



ARCHAEOLOGICAL INVESTIGATION OF LAND ADJACENT TO THE STONE STORE, 19 PRINCES STREET, ONEHUNGA.

SITES R11/2466 and R11/2580



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With contributions by

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Report prepared for
Stone Store Properties Ltd

in accordance with

Heritage New Zealand Pouhere Taonga
Authority Nos. 2011/207 & 2012/409

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EXECUTIVE SUMMARY

Stone Store Properties Ltd have undertaken earthworks at land to the rear and to the west of the historic Stone Store (R11/2466) at 19 Princes Street, 13-19 Princes Street and 9-13 Wharangi Street, Onehunga (DP 25555, DP 47824, DP 49054, 4 DP 9426, DP 52360, DP 61167, and DP 93778). The area had been occupied by the Grove Mitre 10 Outdoor Expo building at the corner of Princes and Wharangi Streets prior to a major fire in 2008 which destroyed it. While the Stone Store suffered only minor damage during the fire, the remainder of the site to the rear was cleared. Archaeological excavations were undertaken in three stages from 19 December 2012 to 21 June 2016, with the area to the rear of the Stone Store investigated first (Stage 1), and an area along Wharangi Street at the south-western corner also examined (Stage 2). The primary investigation along the Princes Street frontage (Stage 3) under the carpark provided the majority of archaeological features and artefacts.

Preceding the Stage 3 excavation to the west of the Stone Store, a geophysical survey utilising both magnetometry and ground penetrating radar methods to identify any potential sub-surface anomalies was carried out. It was anticipated that the survey would assist in defining and understanding the potential for surviving sub-surface archaeological features beneath the carpark area. However, the magnetometer survey results were unclear, in the main, due to large-scale magnetic disturbance in the immediate environment. In contrast, the ground penetrating radar survey did identify a small number of anomalies that were likely to be of an archaeological nature, although the results only allowed for the most tenuous of interpretations to be made.

The stripping of tar seal and modern overburden in the project area was undertaken by mechanical excavator until archaeological deposits and features were exposed. For the most part surviving archaeological horizons were present within 0.4m of the existing ground surface and in some areas, such as to the rear of the Stone Store and in the southwest corner of the project area, considerably less. However, under the carpark area, deeper deposits were identified. Where no archaeological features were encountered, excavation by machine proceeded until natural, sterile deposits were reached.

The Stage 1 excavation behind the Stone Store exposed quarry pits, indicating that the bluestone used in the construction of the Stone Store had been obtained from an outcrop immediately to its rear. The quarry pits were then utilised as a refuse dump and infilled with large quantities of 19th century cultural material, the majority of which dated to the mid-19th century. A small number of postholes were likely to reflect the presence of small outbuildings to the rear of the Stone Store, while a shell path and other features related to European pleasure gardens.

The Stage 2 excavation in the south-western corner of the site recorded a number of cut features in the form of earthen drains, refuse pits and postholes likely indicating the presence of a modest domestic dwelling in the area. A relatively large volume of artefacts was retrieved from the drains and refuse pits indicative of domestic settlement.

The results of Stage 3 included a sequence of European occupation overlying an historic Māori site. The evidence of this Māori occupation was only determined by a few surviving features such as a historic period storage pit, and some possible related gardening features. The European phase of the site included both a number of phases of domestic settlement, in the form of a sequence of building and demolition of houses, and in the west of the site a sequence of industrial, domestic and then industrial structures, with two blacksmithing operations preceding and post-dating residential use.

A large quantity of metal objects, including hundreds of horseshoes as well as metal slag, clearly indicated the presence of the blacksmiths. Rectangular features with stone bases (some bonded

with mortar) were the bases of forge boxes. These features were on two distinct levels and represented two different blacksmith operations on the site, perhaps separated by approximately 20 years, with a dwelling known to have occupied the site following the demolition of the first smithy. The second smithy, dating from the later 19th century, seems to have been a large-scale operation with no fewer than four forge bases identified at the north-western corner property.

The artefact assemblage from the site ranged from pre-European Māori lithics such as an argillite adze, chert and obsidian flakes to historic period bottle glass worked by Māori as if it was obsidian utilised in the production of cutting tools, through mid-19th century to early 20th century cultural material. Of note were items of militaria such as regimental buttons, military belt buckles, a brass shotgun cartridge, and a Royal Navy epauletete stud, likely related to the use of the site by the Commissariat during the Waikato Campaign (1863-1864) of the New Zealand Wars. Other unusual finds were blacksmiths' tools including tongs and punches. Ecofactual material collected from features mainly consisted of animal bone, although some fish bone was also recovered.

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1 INTRODUCTION

1.1 Project Background

Stone Store Properties Ltd have undertaken earthworks at land to the rear and to the west of the historic Stone Store (R11/2466) at 19 Princes Street, 13-19 Princes Street and 9-13 Wharangi Street, Onehunga (DP 25555, DP 47824, DP 49054, 4 DP 9426, DP 52360, DP 61167, and DP 93778; Figure 1.1, Figure 1.2 and Figure 1.3). The area had been occupied by the Grove Mitre 10 Outdoor Expo building at the corner of Princes and Wharangi Streets prior to a major fire in 2008 which destroyed it. While the Stone Store suffered only minor damage during the fire, the remainder of the site to the rear was cleared (a Public Health requirement as the site was likely to have been contaminated by asbestos).

