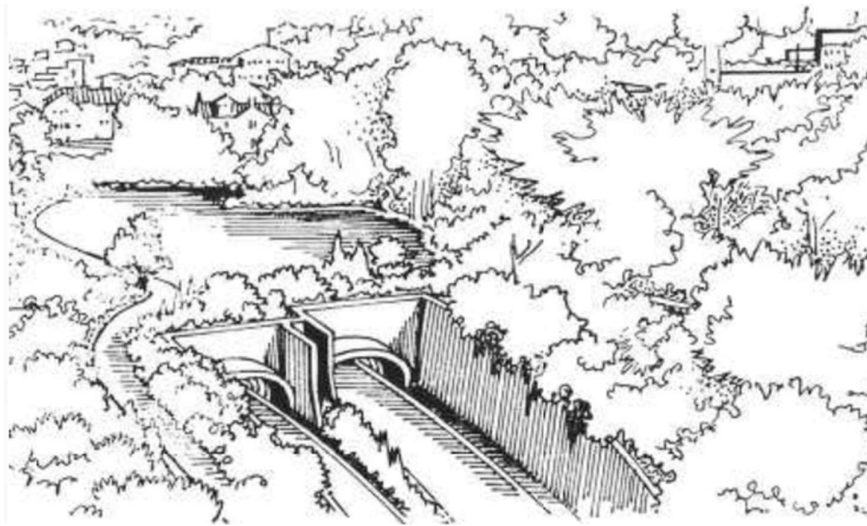


Figure 15 - Technical drawings for Wellington Urban Motorway extension, 1973³⁶

97. Overlaying the proposed second alignment of the Terrace Tunnel and its exit south over the 1891 Thomas Ward map, shows the tunnel runs beneath town acres 164, 187, and 447 to 451. To the south it exits in town acres 163 and 165.

³⁵ Alexander Turnbull Library 1/2-229483-F

³⁶ Alexander Turnbull Library 1/2-229479-F

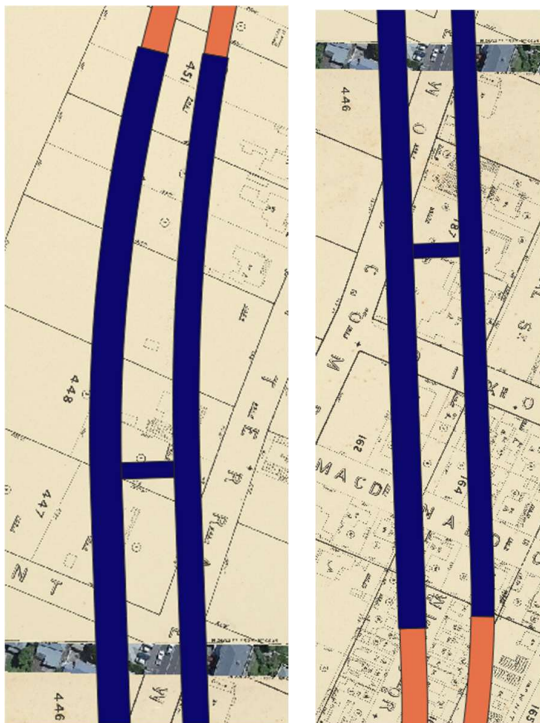


Figure 16 - Terrace tunnel alignment with georeferenced Ward plan (L: North Portal, R: South Portal, Blue: Planned tunnel and Orange: Open road)³⁷

98. The land above the tunnel contains roads: The Terrace³⁸, MacDonald Crescent and Dixon Street. The land parcels adjoining these roads have houses built on them by 1891, shown in the Ward plan. Parcels around Dixon Street and MacDonald Crescent are densely occupied.
99. The land parcels in the vicinity of Dixon Street and MacDonald Crescent contain mainly domestic houses.³⁹ They are generally small and two storied and closely packed within the town acres. By contrast the buildings present on town acres along The Terrace are larger two storied domestic houses, with each town acre containing one house, inferring a grand mansion with landscaped spacious grounds.
100. As part of the Inner-City Bypass work completed by 2007, a trench was built at the southern end of the Terrace Tunnel through town acres 163, 139, 113, 114, and 15, curving from the tunnel portal through the previous intersection of Abel Smith and Willis Streets. This trench which rises to grade has destroyed any previous buildings or structures located on the land parcels.

Te Aro

101. As previously noted, the area of the Te Aro flat developed as a low social status area from the beginning of the European city, occupied largely by cramped workers' cottage and some industries, such as Dixon's aerated water and cordial manufacturing company, and Berry & Co Salt and Spice merchants.⁴⁰ The Ward plan shows that there were lots of new shops built in the area in the 1890s, many replacing housing. From the beginning of the twentieth century

³⁷ Georeferenced by M O'Keeffe - Ward plan sourced from WCC archives

³⁸ The Terrace from Bowen St south to Mount Street was previously known as Wellington Terrace. The section from Mount Street south to Abel Smith St was previously known as Woolcombe Street

³⁹ Detail on building type, material, use, and number of rooms, is inferred from the key at the base of Thomas Ward's 1891 plans

⁴⁰ O'Keeffe, 2014

both streets became even more important because of the introduction of electric trams in 1904 which ran along Cuba and Vivian Streets.

102. The Te Aro area was set out in the Mein Smith plan of 1840. Vivian Street was formed as a street in this first plan, although the section between The Terrace and Cuba Street was originally named Ingestre Street.
103. The Thomas Ward plan shows the density of occupation along Vivian Street (Ingestre Street) by 1891.



Figure 17 - Vivian Street between Willis Street and Taranaki Street⁴¹



Figure 18 - Vivian Street between Taranaki Street and Cambridge Terrace⁴²

104. Detail from the Ward plan shows that the buildings present either side of Vivian Street were a mixture of residential, commercial, and retail, for example, the National Bank and various hotels, shown in Figure 19.

⁴¹ Georeferenced by M O'Keeffe - Ward plan sourced from WCC archives

⁴² Georeferenced by M O'Keeffe - Ward plan sourced from WCC archives

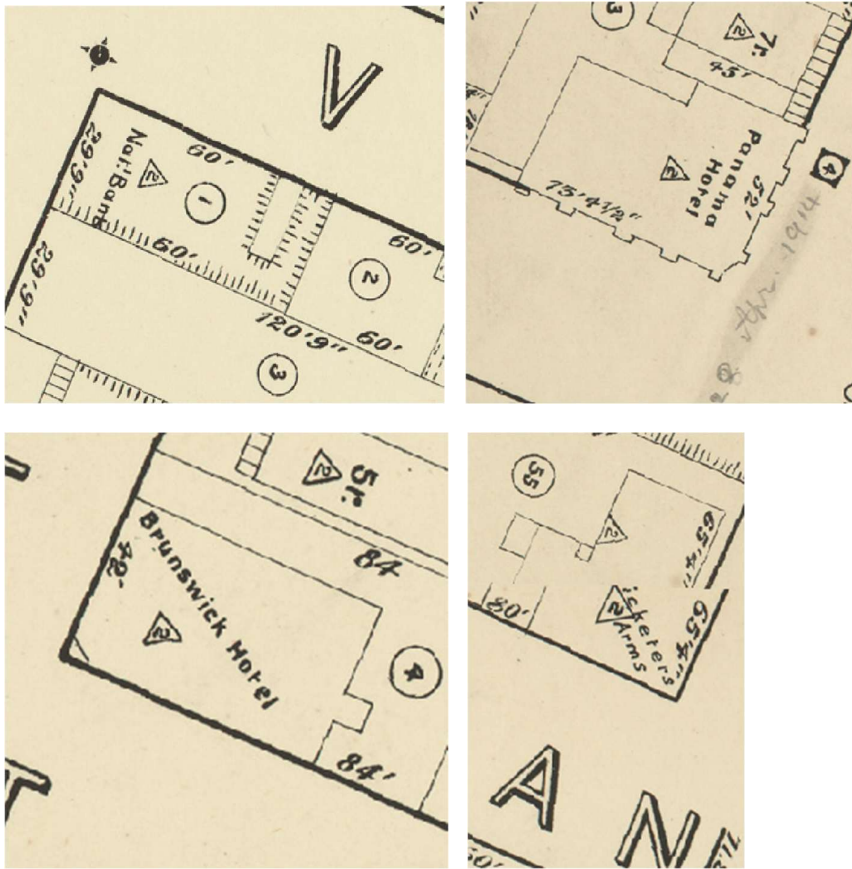


Figure 19 - Buildings along Vivian Street (Top L: National Bank, Top R: Panama Hotel, Bottom L: Brunswick Hotel and Bottom R: Cricketers Arms Hotel)⁴³

105. Much of the area in the vicinity of the Project between the southern portal of the Terrace Tunnel and Kent / Cambridge Terraces was the subject of detailed archaeological research and investigations as part of the Inner-City Bypass Project,⁴⁴ completed by 2007. These investigations around Arthur Street, Cuba Street, and Tonks Avenue revealed much valuable and fascinating information about the lives of early colonial settlers: how they lived, what they ate, what resources they had access to, and their relative social status.

Basin Reserve and Mount Victoria

106. It is probable that the area of what is now known as the Basin Reserve and Mount Victoria was utilised by pre- and post-contact Māori. The bush-clad slopes would have provided food resources of birds and plants. Waitangi Stream previously flowed down the Newtown Valley, into the former swamp at what is now the Basin Reserve, and down to the waterfront, as shown in Figure 20.

⁴³ Ward plan sourced from WCC archives

⁴⁴ Furey, 2010

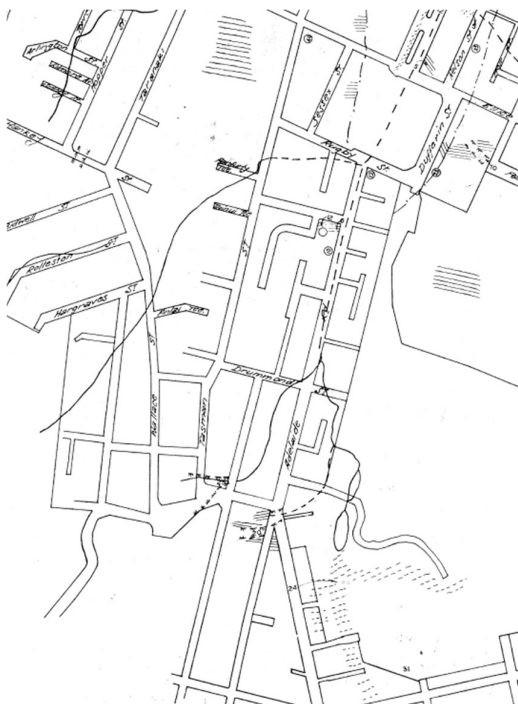


Figure 20 - Detail from Bastings' soil survey plan, 1936 (Black and dotted lines denote streams)⁴⁵

107. The Waitangi Stream would have provided resources such as flax and waterbirds, plus fertile soil in its vicinity for growing crops, as shown in the historic presence of the Hauwai cultivation area.

Basin Reserve

108. Adkin⁴⁶ records the following sites originating from pre-contact Māori in the wider vicinity of the Basin Reserve and Mount Victoria tunnel:

i. Puke Ahu

Located on Mt Cook ridge, where the former National Museum building is. Thought to be a pa or defended site, probably with associated agricultural grounds.

ii. Te Akatarewa Pa

Pa on the Mt Victoria ridge, above Wellington College, precise location unknown.

iii. Hauwai cultivation area

Adjacent to the swamp that is now the Basin Reserve, on the western slopes of Mt Victoria ridge. Probably associated with Akatarewa Pa. Would have been a source of wetland food (eels and water birds) and resources

iv. Waitangi lagoon

Located around the junction of Courtenay Place and Cambridge Terrace. Lagoon at the mouth of the Waitangi Stream that flowed from the swamp that is now the Basin Reserve (this stream was originally to be widened to become a shipping canal to the Basin).

⁴⁵ Showing the stream through the Newtown valley running up to the Basin Reserve at the top of the image - WCC Archives

⁴⁶ Adkin, 1959

v. Kaipapa

Located within the grounds of Government House. The exact nature of the place nor its meaning has not been recorded; this is listed as a site of significance to iwi in the Wellington City District Plan.

109. With the exception of Te Akatarewa Pa, none of these sites noted by Adkin have been formally recorded as archaeological sites; either because their precise location is not known, or there is no physical tangible evidence of the site.
110. The Basin Reserve was originally planned and set out as a saltwater shipping basin: the tidal rise and fall in the inner harbour made mooring of boats difficult, so a shipping basin was planned as a safe and reliable moorage. A canal was to run from the basin to the harbour edge, placed between Kent and Cambridge Terraces, as shown in Figure 21.

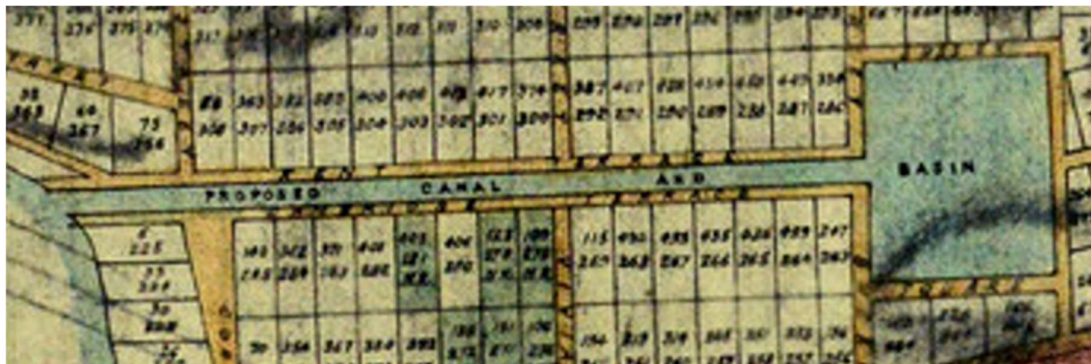


Figure 21 - "Proposed canal and basin"⁴⁷

111. Uplift from the 1855 earthquake drained the stream, and uplifted the basin, as well as moving the harbour edge some 400 metres from the original coastal edge near the mouth of the Waitangi Stream. In 1857 Wellington residents began to petition the Provincial Council for a site to create a permanent cricket ground. In February 1863 prisoners from the nearby Mt Cook prison began the task of draining and flattening the swampy piece of land into a ground suitable for cricket. The Basin Reserve's long association with cricket began on January 11, 1868, when the Wellington Volunteers played the crew of the HMS Falcon.⁴⁸

Mount Victoria

112. The suburb of Mount Victoria with its street layout was set out as part of the original city in 1840.
113. The sections in the city at Te Aro, at the foot of the Mount Victoria ridge were subdivided and built on from the first years of the city's development. In contrast, Mount Victoria remained a bush-clad ridge in the first decade or so of European settlement, as seen in Figure 22.

⁴⁷ Detail from Mein Smith's survey plan, 1840 - WCC archives

⁴⁸ <https://basinreserve.nz/about/the-wellington-basin/>



Figure 22 - Mount Victoria, 1842 (S C Brees)⁴⁹

114. Figure 22 shows a Māori family standing on what is now the intersection of Courtenay Place, Kent Terrace and Majoribanks Street. The buildings of Simmonds and Hoggard's windmill, built in 1843 to grind wheat and corn, are behind them.
115. The views and north facing aspect of the lower slope of Mount Victoria attracted some settlers; early survey plans show the sections were larger and owned by prominent (and generally wealthy) Wellingtonians. Figure 23 shows some houses along the lower slopes in the later 1860s, and Figure 24 shows further growth in the 1870s.



Figure 23 - View across Thorndon, Wellington, ca 1868⁵⁰

⁴⁹Alexander Turnbull Library B-031-032

⁵⁰ Alexander Turnbull Library: 1/2-010900-F (detail)



Figure 24 - Mount Victoria and Te Aro Flat, ca 1870s⁵¹

116. Humphris and Mews⁵² note that increased growth of the city in the 1890s, bringing more workers to the city, created pressure for housing. This was met in part by subdividing some of the larger sections in Mount Victoria.
117. Figure 25 shows further growth and settlement on the lower slope of Mount Victoria in the 1880s, and Figure 26, taken from a similar vantage point, shows the same scene in 1916, with significant growth of houses along and up the slope.

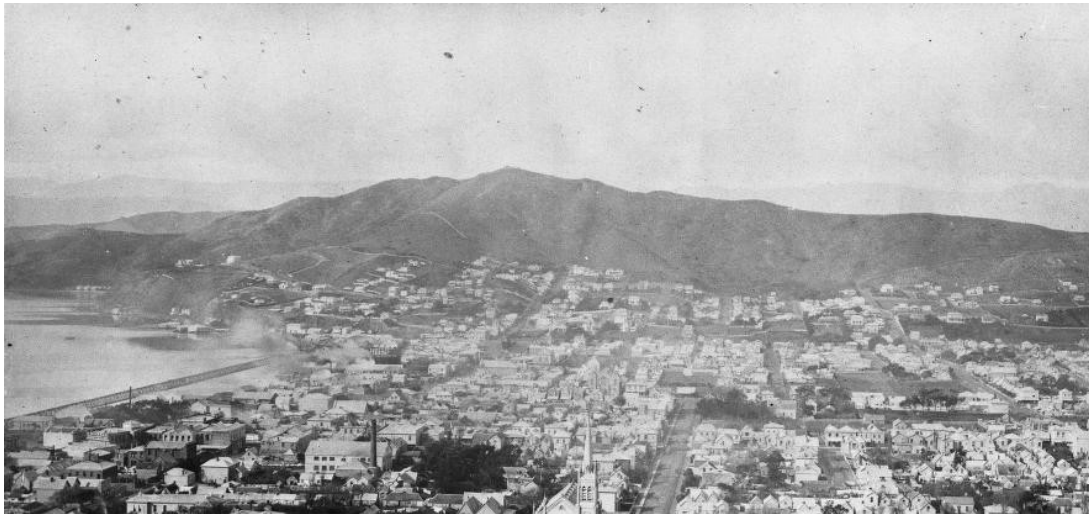


Figure 25 - Te Aro, Wellington City (detail), ca. 1880⁵³

⁵¹ Alexander Turnbull Library: PA7-48-10

⁵² Humphris and Mews, 2009

⁵³ Alexander Turnbull Library: 1/2-018791-F



Figure 26 - Mount Victoria, 1916⁵⁴

118. The paintings and photos of Mount Victoria from the 1840s through to the early 20th century are notable in contrast to the same area today: there are no large trees, and the slopes were grass clad and grazed.
119. Additional archaeological investigations⁵⁵ for the Pukeahu Park and Arras Tunnel developments were undertaken around Mount Cook, during the creation of a cut and cover tunnel as part of Buckle Street, to the north of the Pukeahu National War Memorial Park. Archaeological material was found associated with the military history of Pukeahu Mount Cook, domestic occupation of the area, and evidence of St Joseph's Church and the Home of Compassion Creche, all on the northwest corner of the Basin Reserve.
120. A 'Catholic Precinct' was present in the area in the 19th century: the Catholic Bishop resided for a time at Laureston, a house on the slopes of Mount Victoria (discussed below), where he could look down on his 'flock' at St Patrick's College, St Joseph's Church, St Joseph's Home for Incurables, and the Home of Compassion Creche, all located north of Buckle Street.