After the fire, Stone Store Properties Ltd was contacted by Bev Parslow, the Auckland Regional archaeologist of the New Zealand Historic Places Trust (NZHPT), now Heritage New Zealand Pouhere Taonga (HNZPT), who identified the potential of the site to contain archaeological remains of 19th century date. She also informed Stone Store Properties of the requirement to apply for an archaeological Authority to modify the site prior to any redevelopment. Ms Parslow advised that an archaeological assessment report would be required as part of any Authority application, and Stone Store Properties Ltd subsequently commissioned Clough & Associates to undertake the assessment (Clough and Yoffe 2009). The NZHPT also requested information on the extent of damage to 19 Princes Street, and any of the buildings attached to it.

Stone Store Properties Ltd sought to carry out a full archaeological investigation of the property at 19 Princes Street, including the carpark area along the Princes Street frontage (the area that appeared to have the most potential for subsurface archaeological remains), to enable future development of the site without any impediment from archaeological constraints. Currently there are no plans to redevelop the Stone Store building itself; rather it will retain its character and be integrated into any future design concept.

On 24 May 2011, a geophysical survey was undertaken of the carpark area adjacent and to the west of the Stone Store as part of mediation between Stone Store Properties Ltd and the NZHPT. The aim of the survey was to identify any potential sub-surface anomalies that might be archaeological in nature, which could assist in defining and understanding the potential for surviving sub-surface archaeological features beneath the carpark (Shakles and Clough 2011). The geophysical survey utilised both Ground Penetrating Radar (GPR) and Magnetometry methods (Shakles and Clough 2011; Watson 2011).

While the magnetometry survey failed to identify any significant geophysical anomalies, the GPR survey identified a number of anomalies of potential archaeological origin (Shakles and Clough 2011). Subsequently, two archaeological authorities were granted. One was a section 18 Authority (2012/409) which related to a 2m wide strip that ran along the northern boundary of the carpark from the corner of Wharangi and Princes Streets, eastward to the Stone Store (Figure 1.4). Here, several geophysical anomalies had characteristics indicating archaeological remains relating to 19th century European settlement. The Authority permitted the features to be exposed and investigated.

A second Authority (2011/207) was granted (following an Environmental Court Decision) under Section 14 of the Historic Places Act (1993) and covered the rest of the site, but specifically to investigate four geophysical anomalies that had been identified.

1. Introduction

The archaeological investigation and monitoring of the 19 Princes Street works reported on here were undertaken in three stages: 19-21 December 2012; 7-10 January 2013 and 19 May to 21 June 2016 (Figure 1.4). The archaeological work was carried out in accordance with HNZPT Authorities 2011/207 and 2012/409. This is the final report on the results of the 19 Princes Street, Onehunga archaeological investigations.



Figure 1.1 Satellite image showing location of Onehunga within Auckland. Source: Auckland Council Geomaps Viewer (2017)

1. Introduction

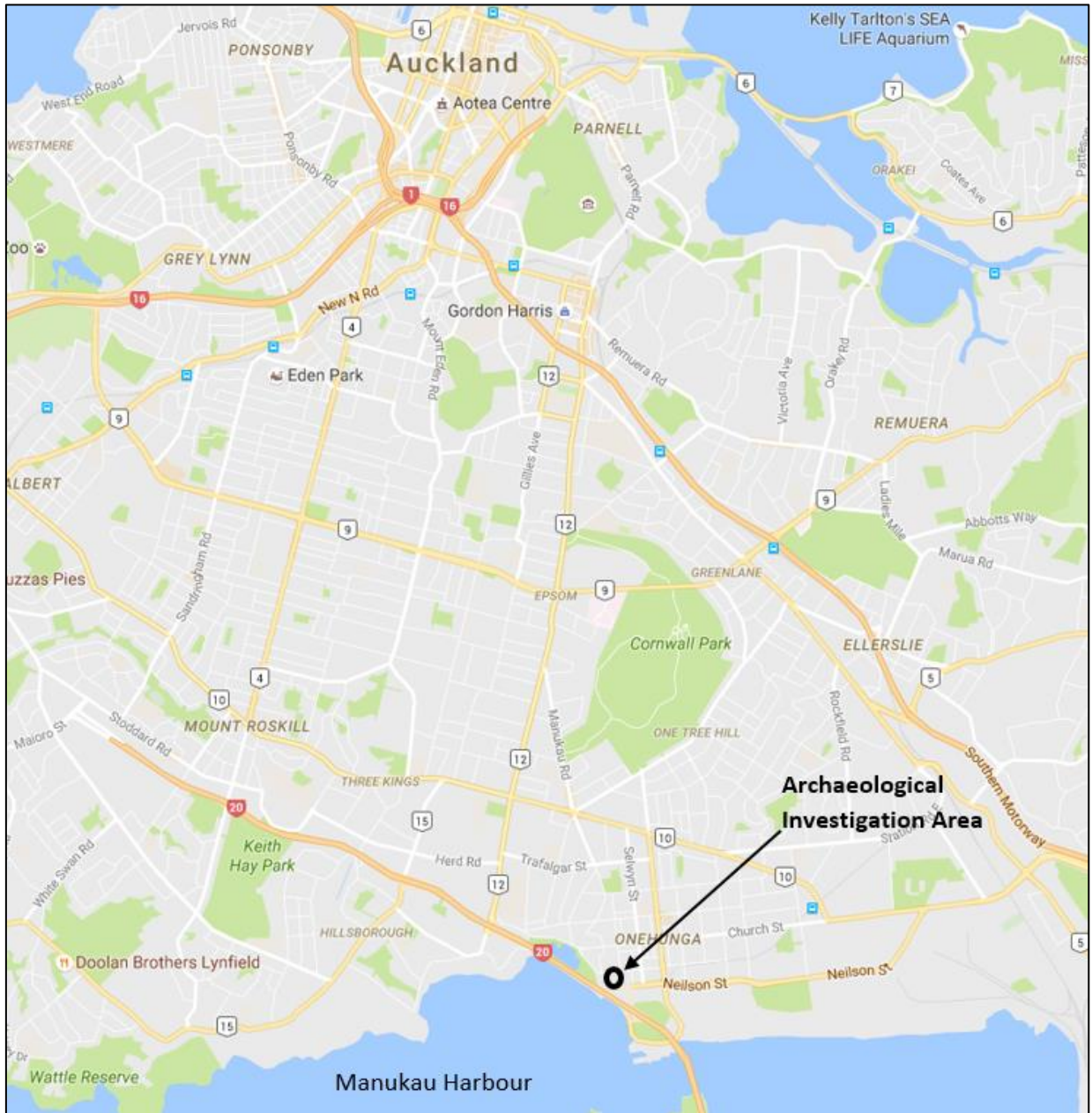


Figure 1.2 General site location map showing the archaeological investigation area at 13-19 Princes Street and 9-13 Wharangi Street, Onehunga

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Figure 1.3 Northeast facing view of the investigation area at 19 Princes Street, Onehunga, with the stone store in the distance at centre right. Source: Google Maps



Figure 1.4 Aerial showing development site at 13-19 Princes Street and 9-13 Wharangi Street, Onehunga and the areas of intact archaeology that were investigated between December 2012 and June 2016

1. Introduction

1.2 Excavation Methodology

The archaeological excavations were undertaken in three stages from 19 December 2012 to 21 June 2016, with the area to the rear of the Stone Store investigated first (Figure 1.4).

Preceding the main archaeological investigation within the footprint of the carpark to the west of the Stone Store, a geophysical survey utilising both magnetometry and ground penetrating radar methods was carried out to identify any potential sub-surface anomalies that might be archaeological in nature. It was anticipated that the survey would assist in defining and understanding the potential for surviving sub-surface archaeological features beneath the carpark. However, the magnetometer survey results were unclear, in the main due to large-scale magnetic disturbance in the immediate environment. In contrast, the ground penetrating radar survey did identify a small number of anomalies that were likely to be of an archaeological nature, although the results only allowed for the most tenuous of interpretations to be made.

The stripping of tar seal and modern overburden was undertaken by mechanical excavator until archaeological deposits and features were exposed. For the most part, surviving archaeological horizons were present within 0.4m of the existing ground surface and in some areas, such as to the rear of the Stone Store and the southwest corner of the project area, considerably less. The archaeological features and/or deposits present were assessed, investigated, recorded and sampled in accordance with accepted archaeological practice and within the framework of the research strategy and requirements of the HNZPT authority. Excavation by machine then proceeded until natural, sterile deposits were reached.

A detailed description of the archaeological excavation methodology is presented in section 4.1.2.

1.3 Research Strategy

A research strategy incorporating a range of research themes was originally developed in March 2011 by Clough & Associates as part of a combined Archaeological Research Strategy and Site Management Plan to accompany a Section 11 application (under the former Historic Places Act 1993) (Clough 2011).

The research framework was formulated following the completion of the Archaeological Assessment (Clough and Yoffe 2009), which included both detailed historical research and an assessment of the archaeological potential of the project area. Pre-European, post-European Contact period (1769-1830), and evidence of trade between Māori traders and European settlers during the early historic period (should any evidence of such sites be exposed), and historic pre-1900 European settlement investigations were treated separately within the research framework (Clough 2011). The research design considered that if archaeological remains were present within the Princes Street site, they had the greatest potential to contribute to knowledge of early historic period and later 19th century European settlement of Onehunga.

The archaeological investigation of the 19 Princes Street site established that survival of archaeological horizons varied significantly across the site, which resulted in limitations in addressing some of the research questions posed. For example, much of the topsoil and subsoil once present to the south of the Stone Store and the adjacent carpark had been truncated by 20th century development, with only exposed outcrops of lava and bluestone remaining. Due to the close proximity of much of this area to the original foreshore, it is likely that this area would have contained archaeological remains relating to pre-European period Māori. As such, it was not possible to explore the research themes related to this period. However, an assemblage of

1. Introduction

culturally modified bottle glass dating to the period of European contact did provide evidence of European influence on historic period Māori material culture.