⁵⁴ Alexander Turnbull Library 1/2-007733-G

⁵⁵ Shakles, 2017a, 2017b, 2017c

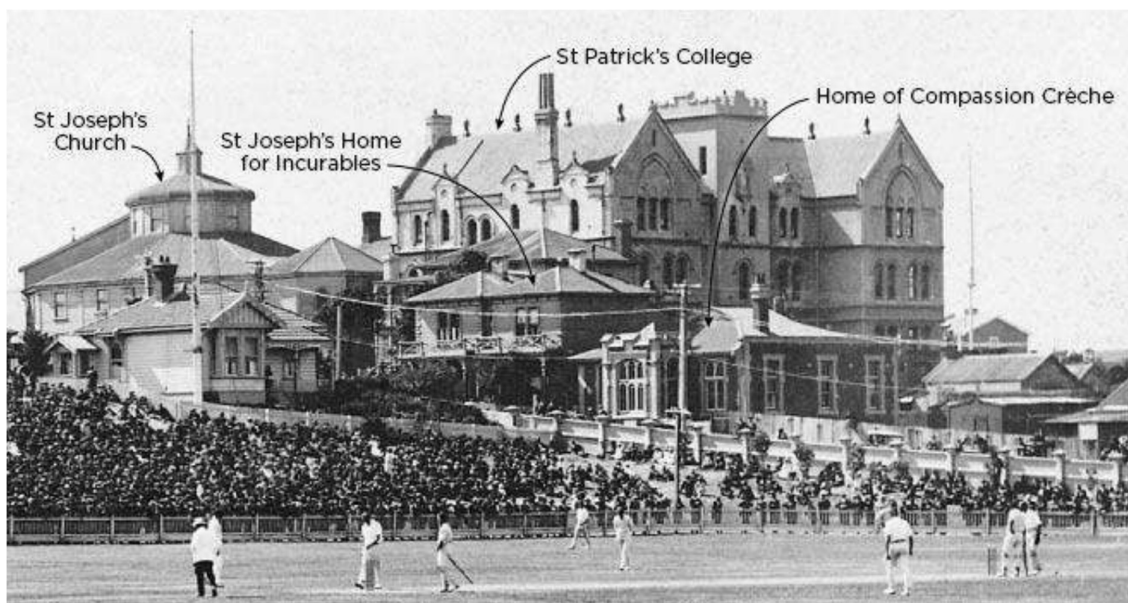


Figure 27 - Buildings of the 'Catholic Precinct'⁵⁶

121. Only the Home of Compassion Crèche is relevant to this assessment, as the other elements of the 'Catholic Precinct' along Buckle Street (St Joseph's Church, St Joseph's Home, and St Patrick's College) have all been demolished.

Home of Compassion Crèche

122. The Home of Compassion Crèche building is, and originally was, located within town acre 263.
123. Shakles⁵⁷ notes that two cottages built in the 1870s located on Lot 5 of town acre 263 were acquired by the Sisters of Our Lady of Compassion, led by the Reverend Mother Mary Joseph Aubert. The sisters obtained the buildings to establish a Crèche facility; an article in the New Zealand Tablet described their intentions:⁵⁸

"These [cottages] are to be converted into a home for the maintenance of babies and the younger children of poor women whose mothers are forced by circumstances to work during the day. Here the little ones will be left in the morning and attended to throughout the day by the Sisters, and handed back to the mothers, who will call for them after the day's work. This form of charity is a new one in Wellington, but surely one that will appeal to the hearts of the people..."

124. The two cottages acquired by the Sisters fronting onto Buckle Street are shown in Thomas Ward's 1891 plan, Figure 28.

⁵⁶ Stevens, 2020: 22

⁵⁷ Shakles, 2017

⁵⁸ New Zealand Tablet, 20 August 1903, cited in Shakles, 2017: 14

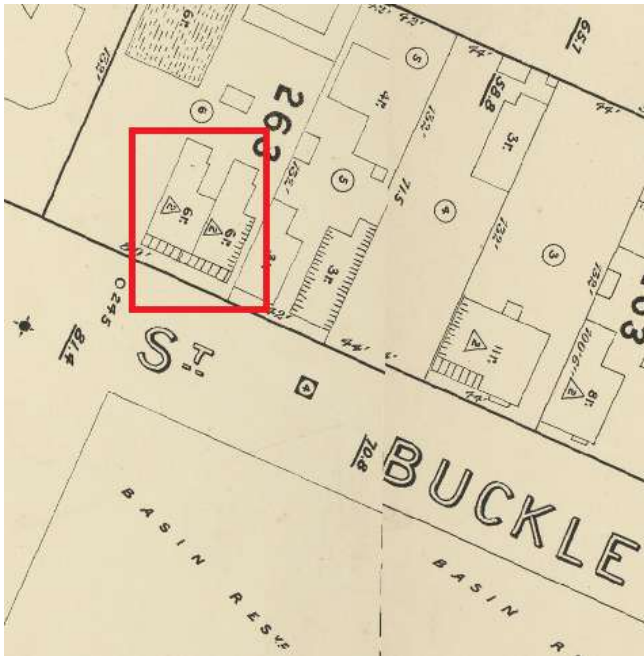


Figure 28 - Sisters of Compassion's cottages, Buckle Street, seen on Ward plan, 1891⁵⁹

125. The wooden buildings were deemed unsafe by the Wellington City Council in 1914, and were replaced by a five roomed brick building, on the same site as the two cottages.⁶⁰

126. The Creche building is seen in an image dating to c. 1929, Figure 29.

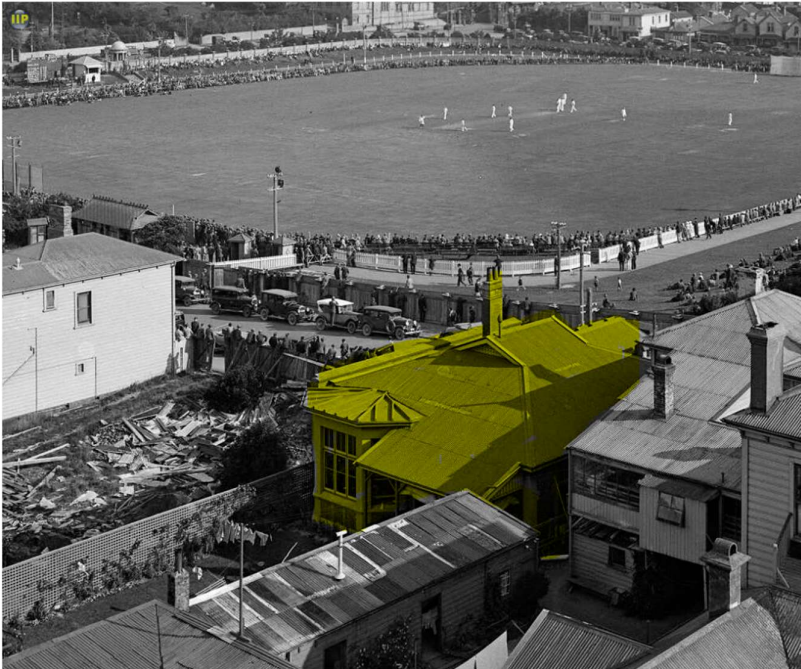


Figure 29 - Home of Compassion Creche, c.1929⁶¹

⁵⁹ WCC Archives

⁶⁰ Shakles, 2017: 14.

⁶¹ Alexander Turnbull Library PAColl-0614-1

127. The Creche was moved as part of the work to construct the cut and cover tunnel on Buckle Street between 2012-2014. The building was moved within its site, to the north-west of its original location, as shown in Figure 30.



Figure 30 - Original and current location of Home of Compassion Creche (Original location shown as red hashed lines)⁶²

128. Archaeological evidence of the features of the 'Catholic Precinct', including the Creche, was revealed by work undertaken for the construction of Pukeahu National War Memorial Park and the cut and cover tunnel that undergrounded Buckle Street in 2012-14, documented in Shakles, 2017.
129. Archaeological investigations on the site to the rear (north) of the original location of the Home of Compassion Creche, revealed a large number of structural and cut features. These features included brick walls, postholes, post-pads, beam-slots, a brick-lined well, open brick-lined drain, trenches cut for ceramic wastewater drains, as well as a number of refuse pits.⁶³
130. A long, narrow trench-like feature was exposed during the excavations to the rear of the Home of Compassion Creche. The feature was cut through the compacted surface and into the re-deposited Holocene gravels. The feature had been cut with steep sides, had a flat base and contained butchered animal bone within a sand matrix. The sand was likely to have been utilised to bury the butchered bone and mask the smell that so much rotting mammal bone would have produced, presumably to deter vermin. Most of the bones displayed butchery

⁶²Georeferenced by O'Keeffe

⁶³ Shakles, 2017: 23

marks in the form of cut and saw marks, and consisted of cattle, sheep and pig. Few artefacts were present within the fill, with those recovered consisting of bottle glass fragments (black beer), a single clay tobacco pipe stem fragment, and stoneware and transferware (willow pattern) sherds. Shakles considered the brick-lined drain was probably associated with the pit, used to wash away blood from butchery activity.⁶⁴

131. Of interest were artefacts associated with children recovered from rubbish deposits on town acre 263, inferred to be associated with the children using the Creche. Twenty-two gaming items and toys were collected from six contexts. Items included plastic building blocks, doll parts and accessories, figurines, tea set component, gaming pieces, marbles and balls.⁶⁵
132. Excavations at the rear of the Creche also established the original topography of the area, which included the presence of a deep gully that incised the eastern flank of Mount Cook. Evidence of large-scale mid-19th century earthworking and re-contouring of the natural topography was also exposed, which consisted of the infilling of the gully with the redeposition of large volumes of natural Holocene sands and gravels derived from the 1848 lowering of Mount Cook by military engineers.⁶⁶
133. The social history and associations of the building are tremendously interesting. On site interpretation is an opportunity to tell these fascinating stories.

Laureston

134. Laureston, located at 7 Paterson Street, was built in 1869. The house was designed by architect Nicholas Marchant for prominent Wellingtonian William Waring Taylor in 1869.
135. The house stood alone on town acre 673 for over 30 years following its construction.

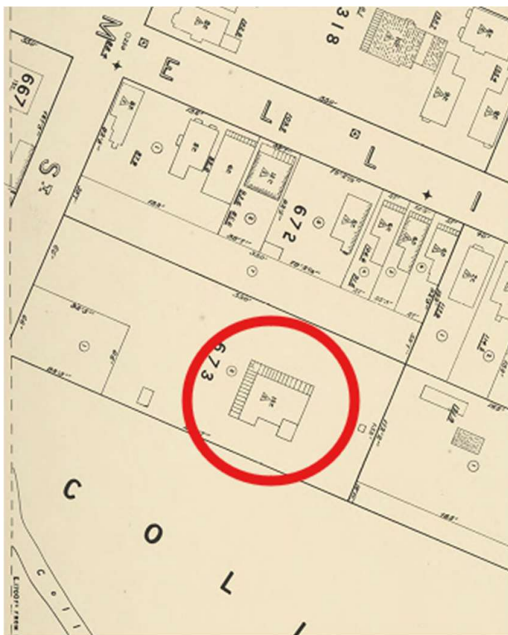


Figure 31 - Laureston on town acre 673⁶⁷

⁶⁴ Shakles, 2017: 32

⁶⁵ Shakles, 2017: 139

⁶⁶ Shakles, 2017: i

⁶⁷ Thomas Ward plan, sheet 70, 1891 - Wellington City Council Archives

136. The next owner was Houston Frances Logan, who purchased the property in 1879 and who used the house as his home. Frances Grant became the next owner of the property in 1885 who then sold it to Harry Crump, builder. Crump developed the area around his home, which included 12 houses and a new street that he first named Laureston Street after his house. The street was later renamed Paterson Street after long-time Wellington College governor Reverend James Paterson.⁶⁸
137. The house and grounds then became the Catholic Presbytery in 1909. Catholic Archbishop Thomas O'Shea lived at the house from 1909 until his death in 1954. The house and additions were also home to many other senior priests of the Wellington Diocese from 1909 to the 1980s.⁶⁹
138. The style of the house is Rustic Gothic, a version of Gothic where English Tudor Gothic was reinterpreted in timber. There are few examples of this style in Wellington, however, it was particularly popular in Nelson with a number of Rustic Gothic examples from this time.⁷⁰
139. Typical of the style, and seen in the house, are gabled roofs, a strong vertical emphasis, decorative bargeboards and finials, bay windows and veranda. There were extensive decorative elements, with a Gothic and Tudor emphasis. The detailing was quite fine and delicate, showing good craftsmanship.⁷¹
140. Photographic evidence shows Laureston in its original context and setting. As noted, for many years it sat alone in its semi-rural setting. It was on the southern edge of the suburb of Mt Victoria; south of and behind it were the empty paddocks of Wellington College and the Mount View Lunatic Asylum (now the site of Government House).
141. The house was built to face the city to the north.



Figure 32 - Laureston, c. 1890s, photographer unknown⁷²

⁶⁸ Cox, 2025

⁶⁹ Newman, 2008

⁷⁰ Bowman & O'Keeffe, 2011

⁷¹ *ibid*

⁷² Alexander Turnbull Library 1/2-017986-F

142. Figure 32 shows the house in the 1890s, looking at its west and north elevations. The house is sitting on a sloping rise; there is a track or vehicle path in the left of the photo. Research has not been able to establish where the vehicular access to the house would have been from. Figure 31 shows that Paterson Street did not exist when the house was first built, so its vehicle access may have been from the west, from the end of Brougham Street. This appears consistent with the location of the track in Figure 32, which is shown on the north-west corner of the property.

Paterson Street

143. Paterson Street is named after the Reverend James Paterson. He was one of the Colony's leading churchmen and retired from the charge of St. John's Presbyterian Church in 1903. Probably significantly for the naming of the street, he was also Governor of nearby Wellington College and, from 1877 to 1903, a member of its Senate.
144. Paterson Street was not originally named after the Reverend, however, nor did it extend so far as to meet up with Austin Street. It was initially a small private street running just 545 feet up from Brougham Street to a dead end. It was constructed and owned by an early Wellington developer, Harry Crump, who named it Laureston Street. Crump had bought the two town acres bordering what became the street in 1897. When the Reverend Paterson died in 1904, three city councillors successfully sought the change of name to Paterson Street in his honour. It became a public street in 1917.⁷³
145. In 1897 Harry Crump bought town acres 672 and 673, including 7 Paterson Street, which was at that time accessed from Ellice Street. At this time, The Cyclopaedia of New Zealand said of him: *"He has been developing important leaseholds round Wellington, and has acquired a considerable area of land not far from Government House where he has created a suburb during the past five years, named Clermont."*⁷⁴
146. Crump built thirteen substantial houses on this block and progressively sold off parts of the two town acres he had bought. A number of the houses he built have already been demolished, but several remain.⁷⁵
147. Crump built the houses at 7, 9, 11, 13, 17 Paterson Street; 42 Austin Street; and 143, 145, 151 Brougham Street.
148. Laureston, located at 7 Paterson Street, and Ettrick Cottage (located at 19 Paterson Street but moved to this location in 1994 from its original location in Austin Street) are the only pre-1900 buildings on Paterson Street. The Thomas Ward plan shows that the site of what became Paterson Street was largely empty in the later 1890s.

Mount Victoria Tunnel

149. With growth of the city into the suburbs came a need to move its people round. Many roads had been formed but some outlying parts of the city were too hilly to allow safe roads. The Wellington City Tramways Company was formed in 1878, and the company received many requests to run trams into outlying areas.⁷⁶
150. James Crawford, a large landowner at Seatoun, suggested a tramline to Seatoun; his plans included a tunnel through Mount Victoria with trams running to Kilbirnie and on to Seatoun.⁷⁷

⁷³ Newman, 2008:2

⁷⁴ <http://mvhs.wellington.net.nz/Publications/PatersonSt.pdf>

⁷⁵ Newman, 2008.

⁷⁶ Humphris and Mews, 2009: 37

⁷⁷ Humphris and Mews, 2009: 38

151. This plan was brought to fruition with the construction of Wellington's second tunnel, the Hataitai Tram Tunnel (now the Pirie Street bus tunnel), which was opened on 16 April 1907 and was instrumental in the growth of the suburb's population from approximately 3,000 to 29,000. According to Yska⁷⁸ the cost of the single-track tunnel was £70,000 and took well over a year, much longer than was expected. It was completed by 100 miners working in three shifts, 25 bricklayers and apprentices, and teams of drivers and truckers to cart away the spoil. A temporary tramline was laid from the mouth of the tunnel down Waitoa Road and Moxham Avenue to transport the spoil, which was used in the creation of Kilbirnie Park, and reclamation of the south-western edge of Evans Bay. The Hataitai Land Company provided land to connect Hataitai to Roseneath, and the tram tunnel completed in 1907 brought gas, water and electricity into the suburb.
152. The Pirie Street bus tunnel was registered category II with the New Zealand Historic Places Trust (now HNZPT) on 28 June 1984.
153. Increased road traffic created the need for easier and quicker road access from the eastern suburbs to the central city.
154. A road tunnel through Mount Victoria had been suggested as early as 1909.⁷⁹ It is shown conceptually on a traffic management plan of 1923.

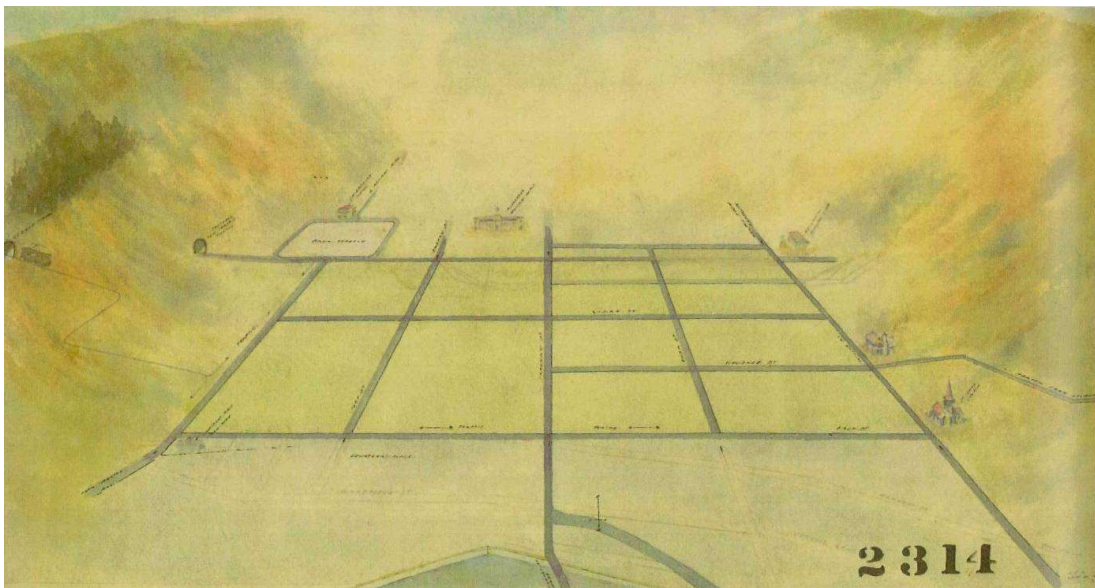


Figure 33 - Proposed traffic tunnel through Mt Victoria, 1923⁸⁰

155. The Mount Victoria Tunnel was constructed between 1929 and 1931 and opened in 1931. As can be seen in Ward's plan (Figure 34), the road layout in the vicinity at the time of the tunnel's construction was different to present day: the roads of the Basin Reserve formed a square, and there were residential properties lining the east side of the Basin. Ellice Street ran along the north boundary of the Basin and up the Mount Victoria slope. Land was taken from the adjacent Wellington College property to form the tunnel.

⁷⁸ Yska, 2006

⁷⁹ Humphris and Mews, 2009: 120

⁸⁰ Humphris and Mews, 2009: 120

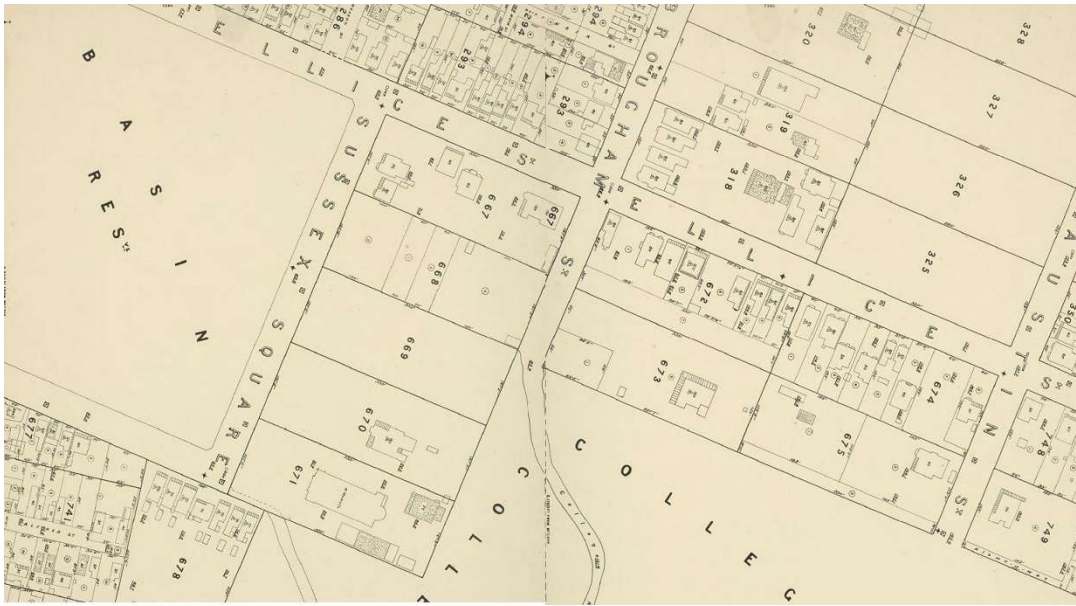


Figure 34 - Detail from Ward plan sheets 69 & 70, 1891⁸¹

156. As noted above, Paterson Street was initially a small private street running just 545 feet up from Brougham Street to a dead end.
157. The landscape in 1900 can be seen in Figure 35, looking south across the Basin Reserve to where the tunnel portal now sits.



Figure 35 - Basin Reserve, c.1900⁸²

⁸¹Wellington City Council Archives

⁸²Alexander Turnbull Library 1/2-059705-F

158. The extension from the west end of Paterson Street where it meets Brougham Street to the edge of the Basin was not formed until after 1930.
159. The approach to constructing the tunnel was new and was proposed by Hansford and Mills' engineer, Arnold Downer. It departed from the then usual tunnel practice by having multiple faces being worked at once. Two preliminary drives, each 8 feet wide, were put through, along either side of the projected tunnel walls for the full length (2045 feet). These drives were tackled from either end and also from a point reached by a vertical shaft put down from near the old Ellice Street Quarry. The first drive was put through by 31 May 1930 with the second parallel one completed a few months later.

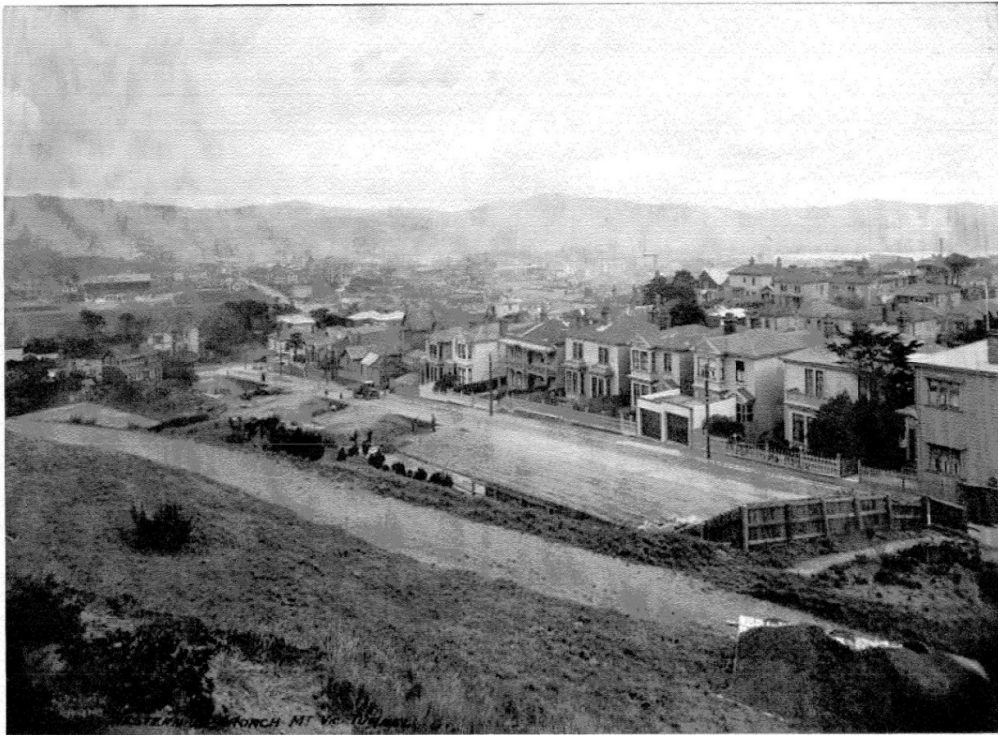


Figure 36 - Commencing trenching for approach ramp, Mt Victoria side⁸³

⁸³Wellington City Archives - (Note Paterson Street ends at Brougham Street and does not run down to Dufferin Street)



Figure 37 - Preparation of site at Hataitai (Clear area in foreground is now corner of Ruahine & Taurima Streets)⁸⁴



Figure 38 - Rock breaking ceremony, Mt Victoria side, December 1929⁸⁵

⁸⁴Wellington City Archives

⁸⁵Wellington City Archives

160. The tunnel was constructed using hand labour, some mechanised labour, trucks, and horse and carts on rails to haul away the spoil. As can be seen in Figure 39 a series of horizontal terraces were cut to facilitate construction of the slope rising to the portal, and removal of the spoil.

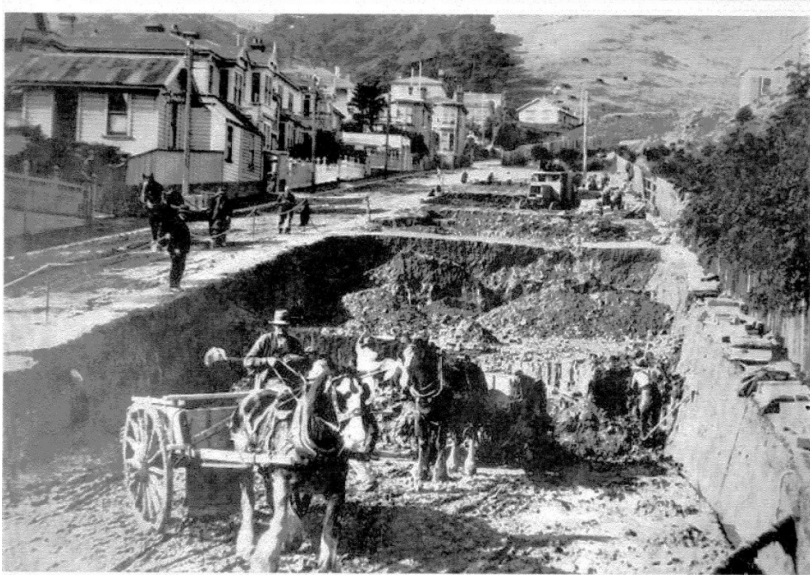


Figure 39 - Excavation of approach ramp, Mt Victoria side⁸⁶

161. Figure 40 shows the western portal beside the Basin Reserve, during construction in late 1930.



Figure 40 - View of the western entrance of the Mount Victoria Tunnel under construction, August 1930⁸⁷

⁸⁶ Wellington City Archives

⁸⁷ Alexander Turnbull Library: EP-Transport-Roads-Tunnels-01

162. Figure 41 shows the Hataitai side of the tunnel in the 1930s: Ruahine Street has not yet been constructed, and rails can be seen running left to right across the image at the edge of the housing, to help remove the tunnel spoil. Large piles of spoil can be seen piled on the eastern slope of Mount Victoria; this slope rising above Ruahine Street has been reshaped by dumping and spreading of tunnel spoil.



Figure 41 - Hataitai, Wellington, ca 1930s⁸⁸



Figure 42 - Initial excavations on Hataitai side⁸⁹

⁸⁸ Alexander Turnbull Library: PAColl-7796-70

⁸⁹ Wellington City Archives

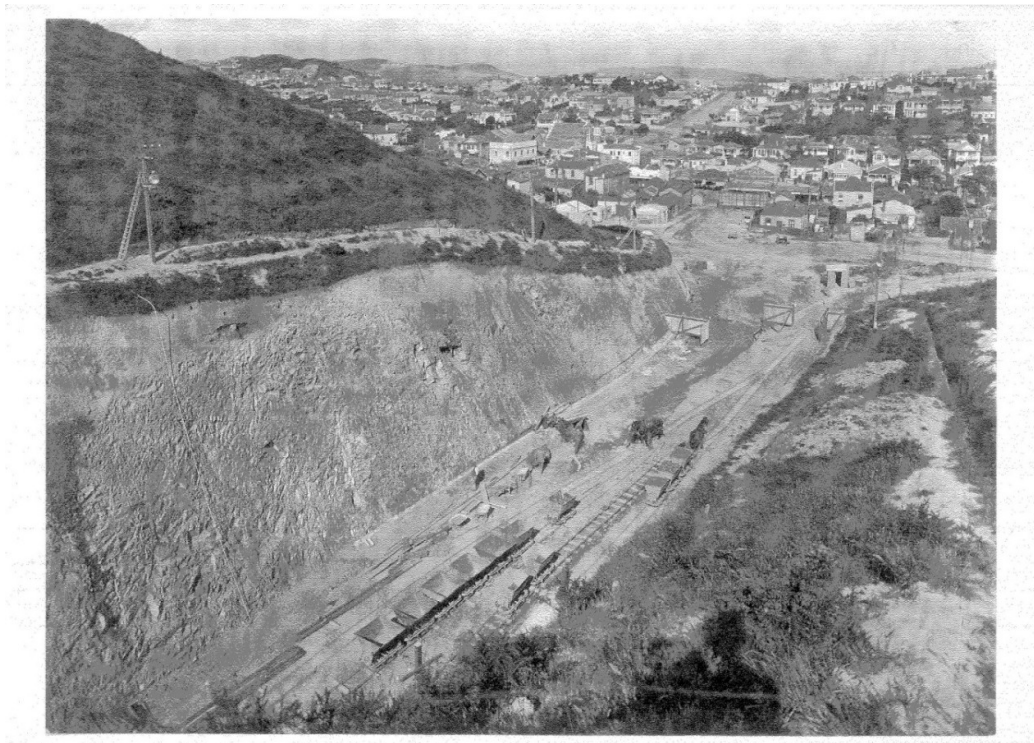


Figure 43 - Trench leading to portal, Hataitai side⁹⁰

163. Geotechnical test pitting undertaken in 2012 was monitored by the archaeologist; one test pit on the south end of the eastern slope of the Mt Victoria ridge revealed redeposited domestic material including pieces of clay brick, three pieces of transfer print ceramic, pieces of metal including thin strapping, and pieces of bottle and window glass.⁹¹ This material had been deposited on the hillslope in fill removed for the tunnel construction, and was presumably from material taken from the surface near an area of domestic occupation.
164. Figure 44 shows a detail of the Hataitai portal during construction in early 1930. The rails to haul away the spoil can be seen. Of interest is the road alignments – Ruahine Street does not yet exist, and what is to become Taurima Street curves away from the tunnel portal to the left.

⁹⁰ Wellington City Archives\

⁹¹ O'Keeffe, 2012:11



Figure 44 - View of the approach from Hataitai to the Mount Victoria Tunnel: March 1930⁹²

165. The loan for the tunnel amounted to £161,250 with the Hansford and Mills Construction Company Ltd. responsible for its construction. George Adam Hart was the Wellington City Engineer at the time, and it is presumed that he was responsible for its design.
166. Prior to commencement the Tramways Department requested the headway in the tunnel to be increased to be able to admit double-deck tram cars passing through the tunnel in the future.
167. The contract officially commenced on the 20th of December 1929.
168. Arnold Downer was chief engineer on the project and when Hansford and Mills went into liquidation, Downer requested to stay on and complete the project. He then formed his own company, Downer and Company.
169. A block of solid rock was left between the two drives, 12 feet wide. Either side of each drive a light tramway was constructed with electric haulers pulling the spoil trucks into the tunnel. Working upwards and inwards from either drive, the men broke out the arch of the tunnel, with the trucks taking out the spoil using their own weight and momentum from the rake of the floor of the tunnel. The retained central block of rock served as a working platform for the next operation.

⁹² Alexander Turnbull Library EP-Transport-Roads-Tunnels-02



Figure 45 - Parallel drives, Mt Victoria side⁹³

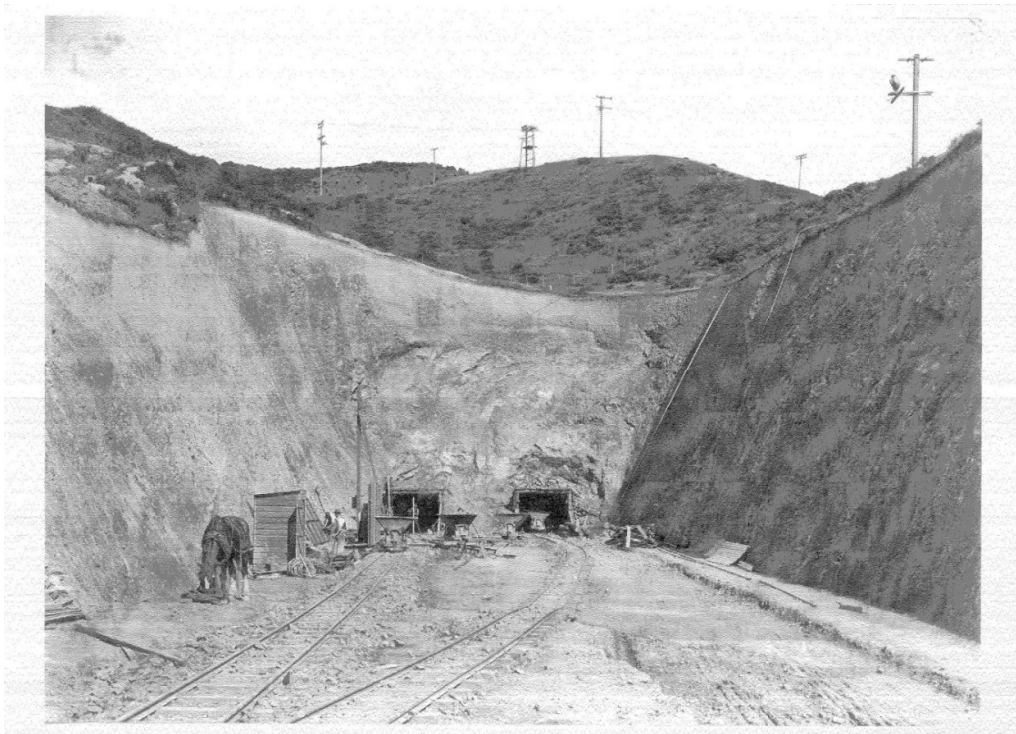


Figure 46 - Parallel drives, Hataitai side⁹⁴

⁹³ Wellington City Archives

⁹⁴ Wellington City Archives

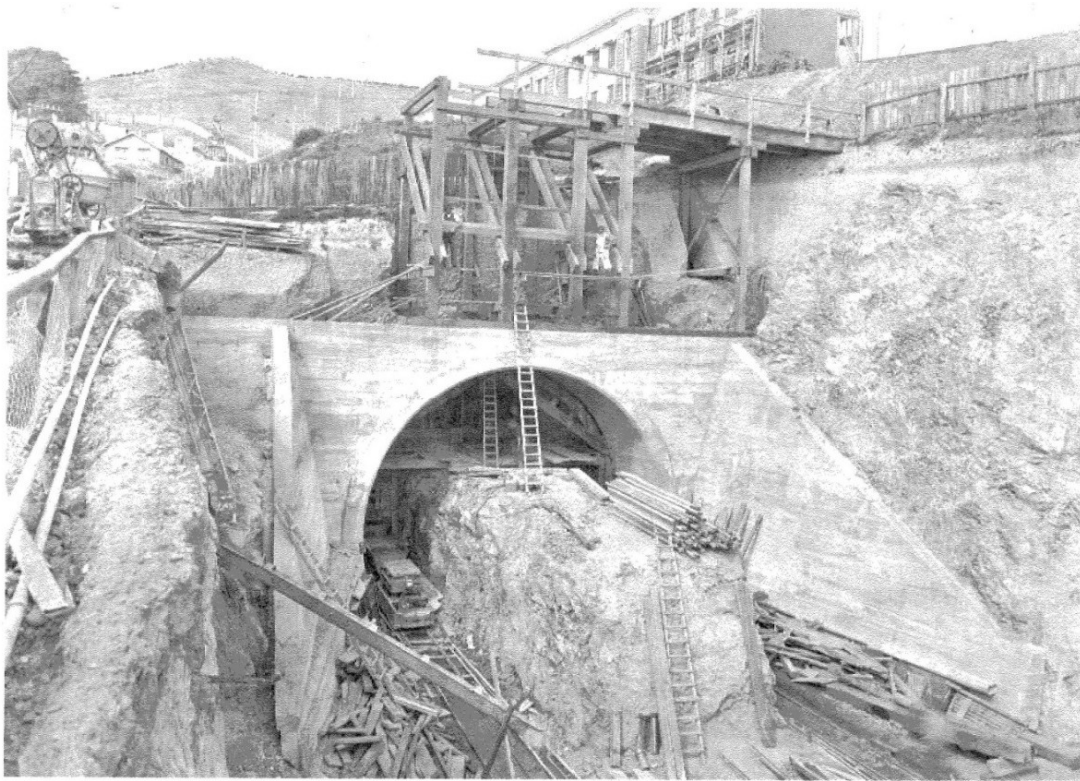


Figure 47 - Central rock core, Mt Victoria side⁹⁵

170. As the arch cutting operation progressed, the tunnel wall concreters followed behind constructing the foundations for the tunnel. The central block left by the preliminary drivers was used by a third tramway over which the concrete was transported. The concrete mixers were placed high above each portal so that the feed of the mixed concrete to the trucks was carried by gravity to the footings and lower tunnel walls.
171. As the lower walling progressed another crew followed placing the concrete for the arch. The arch was two feet in thickness. As the tunnel was excavated, it was supported by timber shoring, which was left in place. The final profile of the tunnel arch was created by large sectioned steel shuttering in place of the usual timber boxing used on typical concrete projects. The wet concrete was pumped into the shuttering by a cement gun. A quick-setting cement was used and after twenty-four hours the set of profiles (four sets were used) was lowered and refixed ahead of the newly set concrete. The smooth steel surface of the mould and the heavy pressure put on by the gun packed the concrete down and when removed the profile left a very smooth surface. Concrete joints were left every ten feet.⁹⁶
172. The Evening Post noted that the natural rock opening was relatively smooth because of the consistency of the rock encountered.⁹⁷
173. The tunnel boring set a new record in Wellington for length of tunnel at 2045 feet and progress to achieve daylight opening in less than five and a half months. At the time the tunnel was the largest in Australasia for superficial area of the opening.⁹⁸

⁹⁵ Wellington City Archives

⁹⁶ Evening Post, December 9, 1930

⁹⁷ Evening Post, December 9, 1930

⁹⁸ Wellington City Council 00001.940:35/295/2 pt1

174. The breakthrough occurred at 2:30pm on 31 May 1930, half an hour earlier than predicted by Mr Downer six weeks earlier. The first people to pass through the breakthrough were tunnellers Philip Gilbert and Alfred Graham. Other men wriggled through and later Beatrice Quinlan, daughter of one of the council's clerk of works went through followed shortly after by her sister Miss Phyllis Quinlan.
175. In February of 1931 the centre core was removed and the roadway at both ends was metalled and concreted. The tunnel was opened officially by the Mayor of Wellington, Thomas Charles Hislop on 12 October 1931.
176. The tunnel sides and roof were completed on 1 April 1931, and then the floor, lights and approach roads were finished. The total cost was £203,000. The planned diagonal approach on the city side was abandoned due to cost and other difficulties, and instead traffic went along Ellice and Brougham Streets to the tunnel approach. The approach curving around the Basin Reserve was not completed until many years after the tunnel opened.⁹⁹



Figure 48 - Opening ceremony¹⁰⁰

177. The contractors carried out the main excavations and constructed the concrete walls and roof of the tunnel as well as the raised footpath and overhead ventilation shafts and the control houses. The City Engineers Department carried out the approach road works, the floor of the tunnel and incidental works while the Tramways and Electrical Lighting Department installed the electrical equipment for ventilating and lightening. Cory-Wright and Salmon supplied the ventilating plant.