The results of the archaeological investigation have, however, contributed significantly to knowledge of the early European settlement period, with valuable information produced relating to residential occupation, mercantile trade and industrial activities, as well as some limited information related to the reclamation of the foreshore in the southwest corner of the site. Lastly, the investigations also produced information relating to later 19th century domestic and industrial activity.

1.3.1 Research Themes

Within the framework of the general research objectives, several research themes were identified, both narrow and broad in focus. The themes related to a number of different occupation periods all relating to the Princes Street site, and were as follows:

- Pre-European Māori settlement around the Manukau Harbour;
- Archaeology of the Post-European Contact period (1769-1840s);
- Early Historic Period – European Settlers and Māori (1850-1870);
- Historic commercial and industrial activity in Onehunga;
- Reclamation and the early shoreline;
- Later 19th century domestic and industrial activity (1870-1900).

Lastly, as part of the research strategy, the effectiveness of geophysical survey in identifying anomalies that correlated to sub-surface archaeological deposits and features in a heavily urbanised environment would be evaluated.

1.4 Project Personnel

During the three stages of archaeological excavation undertaken between 19 December 2012 and 21 June 2016, up to nine Clough & Associates field archaeologists took part in the excavations. In advance of the archaeological excavations, Matt Watson of ScanTec Geophysical Consultants undertook the geophysical investigation of what was to become the Stage 3 excavation area. Additionally, a number of Clough & Associates archaeologists and external specialists were also involved in the post excavation analysis and reporting stage of the project. The following table (Table 1.1) provides a full list of personnel involved in the project:

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Table 1.1 Project personnel and their responsibilities in relation to the Princes Street archaeological investigation

Clough & Associates Excavation Team	Responsibilities
Dr Rod Clough	Director – overall direction of project
Richard Shakles	Co-Director, lead archaeologist & report author
Dr Sarah Phear	Field archaeologist
Dr Simon Bickler	Field archaeologist, drone survey & report author
Dave Carley	Field archaeologist
Ben Jones	Field archaeologist
Ellen Cameron	Field archaeologist
Jen Low	Field archaeologist
Joss Piper-Jarret	Field archaeologist
Bernie Larsen	Field archaeologist
Wesley Maguire	Total station survey – Stage 3
Ben Thorne	Total station survey – Stages 1 and 2
Clough & Associates Post-Excavation Analysis	
Jen Low	Artefact analysis – glass, ceramic, stoneware
Richard Shakles	Artefacts – tobacco pipes, militaria, miscellaneous
Ben Jones	Artefacts - metals
Ellen Cameron	Faunal analysis
Sarah Macready	Editor
Tom MacDiarmid	Illustrations
External Specialists	
Susan Yoffe	Historian
Matt Watson	Geophysical Survey – Magnetometry and GPR
Dr Mark Horrocks	Plant Microfossil analysis
Dr Rod Wallace	Wood and charcoal identification

1.4.1 Report Authorship

Several members of the Clough & Associates team as well as external specialists were involved in the production of this report. The introduction, archaeological excavation results, environmental analysis, discussion and conclusions were written by Richard Shakles. The historical background was written by Susan Yoffe. The artefact analyses were written by Jen Low with contributions from Richard Shakles and Ben Jones. Other contributors included Ellen Cameron for the faunal analysis and Dr Mark Horrocks for the plant macrofossil analysis. Lastly, the report was edited and reviewed by Sarah Macready.

1.4.2 Acknowledgments

Special appreciation is extended to all the excavation team, in particular those who undertook the final stage of excavations in May-June 2016 (Dave Carley, Ben Jones, Ellen Cameron and Simon Bickler), who worked long hours, often in the face of extremely inclement weather, and

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yet excavated meticulously and tirelessly to retrieve as much archaeological information as possible from the site.

The Clough & Associates team would also like to thank all the staff at Grove Mitre 10, and, in particular, David Grove and Michael Shirley for their help, patience and assistance, not least for providing much needed umbrellas!

Lastly, special thanks are reserved for David Manson of Manson Machinery Ltd. His sublime skill and expertise with the mechanical excavator, displayed consistently on an extremely difficult site, often in appalling weather, and undertaken always with good humour, made the job of excavating the site so much easier and enjoyable for the excavation team.

2. Background

2 BACKGROUND

2.1 Physical Environment and Geology

2.1.1 Topography and Physical Environment

The project area at 19 Princes Street (Figure 2.1) is located close to the northern shore of the north-eastern stretch of the Manukau Harbour. The project area itself was once situated directly on the harbour shore but following 19th and 20th century reclamations is now situated some 200m north of the shoreline. The area is urban industrial in character, but was originally more diverse with mercantile, industrial and residential properties in close proximity to one another in the burgeoning Onehunga township of the mid- to late 19th century. The topography of the area is mainly flat with gentle slopes trending north to south towards the harbour shore.