⁹⁹ <http://www.heritagehelp.co.nz/mtvic.html>.

¹⁰⁰ Wellington City Archives

178. It was the first tunnel in New Zealand to have forced ventilation. The tunnel ventilation system was designed after the world's two authorities on this subject were consulted. Prof Yardell Henderson was responsible for the 'Holland' and other vehicular tunnels and Dr. Haldane, designer of the system for the Mersey Tunnel.
179. The spoil from the tunnel was placed on the eastern slope of the Mount Victoria ridge, as noted, and was used to create Hataitai Park.
180. During World War II, the government planned to use the tunnel as an air raid shelter if Wellington was attacked. However, the plan was scrapped, as the tunnel was thought to be too vulnerable to assault from either side by hostile troops.
181. A well-known local story revolves around a murder that occurred during the construction of the Mount Victoria Tunnel, when a young woman named Phyllis Symons was murdered by her lover. After Phyllis was reported missing, police ordered workers to excavate the tunnel's fill to search for her body, which was found in a spoil dump at Kilbirnie.¹⁰¹ George Coats was hanged for her murder in December 1931.¹⁰²

SEARCH ENDED MISSING GIRL'S FATE BODY FOUND AT KILBIRNIE BURIED DEEP IN SPOIL

After a search which has lasted for some days, the body of Phyllis Avis Symons, aged 17, who had been missing from the place where she was living in Adelaide road since 25th or 26th June, was found by the police buried in the spoil on the Town Belt at Kilbirnie, shortly before 3 o'clock yesterday afternoon.

The body, which was fully clothed and covered with a sack, was found lying face down on a clay bed. It is estimated that over 16 feet of clay was removed before the body was uncovered. The police believe that it had been buried since about 26th June, the day which the girl was thought to have disappeared.

With the discovery of the body the Police Department has completed one of the biggest digging tasks ever undertaken by the Force in New Zealand.

¹⁰¹ Evening Post, 13 July 1931

¹⁰² Dominion, 18 December 1931

Figure 49 - Part of article from Evening Post¹⁰³

182. The portals have a neo-Classical influence with quoins expressed in the render to the opening. The shape of the tunnel is a horseshoe.
183. On the north side there is a 6 foot high by 6 foot wide raised walkway for pedestrians and cyclists.
184. Trolley bus services to Hataitai began in 1949 and from 1959 they travelled through the Mt Victoria Traffic Tunnel. From 1962 diesel buses replaced trolley buses. Just a year after this the Mt Victoria Tram Tunnel was reopened for Trolley bus operation.

Eastern Suburbs

185. As seen in Mein Smith's original plan of Wellington, the original surveyed city was surrounded by its hills and extended only as far east as Mount Victoria.
186. The land in what is now Hataitai and Kilbirnie was included in the Evans Bay District, seen in detail from Survey Office plan 10434, dating to 1843, Figure 50.

¹⁰³ Evening Post, 13 July 1931, page 10 - PapersPast

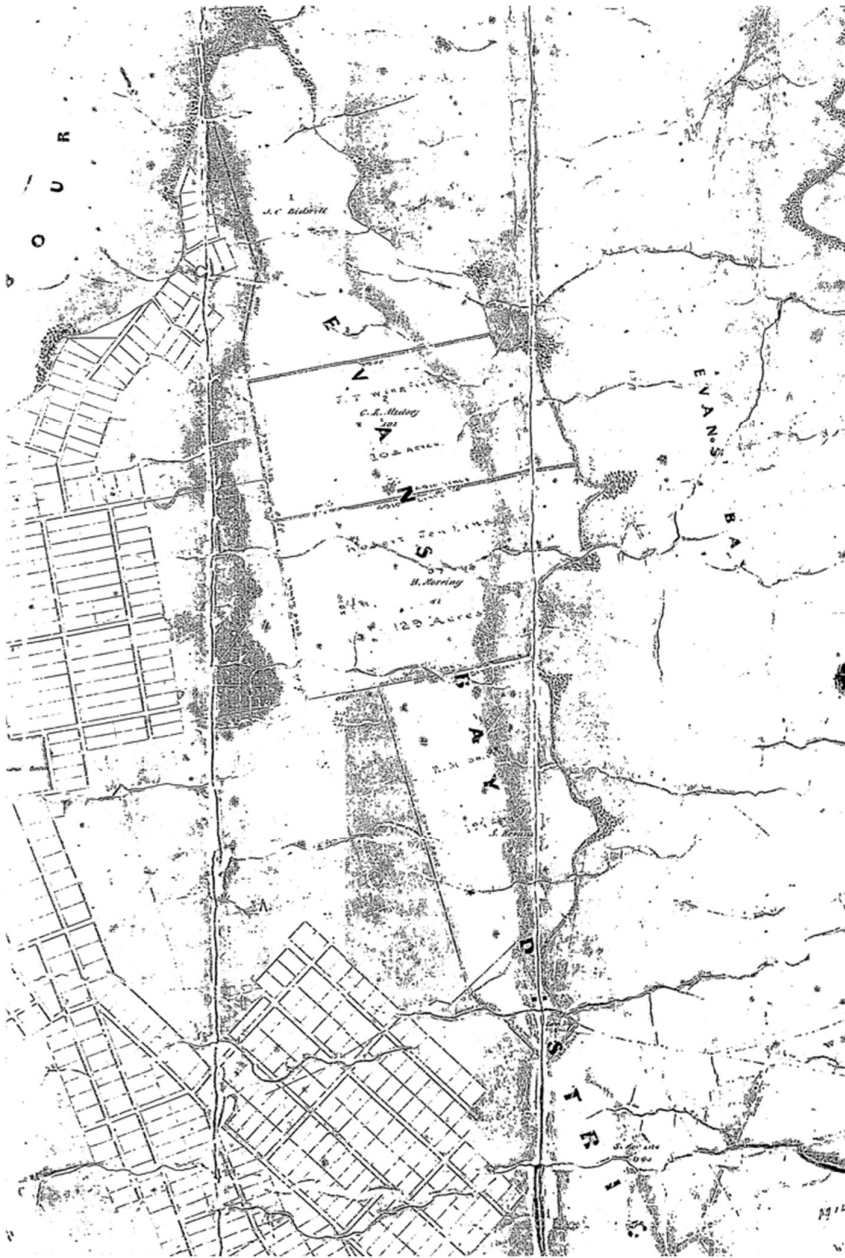


Figure 50 - Detail from Survey Office plan 10434, 1843¹⁰⁴

187. The land immediately in the east edge of the city was assigned to the town belt. The land along the western edge of Evans Bay has been subdivided by 1843 into large parcels of roughly 100 acres (the country acres), and are owned by Bidwill, Alzdorf, Mor[e?]ing, Smith, Revans, and Sutherland.
188. The same parcels, numbered 1 to 6, can be seen more clearly in detail from Survey Office plan 10453, dating to 1845, Figure 51.

¹⁰⁴QuickMap



Figure 51 - Detail from Survey Office plan 10452, 1845¹⁰⁵

189. The main industries to the east of Mount Victoria were farming, and the patent slip at Evans Bay which was built in 1873. There was a small population in the Hataitai-Kilbirnie area in the 1870s, mainly farmers and farm staff, and the patent slip staff.
190. By the 1870s the Wellington City Corporation was developing plans for suburban development.
191. Plan DP 65 shows subdivision and planned development of parcel 4 of the Evans Bay District.

¹⁰⁵ QuickMap

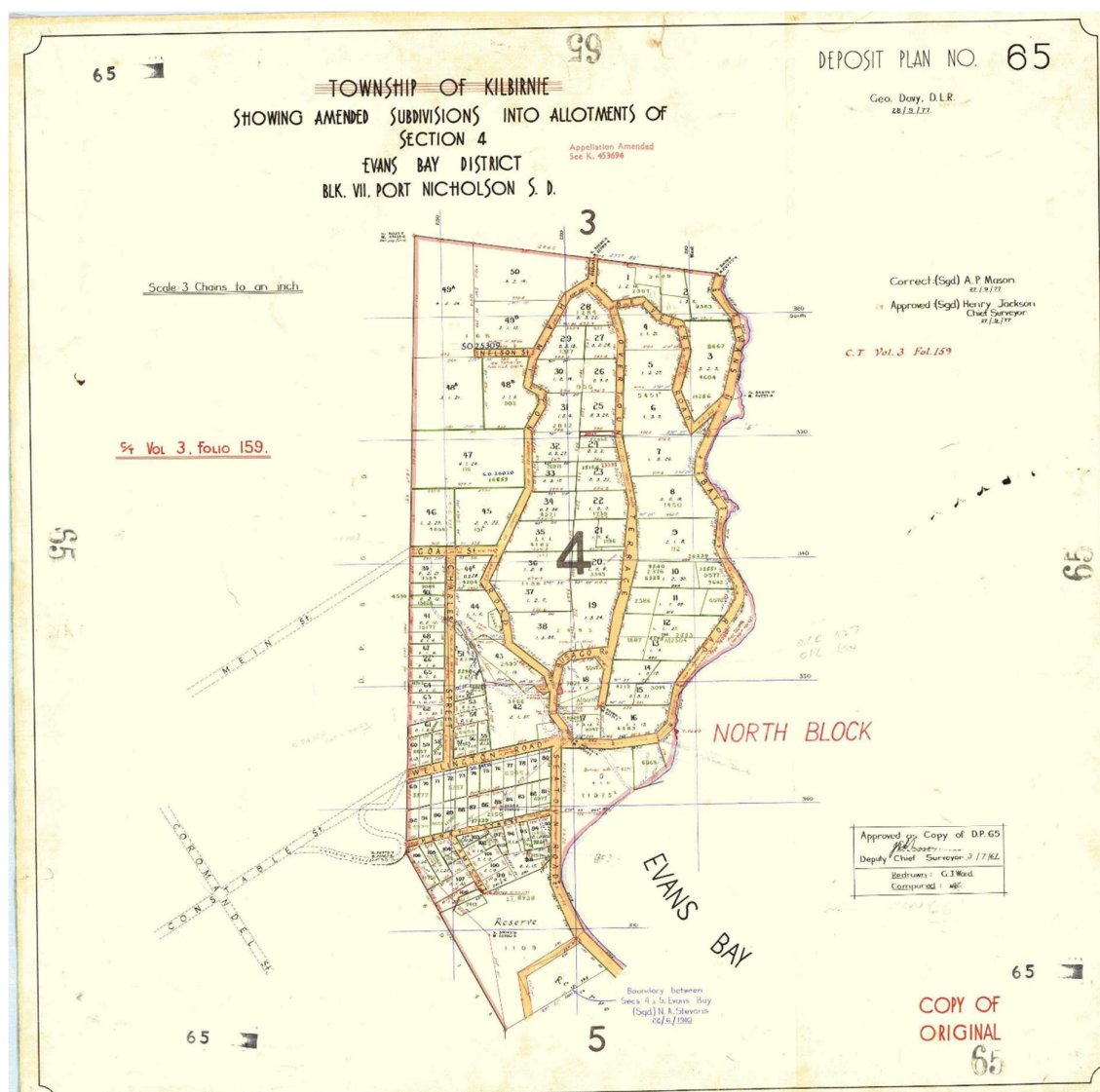


Figure 52 - DP 65, 1877¹⁰⁶

192. DP 65 shows roads have been formed, and parcels of varying sizes have been laid out, intended for small domestic houses plus larger parcels for small farm holdings.
193. The name 'Township of Kilbirnie' has been crossed out on the plan: originally the entire area of what is now Hataitai and Kilbirnie was called Kilbirnie.
194. In 1877 the City Council commissioned a surveyor named Tronson to survey and draw a plan of the city. Detail from this plan is show in Figure 53.

¹⁰⁶ QuickMap - This plan is a copy of the original, explaining its clarity



Figure 53 - Detail from Map of the City of Wellington and Suburbs compiled and drawn by F. Harold Tronson, 1887¹⁰⁷

195. Figure 53 shows the same land parcels seen in DP 65. However, also shown are roads from the city through the town belt to the new eastern suburbs.

¹⁰⁷ Wellington City Recollect

196. Substantial blocks of privately owned land in Hataitai and Seatoun had been sold at auction in 1877 (mainly to speculators than to genuine homeowners, note Humphris and Mews¹⁰⁸).
197. Construction of roads over the Mount Victoria ridge from Newtown, development of tram access and the later construction of the tram tunnel all facilitated settlement and growth of the eastern suburbs past the Mount Victoria ridge.
198. Figure 54 shows the area of Hataitai in the 1880s: Moxham Street can be seen running across the centre of the picture, and Ruahine Street is not yet formed.



Figure 54 - Kilbirnie¹⁰⁹, Wellington, ca 1880s¹¹⁰

199. A significant early landmark was the Kilbirnie Hotel. This large two-storied building was built in 1880, partly in anticipation of expected suburban growth. It can be seen in Figure 55, behind Bourke's dam. It stood on what is now the corner of Wellington Road and Kilbirnie Crescent and was demolished in 1959. A large block of flats was built on the site in 1982.

¹⁰⁸ Humphris and Mews, 2009: 48

¹⁰⁹ As noted above, the area of what is now Hataitai was originally called Kilbirnie

¹¹⁰ Alexander Turnbull Library: PAColl-7796-71



Figure 55 - Kilbirnie Hotel, Wellington, ca. 1880s-1890s¹¹¹

200. After the flats were demolished in late 2020, I undertook archaeological monitoring of the site as it was being created into a pocket park. No archaeological features were revealed, however, because earthworks were relatively shallow, it is possible that subsurface features associated with the hotel (such as cellars, foundations or in-ground rubbish pits) may be present.¹¹²
201. The Melrose Borough Council was formed in 1888,¹¹³ and included the areas of Kilbirnie and Hataitai. As well as the Kilbirnie Hotel, other public or civic facilities in the area included a school which opened in 1884, shops, and a post office.¹¹⁴ By the late 1880s Kilbirnie also offered public saltwater baths at Evans Bay and a private bathing ground beside the recreation ground, a public hall and Heginbotham's Pleasure Gardens.¹¹⁵
202. Figure 56 shows an area of Kilbirnie by 1900: there is substantial occupation. An interesting aspect of this picture is the anticipated reclamation of land at Evans Bay, in the area of what is now Kilbirnie Park. This land was gradually reclaimed for both recreation and civic use between 1900 and the mid-1920s. As noted above, spoil from the creation of the Mount Victoria tunnel was used to reclaim and form Kilbirnie Park.
203. In Figure 56 Wellington Road can be seen running west to east across the picture, from the intersection with Kilbirnie Crescent. There are houses on the edge of Wellington Road beside the coast, located in what is now Kilbirnie Park.

¹¹¹ Alexander Turnbull Library: 1/2-032285-F

¹¹² O'Keeffe, 2021b

¹¹³ Humphris and Mews, 2009: 57

¹¹⁴ Humphris and Mews, 2009: 57-58

¹¹⁵ Humphris and Mews, 2009: 58

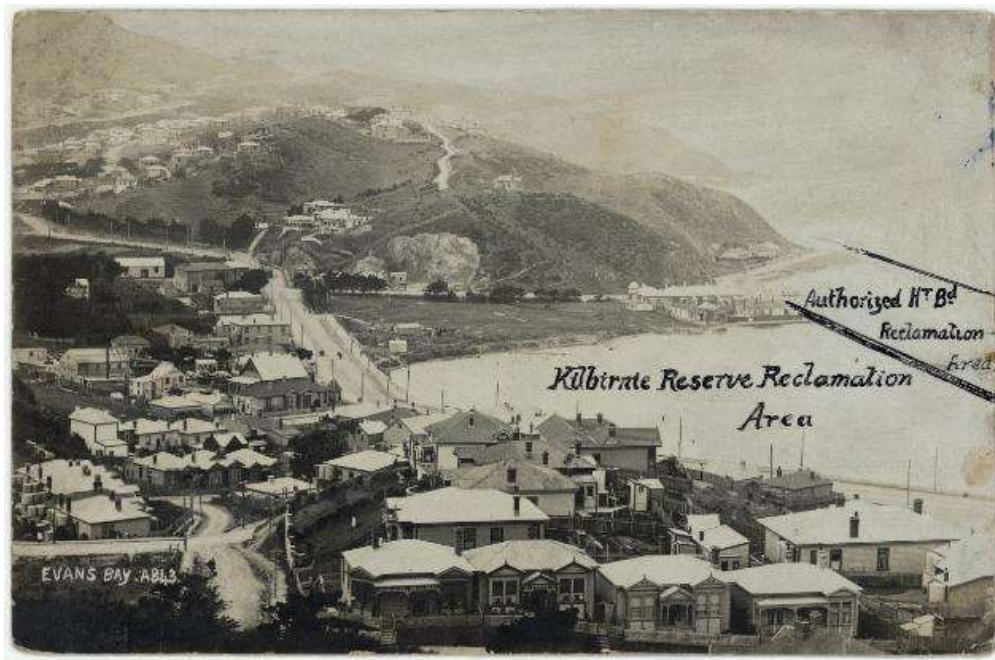


Figure 56 - Kilbirnie and Evans Bay, Wellington; ca 1900¹¹⁶

204. Figure 57 shows Hataitai at about 1900: the same steady growth and settlement can be seen, although settlement is not as intense as that seen in Kilbirnie at the same time in Figure 56.



Figure 57 - Hataitai, Wellington, 1900-1910¹¹⁷

205. Figure 58 to Figure 63 shows the steady growth of the areas from the turn of the century to 1930. Of note is the increase in houses and construction of roads in Hataitai, and the gradual reclamation of Kilbirnie Park area.

¹¹⁶ Alexander Turnbull Library: PAColl-7081-56

¹¹⁷ Alexander Turnbull Library 1/2-032555-G



Figure 58 - Kilbirnie, Wellington, ca 1905¹¹⁸



Figure 59 - Kilbirnie, Wellington, 1908¹¹⁹

¹¹⁸Alexander Turnbull Library: 1/2-066780-G

¹¹⁹ Alexander Turnbull Library: 1/1-024942-G



Figure 60 - Hataitai, Wellington, from Constable Street cutting, c 1910¹²⁰



Figure 61 - Hataitai, Wellington, 1910¹²¹

¹²⁰ Alexander Turnbull Library PICT-000169

¹²¹ Alexander Turnbull Library PAColl-5800-33

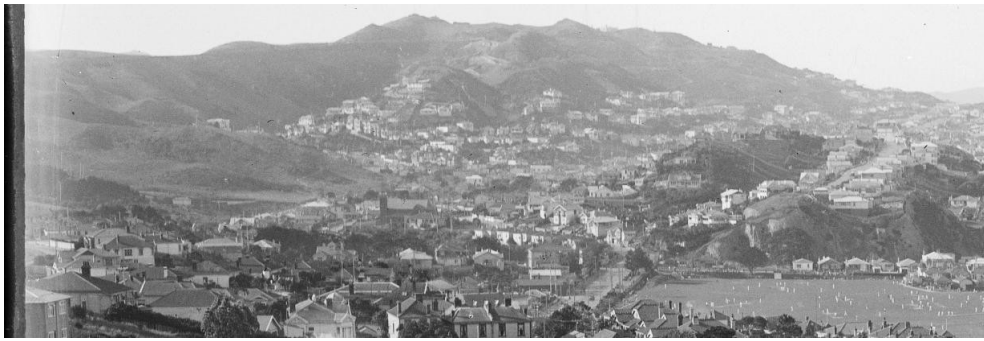


Figure 62 - Detail from picture of Kilbirnie, Wellington, 1929¹²²



Figure 63 - Detail from picture overlooking Kilbirnie and Hataitai, Wellington, c. 1930¹²³

206. Ruahine Street was not formed until the late 1890s. The earliest houses along the street date from the first decade of the 20th century.¹²⁴ Some buildings along Ruahine Street can be seen in a photo dating to 1910 (Figure 64).



Figure 64 - Part 1 of 3 - part panorama of Hataitai, 1910¹²⁵

¹²² Alexander Turnbull Library: 1/2-045865-G

¹²³ Alexander Turnbull Library: 1/2-048548-G

¹²⁴ Cox, 2025

¹²⁵ Alexander Turnbull Library, 1/1 020229G

207. Figure 65 shows the continuation of the panorama from Figure 64, showing that the area of what is now the south part of Ruahine Street was not built on, and contained market gardens in 1910.

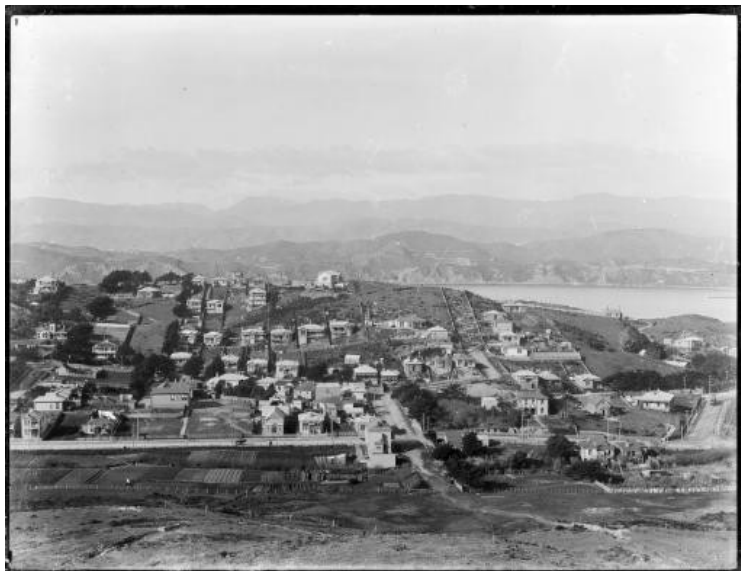


Figure 65 - Part 2 of 3-part panorama of Hataitai, 1910¹²⁶

Recorded archaeological sites and potential sites

208. The survival of any sites associated with pre-contact or colonial Māori occupation is considered very unlikely. This is because of the subsequent development of the colonial city, which will have covered and destroyed sites and features associated with pre-contact or colonial Māori occupation that may have been present. Archaeological work undertaken in the city confirms this hypothesis: very few sites of pre-contact or colonial Māori origin have been revealed or recorded. The notable exception is the kainga associated with Te Aro Pa, revealed on lower Taranaki Street in 2006 during construction work.
209. Because of the nature of the works and their relatively shallow impact, the likely effects on in-ground archaeology are low. However, sites are listed for completeness and to ensure appropriate methods are in place in case any sites are uncovered during the works.

Terrace Tunnel

210. As noted, as part of the Inner-City Bypass work completed by 2007 a trench was built at the southern end of the Terrace Tunnel through town across 163, 139, 113, 114, and 15, curving from the tunnel portal through the previous intersection of Abel Smith and Willis Streets. As this section of the road was trenched, any archaeological sites or features that may have been present would have been destroyed by trenching work.

Te Aro

211. There are numerous recorded archaeological sites in the Te Aro area.
212. The recorded archaeological sites in the vicinity of Vivian Street are shown in Figure 66.

¹²⁶ Alexander Turnbull Library, 1/1 020229G



Figure 66 - Recorded sites in Te Aro (Archaeological sites shown in red)¹²⁷

213. The proposed route passes along the length of Vivian Street from its intersection with Willis Street in the west to its intersection with Cambridge Terrace in the east and extends south down Kent/Cambridge Terrace to the Basin Reserve.
214. The route encroaches into the northern side of Vivian Street.
215. Vivian Street / Ingestre Street was laid out in the original plan of Wellington: as it has always been a street there is very low possibility of archaeological sites associated with domestic occupation (such as postholes or rubbish pits) within its carriageway. The section of Vivian Street between the Willis Street intersection and the Taranaki Street intersection, as an example of the original carriageway, is shown in part of Thomas Ward's 1891 plan, Figure 67.

¹²⁷ Data sourced from ArchSite

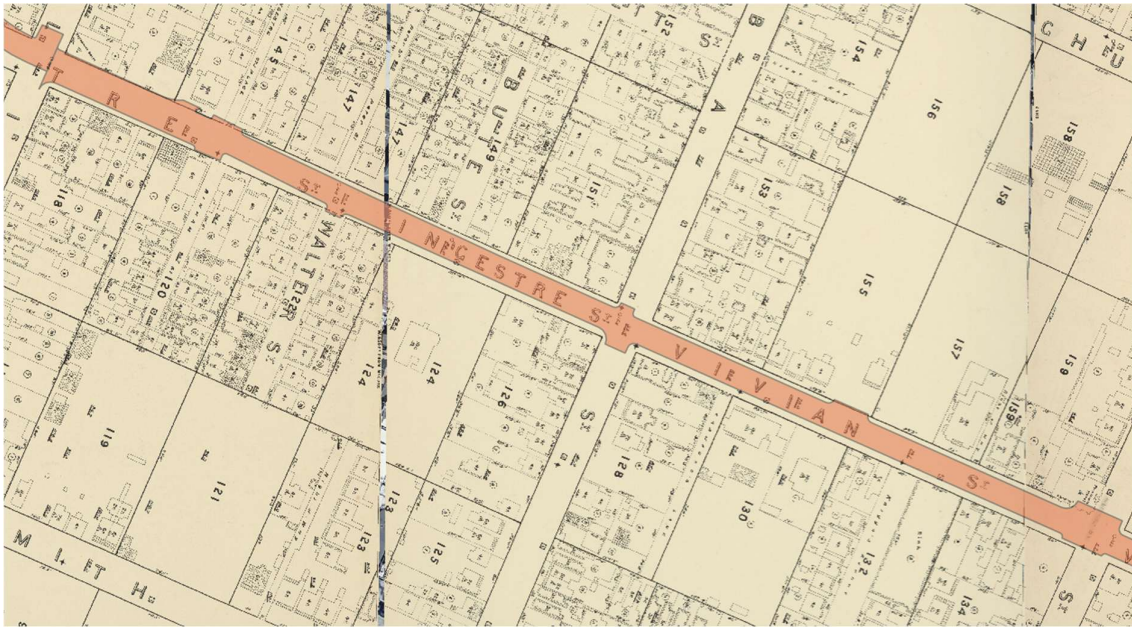


Figure 67 - Example of Vivian Street carriageway

216. Analysis of the detail of the Ward plan sheets (sheets 47, 48, 49, 60 and 61) show that there were many houses and buildings on either side of Vivian Street when the plan was completed in 1891. None of the buildings along the north side of the street shown on the Ward plan remain extant.
217. The recorded archaeological sites along the north side of Vivian Street are listed in Table 1.

Table 1: Recorded archaeological sites along Vivian Street

NZAA ¹²⁸ Site number	Brief Description
R27/467	Town Acre 141: site of pre 1900 buildings
R27/549	Site of Brunswick Hotel
R27/727	Town acre 143 - chimney, historic artefacts
R27/728	Town acre 145 - chimney, historic artefacts
R27/558	Well
R27/471	Brick drain
R27/858	Town acre 153 – site of 19 th century buildings
R27/857	Town acre 155 – sites of 19 th century buildings
R27/279	Site of 19 th century houses
R27/599	Town acre 157 - sites of 19 th century buildings
R27/886	Town acre 159 – postholes relating to 19 th century villa
R27/314	Site of 19 th century house

¹²⁸ NZAA = New Zealand Archaeological Association

218. Several of the sites listed in Table 1 have been recorded from documentary evidence. However, the presence of in-situ archaeological material has been confirmed in the vicinity by sites such as R27/727, R27/728 and R27/558. These recorded sites along Vivian Street are largely associated with domestic occupation, being sites of houses, deposits of historic artefacts, postholes associated with houses and a domestic well. Commercial activity in the area is seen in the site of the Brunswick Hotel (R27/549), where the brick cellar was recorded. The hotel operated from the 1870s.
219. These houses and buildings along the north side of Vivian Street were set back from the street frontage. Therefore, archaeological fabric is more likely to be in the centre of the town acre, so construction incursion into the edge of the property along the street frontage is highly unlikely to adversely affect archaeological fabric. However, this possibility should be considered and managed.
220. The 20th century buildings present on the parcels have on the whole large massed foundations which are likely to have destroyed archaeological fabric that may have been present when they were built. However, the presence of intact archaeological fabric or features associated with the original building on site should be considered.
221. Known and potential sites in the vicinity of Vivian Street that may be adversely affected by construction works are:
- i. Building, 134-138 Vivian St
 - ii. Brick barrel drain, corner Vivian & Bute Street (R27/471)
 - iii. Potential brick drain, Vivian Street / Taranaki Street intersection
 - iv. Potential brick drain, Vivian Street
 - v. Potential brick barrel drain, Kent Terrace
 - vi. Potential in-ground archaeology on Vivian Street
222. These are discussed in detail below

Building, 134-138 Vivian Street

223. The building at 134-138 Vivian Street is an original 19th century building still extant along the northern side of the street which is not recorded as an archaeological site. It was built in 1899.¹²⁹
224. The building is included in the WCC District Plan Schedule 1 as item 322. The Wellington City Council heritage inventory describes the building:¹³⁰

“134 Vivian Street is a much-altered Victorian building that was designed to house a shop/dwelling, ‘lock-up’ shop, and private hall. Although many of the original features have been lost, the remnants of the original design show that this was once a splendid, if somewhat eclectic, Victorian commercial development.

The building has historic value for its association with the strong growth and development of Cuba Street during the Edwardian period, which resulted in the building of many fine commercial buildings.

The building was designed as three separate units: A shop/residence with an entrance to Ingestre (Vivian) Street, a single ‘lock-up’ shop on the corner of Marion and Ingestre Streets, and a public hall, named the ‘Carlton Hall’ above the corner

¹²⁹ It is not shown on the Ward Plan as its construction postdates this plan

¹³⁰ <https://www.wellingtoncityheritage.org.nz/buildings/301-450/322-commercial-building-134-vivian-street?q=>

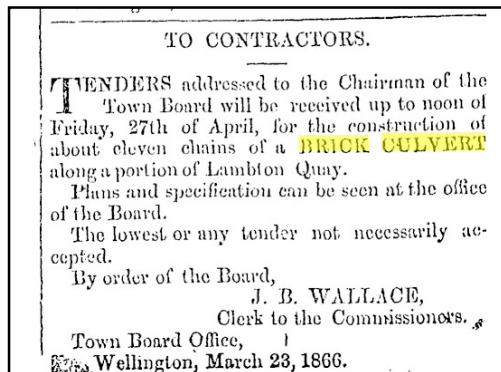
shop. The building's street façade to Ingestre Street was designed in a vernacular timber shop/residence style, overlaid with an eclectic mix of applied decoration that included Gothic pointed-arch louvres, and exotic (perhaps Moorish or even minaret-inspired) finials. Although most of these original features have been lost, the remnants of the original design show that this was once a splendid, if somewhat eclectic, Victorian commercial development."

225. Cox also notes that the taller part of the building (No.134) was a public hall and gym known as the Carlton Hall offering 'physical culture', boxing training etc – an important part of recreational history in Wellington – as well as a venue for concerts, dances, etc. Local clubs used it for meetings. Underneath was a 'lock-up shop' – meaning the shopkeeper did not live there, but just rented the shop space. No.138 on the other side of the brick dividing wall was a more common style of shop – where the shop provided access to a family home behind and above including three bedrooms and a parlour, kitchen etc.¹³¹
226. Construction work should not adversely affect this building, as it is set back from the construction edge.

Brick barrel drain, Vivian Street (R27/471)

227. A brick barrel drain (R27/471) has been recorded in Bute Street, north of Vivian Street. The ArchSite entry for the drain states:

"The brick drain is a substantial structure with a clear fall down to the north-east and a strong flow of water. From end to end it stretches some 42 m across the site. The top is buried in hard fill and is about 1 m below the surface. A small cut had been opened in the upper part and allowed entry to measure the form. It is 1.6 m high and 60 cm wide at the base. The sides slope outwards to the spring line (where the section curves back to the top) and at the spring line it is 1.25 m wide. The sides are double brick in header stretcher form up to the spring line; above the spring line the bricks have a wedge-like section and are laid stretcher fashion".



Wellington Independent, 24 March 1866,
Papers Past

228. The age of the drain is not known. However, brick lined drains and culverts for water and sewerage were being constructed in Wellington from the 1850s: advertisements or reports of work in the newspapers date from this time. Civic works were being undertaken by the 1860s:

¹³¹ Cox, 2025

for example, the Town Board called for tenders for an eleven-chain long brick culvert in Lambton Quay in March 1866.¹³²

229. A major incentive for enclosure of open drains was outbreaks of typhoid in Wellington City in the 1890s.
230. Waimapihi Stream runs near to the recorded site, as shown in Figure 68; it is assumed that the brick barrel drain is culverting Waimapihi Stream.

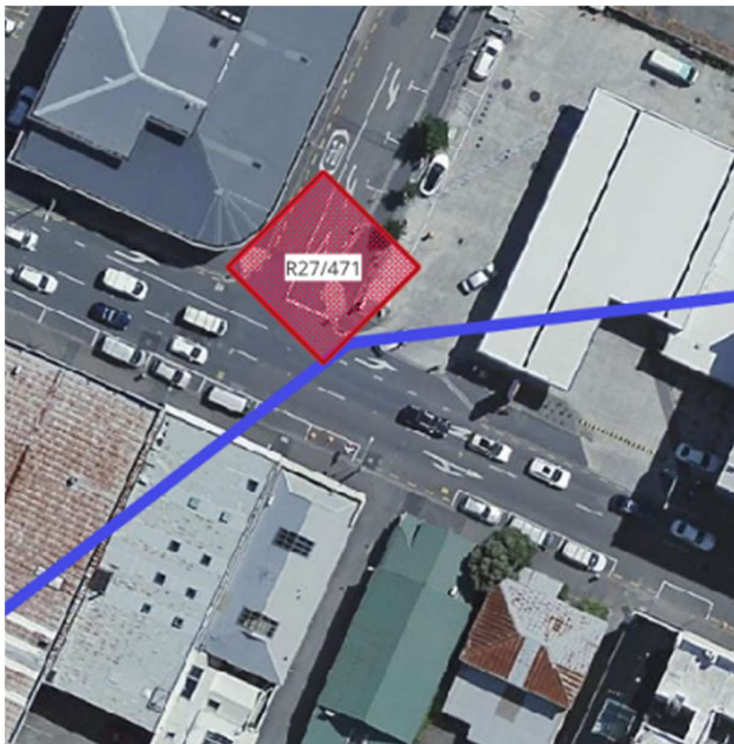


Figure 68 - Waimapihi Stream, and recorded site R27/471¹³³

231. It is probable that the brick drain follows the alignment of the stream and is therefore not likely to be encountered in site works, unless excavations across Vivian Street in the vicinity of the drain go deep enough (approx. 1 m) to impact on it.

Potential brick drain, Vivian/Taranaki Street intersection

232. Monique Waller of NZTA created a design memo¹³⁴ in September 2025, summarising a desktop assessment undertaken to identify the location of known pre-1900 brick drains within the Project area (referred to in this report as the “Waller memo”).
233. The Waller memo¹³⁵ records a brick drain running along Taranaki Street dating to 1930. A brick drain built in the 1930s seems unlikely – by this time concrete pipes were being used, and were quicker and easier to install than constructing a brick structures. It must therefore be assumed that the brick drain predates 1900AD, when such structures were being constructed. This drain is present in the intersection of Taranaki and Vivian Streets. Construction works on the street are unlikely to be deep enough to adversely affect the drain, so adverse effects on the potential site can be avoided.

¹³² Wellington Independent, 24 March 1866

¹³³ Georeferenced by O’Keeffe - Archaeological data streamed from ArchSite

¹³⁴ Waller, 2025

¹³⁵ Waller, 2025

Potential brick drain, Vivian Street

234. The Waller memo on known brick barrel drains¹³⁶ records a concrete drain running along Vivian Street dating to 1840. This date seems highly unlikely – conversely to the Vivian/Taranaki Street drain above, construction of a concrete drain in 1840 is very unlikely and is far more likely to be a brick barrel drain. There are two possibilities: that the drain dates from 1840 and is made of brick, or the construction date is a typo and should actually be 1940.
235. In the event that the drain is brick, construction works on the street are unlikely to be deep enough to adversely affect the drain, so adverse effects on the potential site can be avoided.