Figure 2.1 The Princes Street site prior to archaeological investigation, showing the Stone Store, the area to the rear which required vegetation clearance under archaeological supervision (red outline) and the carpark area to the west of the Stone Store where most of the archaeological remains were concentrated (from Google Maps 2013)

2.1.2 Geology

The geology of the Onehunga area is made up of interbedded Miocene epoch sandstones and mudstones of the Waitemata Series that formed some 20 million years ago and were subsequently uplifted by tectonic activity (Soppet 1973; Kermode 1992 cited in Murdoch 2013: 8). The majority of the Waitemata Series rocks in the Onehunga area were later overlaid with basaltic

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lava flows produced by the Maungakiekie (One Tree Hill) and Rarotonga (Mt Smart), eruptions respectively (Murdoch 2013: 8). The lava from the Maungakiekie eruption of 28,500 BP, flowed south towards the Manukau Harbour, and is the major contributing factor of the present day north-south sloping topography of the Onehunga area (Murdoch 2013: 8).

The most notable geological feature relating to the Princes Street site is that of the low tuff ring of Te Hōpua ā Rangi that was formed by phreatomagmatic eruptions that occurred no more than 30,000 years ago and created a small explosion crater (maar) approximately 500m in diameter, which is located just 400m to the southeast of the site (Smith 2016: 9). The tuff crater ring was breached by seawater following the rise in sea level after the last ice age (10,000 BP), and became a tidal lagoon which also served as the Onehunga boat harbour (Smith 2016: 9). The lagoon was later reclaimed by infilling and during the 1970s the motorway was constructed through its centre (Smith 2016: 9).

The underlying geology of the property at 19 Princes Street is characterised by a gently sloping basaltic lava flow that dominates the southern two-thirds of the project area, while the northern third of the property (adjacent to Princes Street) consists of soft reddish-brown clay formed by the weathering of volcanic deposited lapilli – a gravel sized (2mm to 64mm) material likely ejected during the phreatomagmatic eruption that formed the Te Hōpua ā Rangi maar 29,000 years ago (Smith 2016: 6; Felgate 2016: 12; Kermode 1992; Murdoch 2013: 8).

2.2 Archaeological Background

The nature of pre-European Māori occupation activity in the Onehunga area and wider north-eastern Manukau Harbour has not been subject to major archaeological investigations. This is despite the important role Onehunga played during pre-European times around the Manukau Harbour and the inland areas of the Auckland Isthmus (discussed in the next section). Archaeological sites relating to Māori settlement prior to European arrival have been difficult to identify in the Onehunga township area due both to the modern development of the original Onehunga area and also to the major reclamations and infilling of the foreshore where many of the sites were located. A destroyed pa (R11/99) is recorded as having been broadly located around the end of Wharangi Street, with remnant middens all that are easily identifiable around the township. Foster (2011:6ff) also points out that earlier recording of midden in Onehunga during the 1970s noted several midden scatters throughout Onehunga but only a few were formally recorded. The state and condition of these other potential sites is unknown, although many are likely to have been destroyed by development since then.

Historically, Onehunga was also important during the early settlement of Auckland. As described below, a range of domestic, industrial and retail activities of early European settlers have left archaeological evidence. Sites include remains of a bakery, mills, stone-walls and wharves. Several historical structures are also recorded in the town and many are likely to have archaeological potential.

Figure 2.2 shows the distribution of recorded archaeological sites in the Onehunga area. The property contains two recorded archaeological sites: R11/2466 (the Stone Store) and R11/2580 (the historic land parcel covering the rest of the property).

2. Background

2.2.1 Māori Settlement History

Situated along the foreshore of the Manukau Harbour, Onehunga, whose name may be derived from either a landing place/disembarking beach, a burial place or perhaps ‘friable earth’, held a strategic position within the Auckland Isthmus (Simmons 1987:74; Macready and Burnett 2014: 6; Felgate 2016: 19; Pishief 2006: 8).