Potential brick barrel drain, Kent Terrace

236. The Waller memo on known brick barrel drains¹³⁷ records a drain running through the Basin Reserve and along the eastern side of Kent Terrace. In the Waller memo this section is not shown any further north than the intersection of Kent Terrace and Vivian Street. This is drain 2 in the Waller memo.
237. The drain is in sections:
- i. A section of the drain on Kent Terrace from Vivian Street / Kent Terrace intersection to opposite Fifeshire Avenue is recorded in the Waller memo as reinforced concrete installed 1899¹³⁸
 - ii. A section of the drain on Kent Terrace from opposite Fifeshire Avenue to opposite Barker Street is recorded in the Waller memo as brick main installed 1899
 - iii. A section of the drain on Kent Terrace from opposite Barker Street to Buckle Street is recorded in the Waller memo as concrete main installed 1940
238. I have observed a section of brick barrel drain on the northern part of Kent Terrace outside the Oriental Bay fire station. I speculate that this brick barrel drain is culverting the Waitangi Stream,¹³⁹ and may extend south along Kent Terrace to join the section noted in the Waller memo. The Waitangi Stream is likely to have been culverted soon after the 1855 earthquake, as it was a waterway along a major road.
239. The section between Vivian Street / Kent Terrace intersection to opposite Fifeshire Avenue recorded as reinforced concrete built in 1899 is unlikely to be concrete – as noted above, concrete was not being used for drains in the 19th century.
240. The Waller memo notes drain 2 is 'egg-shaped', which is a typical profile for brick barrel drains, and highly unlikely as a profile for a concrete pipe.
241. If a brick drain is present on Kent Terrace, it is possible it may be located reasonably near to the ground surface – the drain recorded by me at Ballantrae Place, west of Parliament, was about 0.6m below the ground surface. However, construction works on the street are unlikely to be at this depth, so adverse effects on the potential site can be avoided. If construction work does reveal the drain, it can be protected by covering with geotech cloth and a layer of sand before fill is placed on top.

Potential in-ground archaeology on Vivian Street

242. Ward's plan of 1891 shows many buildings along the north side of Vivian Street. With the exception of 134-138 Vivian Street, all pre-1900 buildings are demolished, and replaced with

¹³⁶ Waller, 2025

¹³⁷ Waller, 2025

¹³⁸ The Waller memo notes that a date of 1899 is code for "date unknown"

¹³⁹ I have had conversations with Wellington Water about the locations of the brick barrel drains in Wellington, after I recorded one at the west side of the Parliament campus. Wellington Water freely agreed they do not necessarily know which of their assets may still be original brick barrel drains, and they consider it is highly likely there are other unknown brick assets

20th century buildings. The existing buildings vary in size, mass and materials; it is probable that larger massed buildings have obliterated any potential in-ground archaeology on the site, however, the possibility of pre-1900 in-ground archaeology must be considered.

- 243. Such in-ground features may include historic rubbish pits, drains, garden or landscaping elements, and piles or pile holes.
- 244. Summary of assessment of archaeological significance of known and potential sites in the Te Aro Project section is provided in Table 2 below.

Table 2: Summary of assessment of archaeological significance of known and potential sites in the Te Aro Project section

Site	Age	Integrity/ condition	Rarity/ uniqueness	Cultural/ historical context	National/ regional/ local significance
Brick barrel drain, corner Vivian & Bute St (R27/471)	Not known, potentially 1860s-1870s	From the section recorded, and on the basis of other drains recorded in Wellington, likely to be in good condition and probably still live	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through the need for and development of civic works. A response to a growing population, and a growing and deadly health issue	Potentially of local significance, through its age, and historical associations with the growth of the city
Potential brick barrel drain, Vivian St/Taranaki Street intersection	Not known, potentially 1860s-1870s	Not known; but on the basis of other drains recorded in Wellington, likely to be in good condition and probably still live	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through the need for and development of civic works. A response to a growing population, and a growing and deadly health issue	Potentially of local significance, through its age, and historical associations with the growth of the city
Potential brick barrel drain, Vivian St	Not known, potentially 1860s-1870s	Not known; but on the basis of other drains recorded in Wellington, likely to be in good condition and probably still live	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through the need for and development of civic works. A response to a growing population, and a growing and deadly health issue	Potentially of local significance, through its age, and historical associations with the growth of the city
Potential brick barrel drain, Kent Terrace	Not known, potentially 1860s-1870s	Not known; but on the basis of other drains recorded in Wellington, likely to be in good condition and probably still live	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through the need for and development of civic works. A response to a growing population, and a growing and deadly health issue	Potentially of local significance, through its age, and historical associations with the growth of the city
Potential in-ground archaeology on Vivian St	Not known, potentially 1840s onwards	Unknown. Such features are recorded and observed in good condition	Not a rare site type either in Wellington, or in urban areas in New Zealand	Associated with lifestyles of people and demonstrating changing economies of parts of the city. Historic rubbish deposits can provide information as to lifestyle, health, social status and other factors of the occupants by what is contained in them. Construction elements such as piles and drains show the changing use of the site	Potentially of local significance, through social and historical associations with the growth of the city

Basin Reserve and Mount Victoria

245. The proposed route runs around the Basin Reserve largely within the existing carriageway. A significant diversion from the existing carriageway is a tunnel on the north-west corner of the Basin Reserve beneath the Home of Compassion Creche. A second significant diversion is the formation of a new tunnel through the Mount Victoria ridge, and a new road to access this tunnel.
246. Kent/Cambridge Terraces and the Basin Reserve were laid out in the original plan of Wellington. The Mount Victoria Tunnel and the road leading to it from Sussex Street were not formed until the 1930s, as noted above. The land east of the Basin was both town acres and town belt in the first plan of the city.
247. This area of the Basin and east of the Basin as laid out in the first city plan of 1840 is shown in Figure 69.



Figure 69 - Detail from Survey Office plan 10408 (1840), showing the Basin Reserve and area of the Mount Victoria Tunnel¹⁴⁰

248. The same area as shown in Thomas Ward's plan of 1891, with proposed works overlaid, is shown in Figure 70.

¹⁴⁰ QuickMap



Figure 70 - Proposed route, overlain on Ward plan, 1891¹⁴¹

249. The Thomas Ward plan of 1891 (Figure 70) shows the density of occupation and development in the 50 years since the city was laid out. The town acres are largely densely occupied, and the previous town belt area south-east of the Basin is now occupied by Wellington College.
250. There are numerous recorded archaeological sites in the area of the Basin Reserve and Mount Victoria, shown in Figure 71, and are listed in Table 3.



Figure 71 - Recorded sites, Basin Reserve and Mount Victoria (Archaeological sites shown in red)¹⁴²

¹⁴¹Georeferenced by O'Keeffe

¹⁴²Data sourced from ArchSite. Georeferenced by O'Keeffe

Table 3: Recorded archaeological sites in the vicinity of proposed work on Kent/Cambridge Terraces, around the Basin, and on the approach to the second proposed tunnel through Mount Victoria

NZAA ¹⁴³ Site number	Brief Description
R27/423	Site of 1870s buildings
R27/449	Government House/Mount View Lunatic Asylum
R27/462	Site of St. Joseph's Roman Catholic Church
R27/463	Home of Compassion Creche
R27/581	Site of 19th century commercial buildings
R27/582	Site of 19th century commercial buildings
R27/611	Hauwai cultivation area
R27/612	Basin Reserve
R27/613	William Wakefield Memorial
R27/784	Site of 19th century buildings
R27/785	Site of 19th century buildings
R27/905	Wooden cobbles

251. Several of the sites listed in Table 3 have been recorded from documentary evidence. However, the presence of in-situ archaeological material has been confirmed in the vicinity by sites such as R27/449 and R27/905.
252. The known and potential sites and structures of archaeological value or potential (both recorded and unrecorded) that will or may be adversely affected by proposed construction works are:
- i. Building, 2 Adelaide Road
 - ii. House, 30 Sussex Street
 - iii. House, 46 Sussex Street
 - iv. House, 48 Sussex Street
 - v. Laureston, 7 Paterson Street
 - vi. Ettrick Cottage, 19 Paterson Street
 - vii. House, 145 Brougham Street
 - viii. House, 147 Brougham Street
 - ix. Home of Compassion Creche
 - x. Wooden cobbles, corner Rugby and Dufferin Streets
 - xi. Potential in-ground archaeology on Sussex Street
 - xii. Potential in-ground archaeology on Paterson Street
 - xiii. Potential pre-1900 drains
253. These are discussed in detail below.

Building, 2 Adelaide Road

254. This building is shown on the 1891 Ward plan, as seen in Figure 72.

¹⁴³ NZAA = New Zealand Archaeological Association

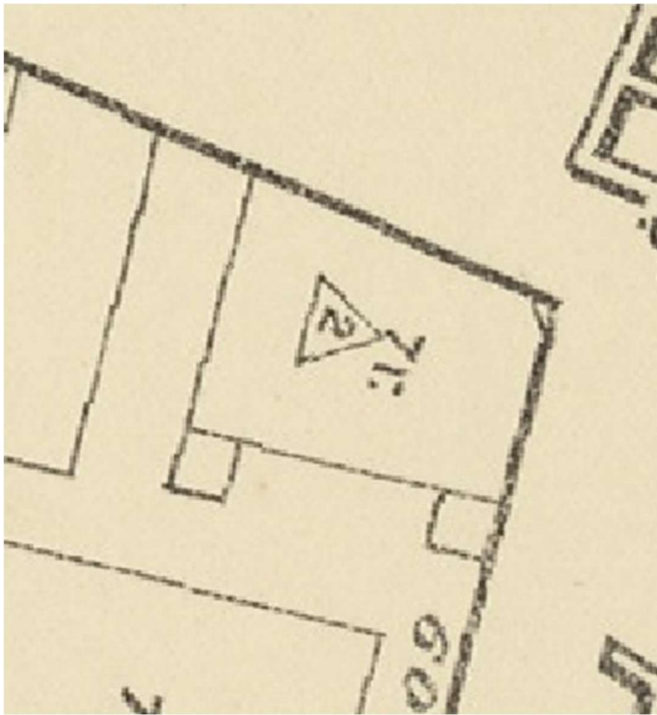


Figure 72 - Building at 2 Adelaide Road, Ward plan, 1891

255. The notations on Ward's plan shows the building is two storied, with seven rooms. However, Cox suggests that given its location it is likely to have been a combined shop/residence, with residence at back and upstairs.¹⁴⁴
256. A 1900 photo shows the building with a veranda over the adjacent footpath.

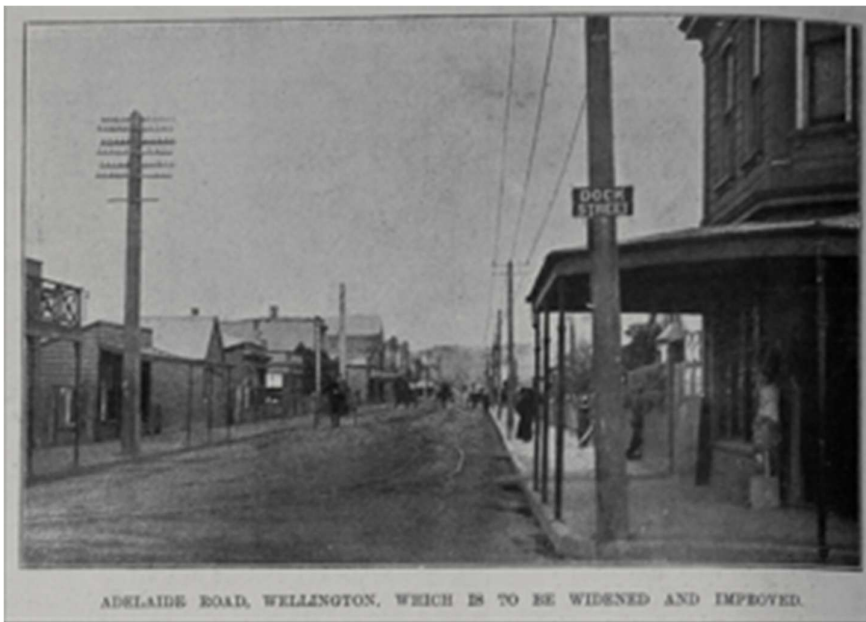


Figure 73 - Building at 2 Adelaide Road, 1900¹⁴⁵

¹⁴⁴ Cox, 2025

¹⁴⁵ <https://kura.aucklandlibraries.govt.nz/digital/collection/photos/id/167722>

257. The building is to be demolished as part of planned works.

Sussex Street houses

258. Cox¹⁴⁶ notes that Sussex Street, previously known as Sussex Square, originally contained a long line of pre-1900 buildings, as seen in the 1928 photo below.



Figure 74 - Sussex Square, 1928¹⁴⁷

259. 30, 46, and 48 Sussex Street are still extant today and will be demolished as part of the Project works.

260. 46 and 48 Sussex Street are on the south-west corner of the Basin Reserve. They were built prior to 1900AD, as they are shown on the Ward plan of 1891, Figure 75. Notation on the Ward plan shows they were built as two storied houses with eight rooms.

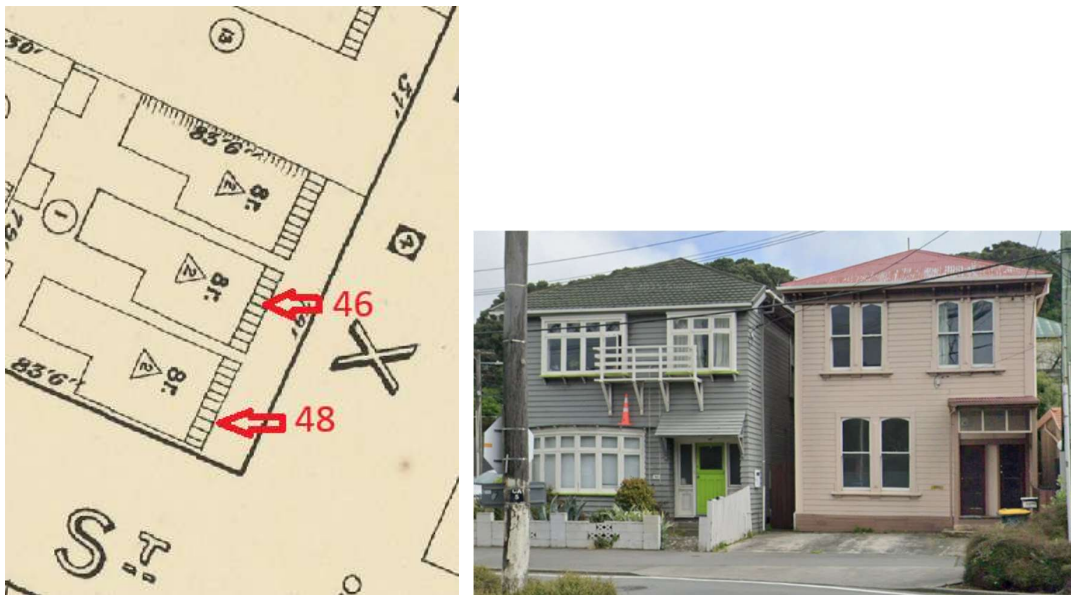


Figure 75 - 46 and 48 Sussex Street, as shown on Ward plan 1891 (L) and Google street view (R)

261. Cox records that 48 Sussex Street was a doctor's house and surgery in the 1920s and 1930s – Dr Oscar Jacobsen and his family lived there from at least 1924. Additions were made for him at the rear of the house.¹⁴⁸

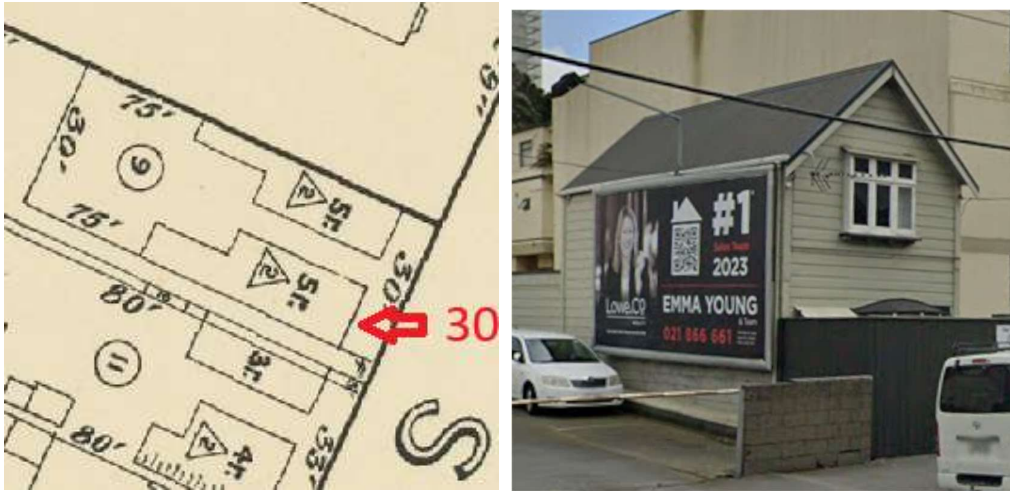
262. 30 Sussex Street is on the west side of the Basin Reserve. It is also shown on the Thomas Ward plan of 1891, Figure 76. Notation on the Ward plan shows it was built as a two storied

¹⁴⁶ Cox, 2025

¹⁴⁷ <https://tiaki.natlib.govt.nz/#details=ecatalogue.425283>

¹⁴⁸ Cox, 2025

house with five rooms, and a similar sized house originally adjoined it on the same land parcel.



**Figure 76 - 30 Sussex Street, as shown on Ward plan 1891 (L), Google street view (R)
Potential in-ground archaeology on Sussex Street**

263. The Ward plan of 1891 shows that houses occupied the entire west side of the Basin Reserve along Sussex Street in 1891, as seen in Figure 77.



Figure 77 - West side of Basin Reserve shown on Ward plan, 1891 (L), with Project overlaid (R)

264. Construction works (seen in Figure 77 R) occupy much of the land parcels west of the Basin Reserve. Whilst subsequent modern building on site may have obscured and destroyed in-ground archaeological features, the presence of such features is possible. Such in-ground

features may include historic rubbish pits, drains, garden or landscaping elements, and piles or pile holes.

Home of Compassion Creche (R27/463)

265. The history of the Home of Compassion Creche is outlined above. The building was moved between 2012-2014, and the Project proposes to move it again.
266. Figure 78 shows the original location of the building, its present location, and the proposed new location. This image shows that the building is remaining within its historical context.

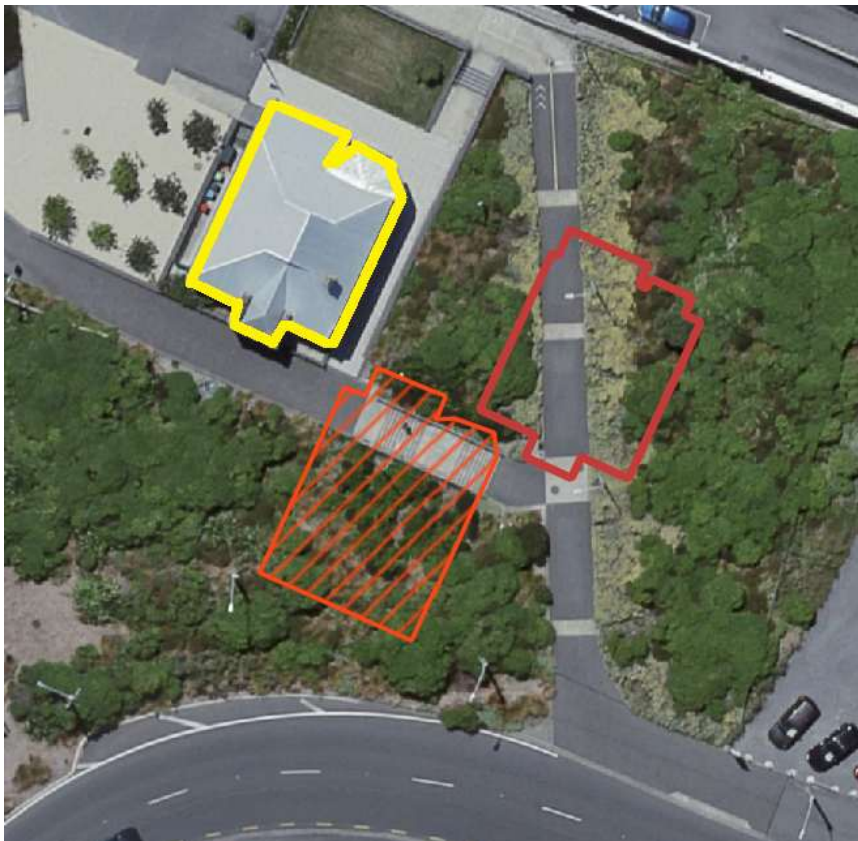


Figure 78 - Home of Compassion Creche (Yellow outline: current location, red hashed area: original location, red outlined: proposed new location)

267. A tunnel is proposed to be constructed beneath the ridge on which the Home of Compassion Creche sits. To ensure the building's stability, the building is to be moved east of its current location by about 25 metres. The archaeological values of the building itself will not be changed in any way by this move. The historic values of the building's setting are not changed, as (indicatively) it will still be in the same land parcel in which it was originally constructed. The physical setting and archaeological landscape values of the building have already been modified by earthworks and landscaping during the cut and cover tunnel on Buckle Street of 2012-2014.

Laureston, 7 Paterson Street

268. As noted above, Laureston was constructed in 1869. Laureston has archaeological and historic significance, through its age, the association with notable Wellingtonians such as Waring Taylor, Harry Crump, and the Catholic Archbishop, the fact that it is a building dating to the 1860s in Mount Victoria, the age of its surviving original fabric, and its place in the story of Mount Victoria and the "Catholic Precinct".

Ettrick Cottage, 19 Paterson Street

269. This cottage was built in the 1870s and is a rare example of a typical 1870s worker's cottage. However, it was originally located at 7 Austin Street and was moved to its current location at 19 Paterson Street in 1994.¹⁴⁹ The physical house has archaeological significance and the site beneath it also has archaeological value associated with its original use prior to the relocation of Ettrick Cottage.

Houses, 145 and 147 Brougham Street

270. These two buildings were built in 1899 by property developer Harry Crump as part of his extensive speculation portfolio.¹⁵⁰ The buildings and the ground beneath them have archaeological significance through their age and association with the development of the suburb of Mount Victoria.

Potential in-ground archaeology on Paterson and Brougham Streets

271. Four buildings currently located along Paterson Street and on the corner of Paterson and Brougham Streets predate 1900AD. However, the Ward plan shows the presence of a small number of houses and structures on site prior to the existing buildings, so the possibility of pre-1900 in-ground archaeology must be considered. Such in-ground features may include historic rubbish pits, drains, garden or landscaping elements, and piles or pile holes.



Figure 79 - Paterson Street (outlined in red) as shown on Ward plan, 1891

Wooden cobbles, corner Rugby and Dufferin Streets (R27/905)

272. During work on the road surface at the main entrance to Government House, on the corner of Rugby Street and Dufferin Street, wooden cobbles were revealed beneath the overlying modern asphalt, and recorded by me. A section of asphalt between the two pillars of the entrance gates measuring 4.8m wide by up to 0.5m was removed.
273. Cobbles were tightly abutting each other and were laid in stretcher bond. Each cobble measured 13cm x 8.5cm and was 10cm deep.

¹⁴⁹ Wellingtoncityheritage.org.nz

¹⁵⁰ Hill, in press



Figure 80 - Wooden cobbles, entrance to Government House, corner Rugby and Dufferin Streets¹⁵¹

274. Some cobbles were removed for foundations of new security gates. The remainder were left intact beneath re-laid asphalt. It is highly likely that further cobbles exist intact beneath the asphalt extending up Government House drive, and beneath roading asphalt to the north along Dufferin Street.¹⁵²
275. The only other area of wooden cobbles known to me is on the Wellington waterfront, where cobbles were used as a surface covering on the wharves and waterfront area. Several expanses of cobbles were recorded by me in my work on various developments at Kumutoto.¹⁵³

Potential pre-1900AD drains

276. As noted above, brick lined drains and culverts for water and sewerage were being constructed in Wellington from the 1850s. The Waller memo on known brick barrel drains¹⁵⁴ records six drains that appear to predate 1900AD in the vicinity of the Basin Reserve:
- i. Drain 2, running north from the south end of the Basin Reserve, through the centre of the reserve and along the eastern side of Kent Terrace. This drain has also been noted above in relation to the Te Aro Project area. In the Waller memo, drain 2 through the Basin Reserve is recorded as a brick culvert installed in 1900.
 - ii. Drain 3, running parallel to Rugby Street, then turning into the Basin Reserve and running parallel to the west of Drain 2.
 - iii. Drains 4, 5 and 6 are very short (5m or less) connections to drain 3. It is assumed in the Waller memo that they were installed at the same time as the section they are connected to. They are recorded in the Waller memo as being constructed of brick, with construction dates variously of 1940 and 1984. As discussed above, if they are brick, they are highly likely to predate 1900AD.
 - iv. Drain 7 is a short section along Rugby Street connecting to drain 1. The Waller memo notes a probable construction date of 1900AD.
 - v. Drain 8 runs along the west side of the Basin Reserve, from south of Sussex Street, along Sussex Street, west along Buckle Street, and north along Tory Street. The Waller memo records this as an oval brick drain; as such, it almost certainly predates 1900AD
277. The locations of the drains are shown in Figure 81:

¹⁵¹ O'Keeffe, 2011

¹⁵² O'Keeffe, 2011: 51

¹⁵³ O'Keeffe, 2017

¹⁵⁴ Waller, 2025

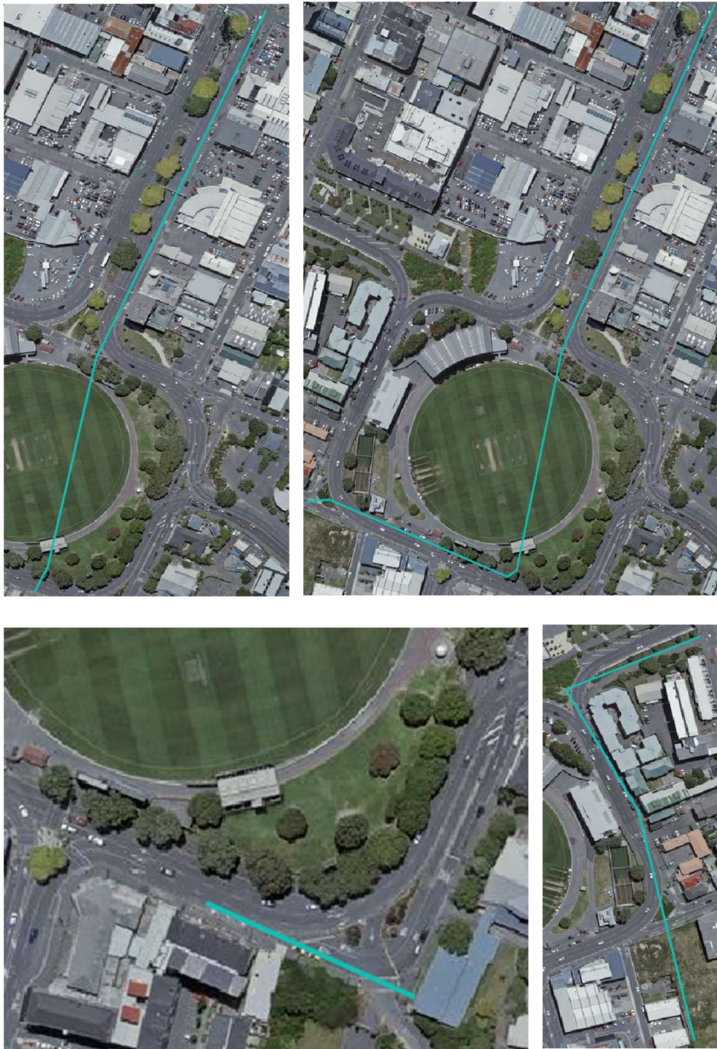


Figure 81 - Drains from Waller memo (Top L: Drain 2, Top R: Drain 3, Bottom L: Drain 7, Bottom R: Drain 8)¹⁵⁵

278. These drains may or may not be made of brick. However a precautionary approach is considered prudent, so it will be assumed they are until proven otherwise. As noted above, these drains may be located reasonably near to the ground surface. However, construction works on the street are unlikely to be as deep as the drains, so adverse effects on the potential sites can be avoided. If construction work does reveal the drains, they can be protected by covering with geotech cloth and a layer of sand before fill is placed on top.

¹⁵⁵ Georeferenced by O'Keeffe

Table 4: Assessment of archaeological significance of known and potential sites in the Basin Reserve/Mount Victoria Project section

Site	Age	Integrity/ condition	Rarity/ uniqueness	Cultural/ historical context	National/ regional/ local significance
Building 2 Adelaide Road	Not known, potentially 1890s	Exterior largely intact except for removal of verandah; interior highly modified	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a semi-suburban combined shop dwelling	Potentially of local significance, through its age, and historical associations with the growth of the city
House 30 Sussex Street	Not known, potentially 1890s	Exterior largely intact; interior not viewed	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a small semi-suburban dwelling	Potentially of local significance, through its age, and historical associations with the growth of the city
House 46 Sussex Street	Not known, potentially 1890s	Exterior largely intact; not viewed	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a semi-suburban dwelling	Potentially of local significance, through its age, and historical associations with the growth of the city
House 48 Sussex Street	Not known, potentially 1890s	Exterior largely intact; interior not viewed	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a semi-suburban dwelling	Potentially of local significance, through its age, and historical associations with the growth of the city
House 145 Brougham Street	1899	Exterior largely intact	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a semi-suburban dwelling. Associated with a locally significant person who was responsible for development in this end of the suburb of Mount Victoria	Potentially of local significance, through its age, and historical associations with the growth of the city
House 147 Brougham Street	1899	Exterior largely intact;	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city into the suburbs, as a semi-suburban dwelling. Associated with a locally significant person who was responsible for development in this end of the suburb of Mount Victoria	Potentially of local significance, through its age, and historical associations with the growth of the city

Laureston, 7 Paterson Street	The house was built in 1869. It is one of the oldest remaining buildings in Mt Victoria	The house is largely structurally intact and contains much original fabric. It also remains on its original site, the topography of which is largely unmodified. The original town acre has since been subdivided and built on. The house is largely intact apart from moderate exterior additions. It is in line of sight with sites and buildings associated with the Catholic Precinct, so has landscape values.	Physical house not a rare site type either in Wellington, or in urban areas in New Zealand The house is a rare example of an 1860s building remaining in Mount Victoria	The house has associations with notable early Wellington residents, including Harry Crump, and William Waring Taylor. Of especial note are its associations with the Catholic Church, and the Archbishop. As a presbytery, the residence of Archbishop O'Shea and the Chancery office and Vicariate, and finally offices for Catholic Social services, the house has been associated with the Catholic Church for approximately 80 years. It also has strong visual and contextual associations with the large former 'Catholic Precinct' on the corner of Buckle and Tory Streets, comprised of the Home of Compassion Crèche on Buckle Street, the former site of St Patrick's College by Buckle Street, St Joseph's Church on Brougham Street (former church was located on Buckle Street) and the Catholic Social Services on Brougham and Ellice Streets. As such, Laureston is an important part of this group, and can assist in telling the story of Catholic occupation, land use and work in this area. Originally there would have been direct line of sight from the Archbishop's house (Laureston) to the rest of the buildings in the Catholic Precinct. It also represents the changing demographic and economic fortunes of Mount Victoria, where smaller workers' cottages, such as Ettrick Cottage, were being replaced by larger grand mansions	Potentially of regional significance, through its age, relative rarity in Mount Victoria suburb, and historical associations with the Catholic Church
Ettrick Cottage, 19 Paterson Street	Built 1870s	Exterior largely intact; interior not viewed Integrity compromised by move from its original location; however, it is still within its original historical context of Mount Victoria	A rare example of a typical 1870s worker's cottage in Wellington	Represents the growth of the city into the suburbs, the growth of Mount Victoria, and the diversity of Mount Victoria where original workers' cottages were gradually displaced by larger grand houses	Potentially of local significance, through its age

Home of Compassion Creche (R27/463)	Built 1870s	Exterior largely intact; interior not viewed Integrity compromised by move from its original location; however, it is still within its original land parcel	Brick buildings in Wellington are less common following the 1848 & 1855 earthquakes; however, they are not rare	Associated with Mother Aubert, a figure of national significance for her work in the social services and community care; one of the first sites in Wellington established for community care through the care of mothers and babies	Potentially of national significance, through its associations with Mother Aubert
Wooden cobbles corner Rugby and Dufferin Streets (R27/905)	Not known, potentially 1850s	Sections likely to be intact beneath asphalt	Moderately rare in Wellington – only other known areas are on Wellington waterfront	Associated with growth of city and need for reliable ground surface for horse and later motorised vehicles	Potentially of local significance, through associations with growth of the city
Potential in-ground archaeology on Sussex Street	Not known, potentially from 1880s	Unknown. Such features are recorded and observed in good condition	Not a rare site type either in Wellington, or in urban areas in New Zealand	Associated with lifestyles of people and demonstrating changing economies of parts of the city. Historic rubbish deposits can provide information as to lifestyle, health, social status and other factors of the occupants by what is contained in them. Construction elements such as piles and drains show the changing use of the site	Potentially of local significance, through associations with growth of the city
Potential in-ground archaeology on Paterson Street	Not known, potentially from 1860s	Unknown. Such features are recorded and observed in good condition	Not a rare site type either in Wellington, or in urban areas in New Zealand	Associated with lifestyles of people and demonstrating changing economies of parts of the city. Historic rubbish deposits can provide information as to lifestyle, health, social status and other factors of the occupants by what is contained in them. Construction elements such as piles and drains show the changing use of the site	Potentially of local significance, through associations with growth of the city
Potential brick barrel drains	Not known, potentially 1860s-1870s	Not known; but on the basis of other drains recorded in Wellington, likely to be in good condition and probably still live	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through the need for and development of civic works. A response to a growing population, and a growing and deadly health issue	Potentially of local significance, through its age, and historical associations with the growth of the city

Eastern suburbs

279. The proposed route emerges from the Mount Victoria tunnel, and runs along Ruahine Street and Wellington Road.
280. As noted, the land parcels of what is now Kilbirnie and Hataitai were laid out in the 1840s, subdivision plans commenced in the 1870s, but settlement and buildings did not really occur until the 20th century. Accordingly, there are relatively few archaeological sites recorded in the eastern suburbs, as seen in the Figure 82 below.



Figure 82 - Recorded sites, Kilbirnie and Hataitai in vicinity of Project (Archaeological sites shown in red)¹⁵⁶

Table 5: Recorded sites in Hataitai/Kilbirnie

NZAA ¹⁵⁷ Site number	Brief Description
R27/160	Mt Victoria Anti-Aircraft Battery. One of a series of defensive installations constructed around Wellington during WWII. Bulldozed May 1970
R27/114	Traditional location for pa site. Record based on Best and Adkin - no evidence sighted
R27/140	Ship slipway, originally built in 1870s and closed in 1985
R27/900	Site of Kilbirnie Hotel

¹⁵⁶ Data sourced from ArchSite -Georeferenced by O'Keeffe

¹⁵⁷ NZAA = New Zealand Archaeological Association

281. The only site listed in Table 5 adversely affected by the proposed Project works is the Kilbirnie Hotel site.

Kilbirnie Hotel

282. As noted in this report, the large two-storied Kilbirnie Hotel was built in 1880, partly in anticipation of expected suburban growth. It stood on what is now the corner of Wellington Road and Kilbirnie Crescent, and was demolished in 1959. There is high possibility of in-ground archaeology associated with the hotel, as in the days before refrigeration, much cool storage was located in cellars beneath hotels.

Table 6: Assessment of archaeological significance of known and potential sites in the Eastern Suburbs Project section

Site	Age	Integrity condition	Rarity/ uniqueness	Cultural/ historical context	National/ regional/ local significance
Kilbirnie Hotel site	Built 1880	Above ground building demolished, potential for subsurface features such as a cellar	Not a rare site type either in Wellington, or in urban areas in New Zealand	Represents the growth of the city, through development of social facilities in the eastern suburbs	Potentially of local significance, through its age, and historical associations with the growth of the city

Summary of archaeological potential

283. Table 7 summarises the potential for adverse effects on archaeology for each of the Project sections.

Table 7: Potential for archaeological effects in Project sections

Section	Potential	Justification
Terrace Tunnel	Low	High degree of modification of ground surface
Te Aro	Moderate	Few sites within project corridor, possibility of effects on brick drains
Basin Reserve and Mount Victoria	High	Effects on known sites, high probability of effects on potential sites
Eastern Connections	Low	Only one known site, not known if any physical elements of this site remain subsurface

284. It is noted that Table 7 is stating the likelihood of adverse effects on archaeology in each Project section, not the significance of that archaeology.
285. Figure 83 shows the areas of archaeological potential.

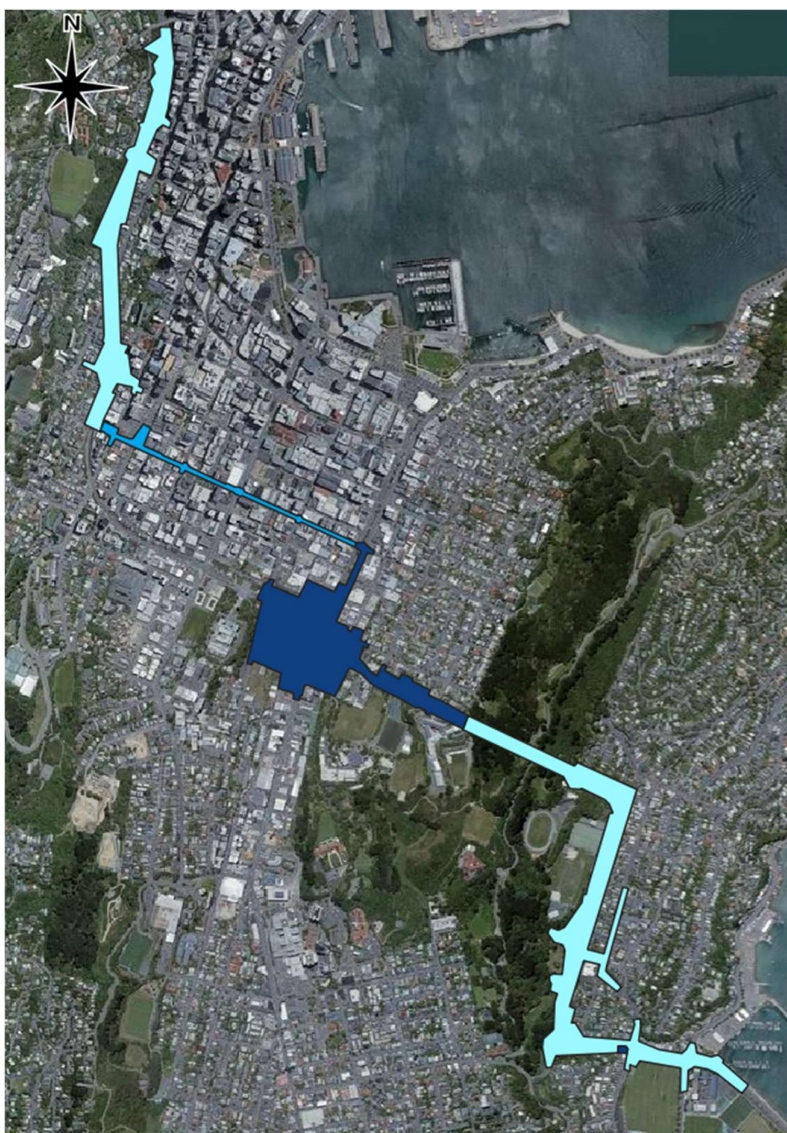


Figure 83 - Archaeological potential in Project sections (Pale blue: low, medium blue: moderate, dark blue: high)

5. ASSESSMENT OF EFFECTS

286. There are direct adverse effects on known and potential archaeological sites within the Project area. These adverse effects all arise during the construction phase; there are no effects from operation of the Project.