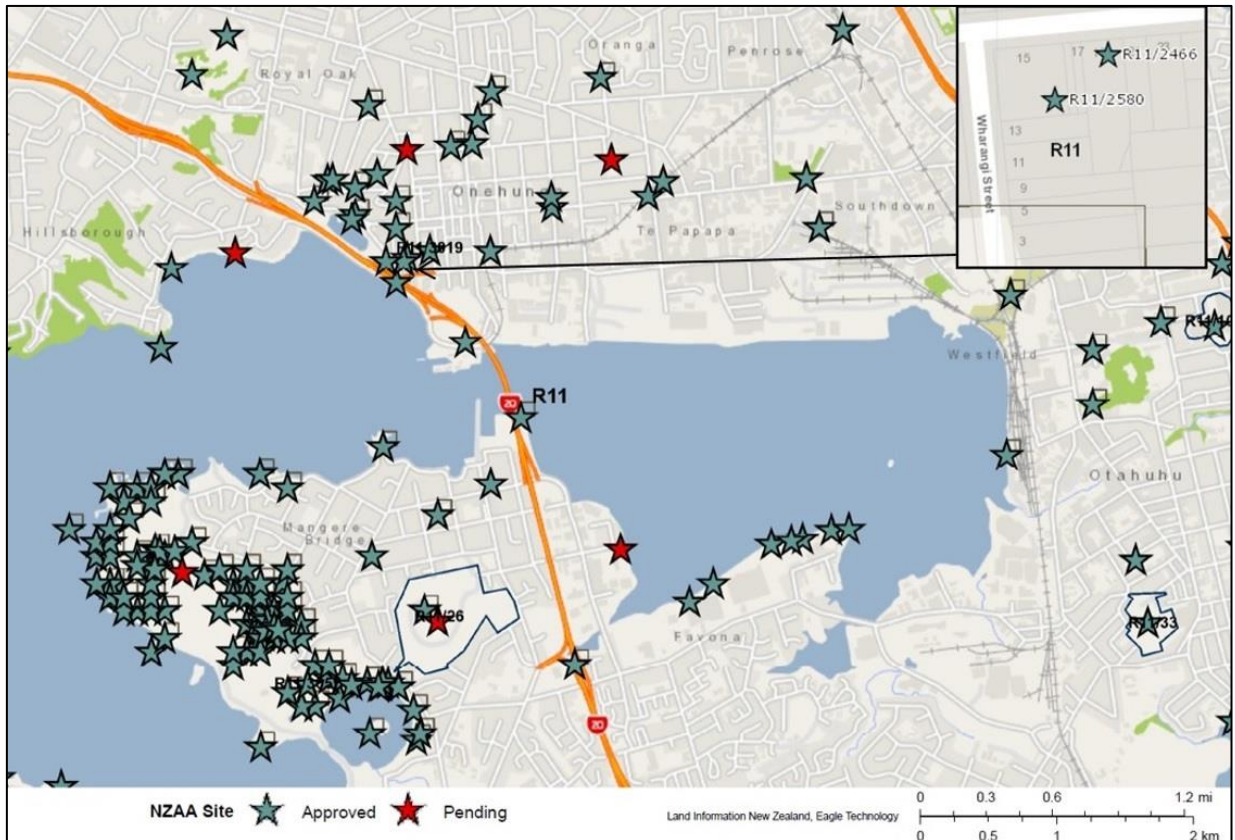


Figure 2.2 Archaeological site distribution around the north-eastern Manukau Harbour with sites R11/2466 and R11/2580 situated in the project area seen inset. Source: NZAA ArchSite

The area was of importance to Māori due to its strategic location on the north-eastern shore of the Manukau Harbour, its proximity to the waka portages to the Waitemata Harbour via the Tamaki River (Stone 2001:1-3) and the Otahuhu (Te To-waka), as well as Maungakiekie pa (Eaves et al. 2013: 16; Macready and Burnett 2014: 6). The harbour would have provided abundant resources such as fish, shellfish, and sea birds, while on land its freshwater springs and rich volcanic soils provided ideal conditions for the cultivation of crops such as kumara (Eaves et al. 2013: 8; Macready and Burnett 2014: 6).

The Onehunga area had been settled by Māori for generations prior to the arrival of the Europeans but, as with the rest of the Auckland Isthmus, the area was deserted during the 1820s in response to attacks on the Māori inhabitants of Onehunga by musket-armed Ngāpuhi. Between 1815 and 1835, a series of inter-tribal conflicts known as the Musket Wars were fought between raiding Ngāpuhi accompanied by Northland allies who, armed with muskets, undertook devastating raids against other Māori groups situated in the Hauraki, as well as those who dwelt around the Kaipara and Manukau Harbours (Eaves et al. 2016: 18; Felgate 2016: 20). The area was cautiously

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resettled by Ngāti Whātua in the later 1830s, when its extensive gardens were re-established (Stone 2001:182).

2.2.2 Post-European Contact Period (1820-1840)

The first visits to the wider Onehunga area by Europeans was undertaken by Admiralty vessels in search of Kauri spars for naval warships (Elder 1932; McNab 1914; Rutherford 1940 cited in Felgate 2016: 20). The first documented visit by a European to Onehunga itself was that of the Church Mission Society (CMS) missionary, the Reverend Samuel Marsden in 1820 (Eaves et al. 2016: 17; Mogford 1977: 12 cited in Felgate 2016: 20). Marsden observed a small Māori settlement and reported to the CMS that Onehunga was a potential site for a missionary settlement (Eaves et al. 2016: 17).

Other early interactions between Māori and Europeans consisted of prospectors evaluating the timber and flax resources found in the area (Mogford 1977: 13 cited in Eaves et al. 2013: 61).

2.2.3 Early European Settlement, The Fencibles¹ and the New Zealand Wars (1841-1864)

In the early 1840s, after the signing of the Treaty of Waitangi, Onehunga was a busy Māori trading settlement supplying Auckland (Felgate 2016: 23). One of the increasing number of European visitors at this time was the notable public figure John Logan Campbell, who visited Onehunga in mid-1840 accompanied by his business partner William Brown, and described the settlement as having kumara grounds and a fishing station (Campbell 1881: 292-99 cited in Eaves et al. 2013: 62; NZHPT 2012 cited in Felgate 2016: 23).