287. These effects are set out in Table 8 below.

Table 8: Effects on known and potential archaeological sites within the Project area during construction

Known and potential archaeological features	Effect
Te Aro	
Brick barrel drain, corner Vivian & Bute Street R27/471	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Potential brick barrel drain, Vivian Street/Taranaki Street intersection	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Potential brick barrel drain, Vivian Street	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Potential brick barrel drain, Kent Terrace	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Potential in-ground archaeology on Vivian Street	Any feature present likely to be shallow and will be destroyed by construction work
Basin Reserve	
Building 2 Adelaide Road	Demolition
House 30 Sussex Street	Demolition
House 46 Sussex Street	Demolition
House 48 Sussex Street	Demolition
Potential in-ground archaeology on Sussex Street beneath demolished buildings	Earthworks likely to reveal and destroy in-ground archaeological features such as domestic rubbish pits, piles, drains
Home of Compassion Creche building only (noting it has already been moved from its original location)	Relocation
Brick drains beneath, south of and west of Basin Reserve	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Wooden cobbles, corner Dufferin and Rugby Streets	Earthworks likely to reveal and destroy cobblestones present within area of work
Mount Victoria	
Laureston, 7 Paterson Street	Relocation and reinstatement
Ettrick Cottage, 19 Paterson Street	Relocation and reinstatement
House 145 Brougham Street	Demolition
House 147 Brougham Street	Demolition
Potential in-ground archaeology on Paterson Street within footprints and in sites of relocated buildings	Earthworks likely to reveal and destroy in-ground archaeological features such as domestic rubbish pits, piles, drains
Brick drains	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain
Eastern Suburbs	
Kilbirnie Hotel site	Earthworks may reveal in-ground remains of hotel including basement and cellar, piles, domestic rubbish pits and rubbish deposits

288. Where the Project will lead to the permanent demolition or destruction of the archaeological site, the effect is permanent loss of archaeological fabric that relates to the early colonial history and development of Wellington City. This effect is considered to be of a moderate adverse scale: none of the adversely affected sites, with the exception of Laureston, is considered to be greater than local significance. Laureston is considered to have regional significance, but the primary adverse effect on the house is the earthworks on its site, rather than direct effects on the house itself which is to be reinstated on its site. While the Creche has national significance, it has already been moved once, meaning there is no risk of destroying any in-ground archaeological features associated with the building; and the building itself will be relocated as part of the Project works.
289. However, there is also a beneficial effect from the information that will be gathered and recorded from these affected sites and places. Much of this physical information cannot be gained from any other sources, so by uncovering archaeological sites, the Project will provide unique and valuable contextual data.
290. The loss of the physical data is balanced against the data gained for local and regional analysis. It is likely many of the research questions noted in section 4 of this report can be answered, in part or in whole, from data gathered from this Project.
291. In addition, Laureston will be secured near its original site; interpretation on site developed as part of this Project can inform the Wellington community of the history and significance of this building and its relationship to Mount Victoria.
292. Table 9 sets out the level of effects on the affected archaeological sites and features, before and after mitigation.

Table 9: Level of effects on the affected archaeological sites and features, before and after mitigation

Location	Known and Potential archaeological features	Effect	Level of effect (unmitigated)	Recommended management	Overall level of effect (mitigated)
Construction effects					
Te Aro	Potential in-ground archaeology on Vivian Street	Any feature present likely to be shallow and will be destroyed by construction work	High: Information will be lost; features and artefacts will not be recovered and recorded	Monitor construction earthworks, investigate and record revealed features.	Moderate: Loss of archaeological feature, but data gained for future and comparative research: through nature of sites and features recorded, comparative analysis of artefacts gathered, information on social history such as relative wealth seen through types and origin of artefacts, addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand
Basin Reserve	2 Adelaide Road 30 Sussex Street 46 Sussex Street 48 Sussex Street	Demolition of houses / buildings	High: Loss of architectural and construction information	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. Monitor cleared site after house removal, investigate any revealed features.	Moderate: Loss of archaeological feature, but data gained for future and comparative research: materials used, construction methodology, social history such as relative wealth through wallpaper. Addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand
	Potential in-ground archaeology on Sussex Street beneath demolished buildings	Earthworks likely to reveal and destroy in-ground archaeological features such as domestic rubbish pits, piles, drains	High: Information will be lost; features and artefacts will not be recovered and recorded	Monitor earthworks for presence of archaeological sites and features associated with prior buildings on site.	Moderate: Loss of archaeological features, but data gained for future and comparative research: through nature of sites and features recorded, comparative analysis of artefacts gathered, information on social history such as relative wealth seen through types and origin of artefacts, addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand

	Home of Compassion Creche building only (noting it has already been moved from its original location)	Relocation of houses / buildings	Negligible	No archaeological monitoring is required for the relocation as the area has already been substantially modified for construction of Arras tunnel approach. Review on-site interpretation to tell the story of the Creche, its association with social services and community, and with the “Catholic Precinct”.	Negligible
	Wooden cobbles, corner Dufferin and Rugby Streets	Earthworks likely to reveal and destroy cobblestones present within area of work	High: Information will be lost; features will not be recovered and recorded	Monitor earthworks for presence of insitu cobbles, and either record and remove, or leave insitu if possible.	Moderate: Loss of archaeological feature, but data gained for future and comparative research: through nature and extent of feature, addition of comparative data to compare with other industrial parts of Wellington and other 19th century cities in New Zealand
Mount Victoria	- Laureston, 7 Paterson Street - Ettrick Cottage, 19 Paterson Street	Relocation and reinstatement of buildings / houses	High: Information in house footprints will be lost; features and artefacts will not be recovered and recorded	After Laureston house removal, monitor the site and investigate any features found. Reinstall the house north of its current location, as per Indicative Landscape Plans, to maintain connections to Mount Victoria and the Catholic Precinct. Interpretation opportunity to share the history of Mount Victoria’s changing social and economic landscape. After Ettrick Cottage house removal, monitor the site for signs of prior occupation (not Ettrick Cottage, as it has already been relocated). Reinstall the house near its original site (corner of realigned Paterson and Brougham Streets) to maintain its connection to Mount Victoria.	Moderate: Loss of in-ground archaeological features, but data gained for future and comparative research: through nature of sites and features recorded, comparative analysis of artefacts gathered, information on social history such as relative wealth seen through types and origin of artefacts, addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand

	145 Brougham Street 147 Brougham Street	Demolition of houses / buildings	High: Loss of architectural and construction information	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ⁸⁸ Monitor cleared site after house removal, investigate any revealed features.	Moderate: Loss of archaeological feature, but data gained for future and comparative research: materials used, construction methodology, social history such as relative wealth through wallpaper. Addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand
	Potential in-ground archaeology on Paterson Street within footprints and in sites of relocated buildings	Earthworks likely to reveal and destroy in-ground archaeological features such as domestic rubbish pits, piles, drains	High: Loss of architectural and construction information	Monitor earthworks for presence of archaeological sites and features associated with prior buildings on site.	Moderate: Loss of archaeological features, but data gained for future and comparative research: through nature of sites and features recorded, comparative analysis of artefacts gathered, information on social history such as relative wealth seen through types and origin of artefacts, addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand
Eastern suburbs	Kilbirnie Hotel site	Earthworks may reveal in-ground remains of hotel including basement and cellar, piles, domestic rubbish pits and rubbish deposits	High: Loss of architectural, commercial, and construction information	Monitor earthworks for presence of subsurface cellars, rubbish pits, foundations, piles, drainage pipes. Opportunity for interpretation on site, such as storyboards about the history of the hotel, growth of the eastern suburbs, and the need for social facilities.	Moderate: Loss of archaeological features, but data gained for future and comparative research: through nature of sites and features recorded, information on commercial activity seen through architecture and artefacts, comparative analysis of artefacts gathered, information on commercial and local history, addition of comparative data to compare with other parts of Wellington and other 19th century cities in New Zealand

6. MEASURES TO AVOID, REMEDY OR MITIGATE ACTUAL OR POTENTIAL ADVERSE EFFECTS

293. As noted above, my understanding is that the potential effects of the Project on heritage and archaeology have been considered as part of the Project development and, as a result, some potential effects on archaeology will have been avoided (refer to Mr. Peet's Assessment of Alternatives).
294. Now that the Project route has been selected, it is often not possible to avoid effects on archaeology along the Project route because:
- In some cases, the actual presence of sites is not known, but is inferred from historical or archaeological data
 - The overall purpose of the Project, to construct a road, means that factors such as location and alignment of the road corridor now that the route has been selected cannot be modified to a great degree without compromising safety or efficiency. Therefore, sites such as buildings that are within or affected by the proposed alignment cannot be avoided
295. I recommend the following general mitigation practices along the Project route:
- Undertake monitoring of all earthworks during construction, to ensure appropriate recording and investigation of archaeological features that may be revealed
 - On completion of the Project, creation of on-site interpretation wherever possible, through story boards, display of artefacts, use of historic photos and maps
296. In addition, I recommend the following site-specific mitigation measures (set out by Project section). I have included options in Table 10 below that highlight where avoidance of sites (known and potential) is likely to be achieved, and specific conditions that may allow site avoidance and protection during construction.

Table 10: Recommended mitigation measures for known and potential archaeological features

Known and potential archaeological features	Effect	Recommended condition
Te Aro		
Brick barrel drain, corner Vivian & Bute Street R27/471	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Potential brick barrel drain, Vivian Street/Taranaki Street intersection	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Potential brick barrel drain, Vivian Street	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Potential brick barrel drain, Kent Terrace	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Potential in-ground archaeology on Vivian Street	Subsurface archaeological features unlikely, any feature present likely to be shallow and will be	Monitor construction earthworks, investigate and record revealed features

	destroyed by construction work	
Basin Reserve		
Building 2 Adelaide Road	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁵⁸ Monitor cleared site after house removal, investigate any revealed features.
House 30 Sussex Street	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁵⁹ Monitor cleared site after house removal, investigate any revealed features.
House 46 Sussex Street	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁶⁰ Monitor cleared site after house removal, investigate any revealed features.
House 48 Sussex Street	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁶¹ Monitor cleared site after house removal, investigate any revealed features.
Potential in-ground archaeology on Sussex Street	Earthworks	Monitor earthworks for presence of archaeological sites and features associated with prior buildings on site.
Home of Compassion Creche - building still on site, but has been moved	Relocation	No archaeological monitoring is required for the relocation as the area has already been substantially modified for construction of Arras tunnel approach. Review on-site interpretation to tell the story of the Creche, its association with social services and community, and with the "Catholic Precinct"
Brick drains beneath, south of and west of Basin Reserve	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Wooden cobbles, corner Dufferin and Rugby Streets	Earthworks	Monitor earthworks for presence of insitu cobbles, and either record and remove, or leave in situ if possible
Mount Victoria		
Laureston, 7 Paterson Street	Relocation and reinstatement	Monitor cleared site after house removal, investigate any revealed features. The house should be reinstated on its site after construction. It is noted that the house cannot go back to its existing location, as this will be partially occupied by the new road, so the house should be placed on its site

¹⁵⁸ HNZPT 2018

¹⁵⁹ HNZPT 2018

¹⁶⁰ HNZPT 2018

¹⁶¹ HNZPT 2018

		slightly north of its current location (as allowed for on the Indicative Landscape Plans). This is to continue its locational associations with Mount Victoria and visual and locational relationship with the 'Catholic Precinct'. Opportunity for interpretation – telling the story of the changing social and economic fortunes of Mount Victoria (workers' cottages vs large mansions, and the Catholic Precinct).
Ettrick Cottage, 19 Paterson Street	Relocation and reinstatement	Monitor cleared site after house removal, investigate any revealed features. (Note this will be for evidence of prior occupation, not association with Ettrick Cottage as the building has already been moved on site). The house should be reinstated near its original site but it is not essential that it be returned to its current location (given it has already been moved from its original location). I note a relocation site for this building has been allowed for on the Indicative Landscape Plans at the corner of the realigned Paterson Street and Brougham Street. This location will continue the building's locational associations with Mount Victoria
House 145 Brougham Street	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁶² Monitor cleared site after house removal, investigate any revealed features.
House 147 Brougham Street	Demolition	Record interior and exterior of house to level 2 of HNZPT buildings recording standard. ¹⁶³ Monitor cleared site after house removal, investigate any revealed features.
Potential in-ground archaeology on Paterson Street	Earthworks	Monitor earthworks for presence of archaeological sites and features associated with prior buildings on site.
Brick drains	Likely to be avoided, construction earthworks in street corridor unlikely to extend to depth of drain	Record and protect site during construction if encountered: cover with geotech cloth and a protective layer of sand
Eastern Suburbs		
Kilbirnie Hotel site	Earthworks	Monitor earthworks for presence of subsurface cellars, rubbish pits, foundations, piles, drainage pipes. Opportunity for interpretation on site, such as storyboards about the history of the hotel, growth of the eastern suburbs, and the need for social facilities.

¹⁶² HNZPT 2018

¹⁶³ HNZPT 2018

7. RESPONSE TO PRE-LODGE MENT FEEDBACK

297. A previous version of this report and the draft archaeological management plan were provided to the administering agencies for feedback. HNZPT carried out an initial review and their comments included the following:
- i. A request to show the overall Project area
 - ii. A request to show the areas of archaeological potential as high, medium, or low
 - iii. Some requests for further details in the draft archaeological management plan
298. In response to these requests Figure 1 and Figure 83 was added to show the areas of archaeological potential and the draft archaeological management plan has been updated.
299. No comments were received from either of the councils in relation to my report or the draft archaeological management plan.

8. CONCLUSIONS AND RECOMMENDATIONS

- 300. Research work undertaken confirms there are known and probable archaeological sites that could be adversely affected by the proposed Project. They include buildings, in-ground drains, and potential sites such as rubbish pits.
- 301. All sites have the potential to provide information about the growth and development of Wellington City, by showing resources that people were using and how these changed over time, relative wealth seen in building design and size, the need for social facilities, or the growing need for infrastructure.
- 302. Most known and potential sites are of local significance. One building, Laureston, is of regional significance, through its association with notable Wellington identities, and its associations with the 'Catholic Precinct' located near the Basin Reserve. Another building, the Creche, is of national importance. Both of these buildings will be removed and then relocated as part of the Project works.

Benefits

- 303. The Project has the potential to achieve some archaeological benefits, through the retention and maintenance of Laureston and Ettrick Cottage, and information gained from sites that will be investigated, recorded, and analysed.
- 304. In addition, the Project will enable investigation of known and potential archaeological sites along the Project corridor. Investigation of sites and analysis of their fabric can contribute information that increases the available knowledge of Wellington history and development. Information gained can subsequently be compared and contrasted with other urban locations in New Zealand, to build a story of life in New Zealand in the precontact, contact and colonial periods. Research questions considering during analysis can include:
 - i. What is the survival rate of subsurface sites beneath the current city surface? This can help determine archaeological strategies for future projects and work
 - ii. What types of sites associated with precontact Māori were revealed? What can the nature and location of these sites tell us about how people were interacting with and utilising their environment? How does this compare and contrast with occupation in other areas?
 - iii. Can any evidence of precontact or contact Māori gardening be seen in and around the Basin, where there is traditional evidence of gardening?
 - iv. What information is yielded about the relative wealth and lifestyles of 19th century occupants? Is there a contrast between apparent lifestyle in different parts of the city, reflecting varying affluence and status in different areas?
 - v. Can any changes of personal circumstances be seen through relative changing value of ceramics or other artefacts?
 - vi. What information can be gained about imported vs locally produced goods and materials?
 - vii. Can domestic rubbish deposits yield specific lifestyle indicators or activities, for example, children, elderly, sick, reuse, recycling, repurposing?
 - viii. Is there any information yielded from artefacts about activities other than domestic use, for example, religious, drinking, recreation?
 - ix. What information can be gained about 19th century infrastructure and construction, from house piles, drains, and other services? How does this compare with present-day methods?

Adverse effects

- 305. The Project, however, will also have adverse effects on archaeological sites and fabric, through the permanent destruction of some known and potential unknown sites. This adverse effect is

mitigated through the recommended conditions (as outlined below), which will enable information about the sites to be obtained.

Mitigation and conditions

306. I recommend conditions similar to those typically contained in a typical archaeological authority granted under the HNZPTA.

307. At a high-level, those conditions listed in Table 11 are as follows:

Table 11: Recommended conditions for known and potential archaeological features

Known and potential archaeological features	Mitigation
General Project extent	Undertake monitoring of all earthworks during construction and landscaping
	Undertake interpretation wherever possible
Buildings	Record interiors prior to demolition
	Investigate footprint beneath buildings after moved/demolished
	Investigate and record foundations/cellars where revealed
Rubbish deposits	Excavate and analyse
Drains	Record, sample and cover
Wooden cobbles	Record sample and cover
Other in-ground features	Record and sample

308. In more detail, the proposed conditions are as follows:

- i. That an archaeologist is on site to monitor all surface clearing, earthworks, landscaping or other invasive subsurface groundwork required, including exploratory work prior to construction earthworks
- ii. The archaeologist should be given the opportunity to examine any archaeological deposits, or heritage features disturbed by the proposed works, and to make recommendations for further detailed examination of these deposits where appropriate

309. Specific sites or places that the archaeologist will investigate are:

- i. Undertaking interior recording of buildings at 2 Adelaide Road, 30, 46 and 48 Sussex Street, 145 and 147 Brougham Street, prior to their demolition
- ii. Investigating the sites of buildings at 2 Adelaide Road, 30, 46 and 48 Sussex Street, 145 and 147 Brougham Street after their demolition
- iii. Interior recording of Laureston, 7 Paterson Street and Ettrick Cottage, 19 Paterson Street, prior to their temporary removal off site
- iv. Investigating the sites of Laureston, 7 Paterson Street and Ettrick Cottage, 19 Paterson Street, after their temporary removal off site
- v. Observing work on the corner of Rugby and Dufferin Streets, to establish the location and extent of the wooden cobbles previously recorded there; and
- vi. Investigating any foundations or cellars, rubbish pits, drains, or other features of the Kilbirnie Hotel site, corner of Wellington Road and Kilbirnie Crescent

310. Analysis of artefacts and material recovered will be undertaken to gain information on domestic activities. Artefacts and material uncovered and recorded during site clearing work will be lodged with an appropriate repository.

311. At the conclusion of the Project, when all archaeological data has been assessed and analysed, opportunities should be explored to use this data to develop interpretation, to display appropriate archaeological material recovered, and to tell the story of the changing use and significance of

the area. Specific areas recommended for interpretation are the Home of Compassion Creche, the Laureston site, and the Kilbirnie Hotel site.

312. I recommend that the archaeological authorities require the Project to be delivered in accordance with the proposed archaeological management plan, which I have prepared and which provides for the measures I have outlined above. This management plan will guide the archaeological work and inform all parties to the proposed works of their requirements and obligations.
313. Provided the archaeological authorities are subject to the proposed archaeological management plan, and the plan is adhered to, this will ensure that the adverse effects on archaeology are addressed appropriately.
314. Subject to adoption of the recommended mitigations set out in this report, it is my view that the Project appropriately recognises and provides for the management and protection of archaeological heritage across the Project areas.

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Pictorial

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