In 1841, the first Governor of New Zealand, Captain William Hobson RN, visited the Onehunga area and Felton Mathew, the first Surveyor-General of New Zealand, surveyed the area in the same year as part of a map of Auckland, which at the time had just been made the new capital of the colony. Felton's map of Auckland, published in 1842,² illustrates the presence of a Māori settlement at Onehunga, as well as describing the soils in the wider area as 'Volcanic soils of the finest description'.

By 1844, the European settlement of Onehunga was said to consist of little more than one whare and a sawpit, the whare being maintained by the Ngāti Mahuta leader Pōtatau te Wherowero, the ownership of the sawpit unknown (Jones 2010: 2 cited in Eaves et al. 2013: 62; Felgate 2016: 23). After this time, the area was opened up for settlement by Europeans (Stone 2001:1-3), and on 7 May of that year, John Thomas Jackson became the first officially recorded European to purchase land at Onehunga (Eaves et al. 2013: 62). Jackson purchased a large block of land of approximately 163 acres, known as Waihihi, from two Māori, Te Tinana and Wiremu Hopihone (Murdoch 2013: 18). The area is that now occupied by the main business centre of Onehunga (Mogford 1977: 14). Subsequently, some of Jackson's lands was sold to a number of other early settlers, and following a Crown appointed investigation of land purchases from Māori made by

¹ Includes elements taken from Macready and Burnett 2014: 7.

² Map of the Harbour of Waitemata, New Zealand, and of the adjacent country shewing the situation of Auckland, the capital of the colony, and also the isthmus which separates the waters of the Frith of Thames on the eastern from those of Manukao [Manukau] on the western coast [cartographic material] from actual measurement with the chain and from a trigonometrical survey, Felton Mathew, Surveyor General, 1841. National Library.

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early settlers, a number of settlers accepted compensation for confiscated land while others held out for a number of years (Eaves et al. 2013: 62).

In 1846, Onehunga was identified by Governor George Grey as being a suitable site for a defensive outpost (Mogford 1989:11; Davenport 1990:163). The military settlement at Onehunga was planned in response to continued warfare with northern Māori groups which had culminated in the destruction of Kororāreka and several notable battles between British troops and supporters of Hone Heke (ibid.). In order to ensure the security of Auckland and the safety of settlers Grey erected blockhouses, army barracks, and established garrison towns (of which Onehunga was one) to form a line of defence between the Waitemata and Manukau Harbours (Figure 2.3). Onehunga was the first of the four military Fencible settlements founded around Auckland, later followed by settlements at Howick, Otahuhu and Panmure (Alexander 1997 cited in Eaves et al. 2013:18). Onehunga was chosen as the first Fencible settlement due to its strategic position as a port and transport hub between Auckland and the Waikato, and New Zealand and Sydney, Australia (Alexander 1997 cited in Eaves et al. 2013:18). Troops stationed at these towns were known as the Royal New Zealand Fencibles, who were recruited from discharged soldiers and military pensioners from Great Britain (Alexander 1997 cited in Eaves et al. 2013:18). In return for enlisting with the Fencibles, and with a view to encouraging permanent settlement, the government offered each soldier one acre of land (and a right of pre-emption over an additional five acres) and a cottage, which were to be made freehold at the completion of seven years of service (Alexander 1997 cited in Eaves et al. 2013:18; Mogford 1989:16).



Figure 2.3 Photograph c.1860s looking south along Hill Street, Onehunga towards Mangere Mountain, showing Ninnis's Store in Princes Street (arrow), and a military encampment (background, left). Source: Sir George Grey Special Collections, Auckland Libraries, 957-36

The first Fencibles arrived in Onehunga in 1847 and work began on erecting their cottages soon afterwards. In 1849 the second force arrived aboard the *Berhampore*, which included 88 New Zealand Fencibles and their families.³ A block of 90 acres (which included the project area) between Mt Smart Road, Manukau Road (now partially Quadrant Road), Grey Street, and Upper Queen Street (now Onehunga Mall) was surveyed by Mr Ormsby that same year; however, reduced government funds meant that despite the terms of their contracts, the new Fencibles received one acre of land, 'a plan of a single cottage and a grant of £15 to go toward building costs' (Mogford 1989:16).

³ *New Zealander*, 23 June 1849, p.2.

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In order to supplement their income, fencibles engaged in various employment activities that included road construction, farming (at Royal Oak, Three Kings and Mount Roskill, where they cultivated wheat and vegetables, particularly potatoes), clearing land of stones and building walls (Felgate 2016:26; Alexander 1997 cited in Eaves et al. 2013:18).

2.2.4 Later 19th Century European Settlement History

Onehunga's strategic position connecting Auckland to the south put pressure on ensuring that roads and other transport links to and from Onehunga were developed and continued to be enhanced throughout the 19th century (see e.g., ACHU 2013: 46ff). Access roading, rail and water meant that trade goods flowed through the important hub servicing south Auckland.

The population in Onehunga expanded from its original military fencibles and, following economic recession in the 1860s, a range of commercial and private buildings were constructed during the 1870s onwards. The growth in population resulted in improved infrastructure, churches and schools and by the early 20th century the population was over 3000. Difficulties with the Manukau Harbour sailing and the completion of the North Island Main Trunk rail line placed limits on the expansion of the port facilities during the 20th century, but suburban and light industrial works continued to grow (ACHU 2013:19-20). This trend has continued throughout the 20th century, with open areas now almost completely infilled.

Foreshore reclamation and infilling of Te Hōpua ā Rangi (Geddes Basin) following a history of landfill and water management activities have changed the area significantly. The connections through Onehunga to the south and east of Auckland remain crucial and subject to constant attention and development.

A summary timeline of Onehunga history is available in ACHU (2013: Appendix 1b) and the report contains a summary of heritage sites in Onehunga and a list of references relating to that heritage.

2.3 Site History

The site comprises Allotments 12,13,14, part 15, 18 and 19 of Section 20 village of Onehunga (Figure 2.4). The modern street numbers equate with these allotments as follows:

- 19 Princes Street (Stone Store) = Parts of Allotments 14 and 15
- 17 Princes Street = Parts of Allotments 13 and 14
- 15 and 13 Princes Street = Allotment 12
- 13 Wharangi Street = lot 2 of Allotments 12 and 13
- 11 Wharangi Street = Allotment 18
- 9 Wharangi Street = Allotment 19.

The site is a portion of Waihihi Block Onehunga, which was initially sold in 1844 for £2, a horse, saddle and bridle by Wiremu Hopihona (William Hobson) to Thomas Jackson – Land Claim No 339 – and subsequently taken by the Crown. The 163 acres began at the foot of Princes Street, ran north to Grey Street, then east to Alfred Street, then due south to Waikaraka Bay. The

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shoreline back to the foot of Princes Street formed the southern boundary.⁴ A map dated 1853 shows the approximate extent of this block and also the original shoreline, which extended into the extreme southeast corner of the property in Allotments 18 and 19 (Figure 2.5). The proximity of the beach would have added to the value of these properties.

2.3.1 Early Princes Street

In 1847, Onehunga Beach – that portion which lies between the foot of Princes Street and the commencement of Normans Hill Road to the northwest – was the main trading centre of Onehunga. All types of vessels (ketches, cutters, barques, schooners) which traded in and out of the Manukau Harbour, came to load or unload their cargoes on the shell bank fronting the Beach. Māori canoes came regularly, loaded with farm produce from the Waikato basin. A survey of produce brought by canoe between 1852 and 1858 records that over 6,000 kits of potatoes, 2,000 kits of maize, nearly 900 kits of peaches and 13 tons of flax were landed at Onehunga. A Māori hostel provided overnight accommodation for canoe crews and seems to have been used as a meeting place for the settler community (see Figure 2.6 and Figure 2.7). In October 1854, a meeting was held there to hear Edward Gibbon Wakefield discuss planned settlement and urge people to resist the unlawful sale of Māori land.⁵

The village was growing to the north, east and southeast and soon the Beach was unable to provide accommodation for the expanding trade within its narrow bounds. By 1848 businesses were being set up in Princes Street, and when a disastrous fire in 1849 destroyed all the buildings on the Beach, Princes Street took over as the centre of commerce.

Mr Edward George was probably the pioneer of Princes Street. He opened the Royal Hotel in the lower part of the street on 1 July 1848. Other businesses were soon established and by 1850 the Beach had been ousted from its leading position by the merchants of Princes Street. In the year 1856 Princes Street housed the Bank of Auckland (the building still stands near the corner of Hill Street), two hotels (the Royal and Exchange), three general storekeepers, a builder, boot and shoemaker, butcher, ship chandler and ironmonger (Captain William Davies), two bread and biscuit makers, a ship builder, hairdresser and barber, a weekly newspaper (*Manukau Advocate*), a watchmaker, a draper, and a firm of general smiths. Figure 2.7 and Figure 2.8 show some of these buildings along Princes Street in the 1860s.

In the same year (1856), several business houses had also been established in Queen Street (Alexander n.d.: 40 cited in Eaves et al. 2013). The road inland up Normans Hill was steep, and it was perceived that a much easier route to Auckland would be Queen Street, if only the huge volcanic rocks were removed. This work was done by public subscription and community effort in 1861. As soon as traffic was diverted to Queen Street, enterprising businessmen began to erect buildings in the main thoroughfare. Shop owners in Princes Street saw the importance Queen Street would acquire, as cartage firms showed their preference for the new highway with its gradual ascent from the wharf to the Royal Oak corner (ibid.). Princes Street lost its commercial importance. Nevertheless, Princes Street continued to have light manufacturing businesses (woodturning, a blacksmith and two hotels as well as domestic dwellings) until light industrial concerns arrived in the early 1960s.

⁴ Mitchell Papers NZSM 531 Box 2.

⁵ Mitchell Papers NZSM 531 Box 2 Onehunga notes.

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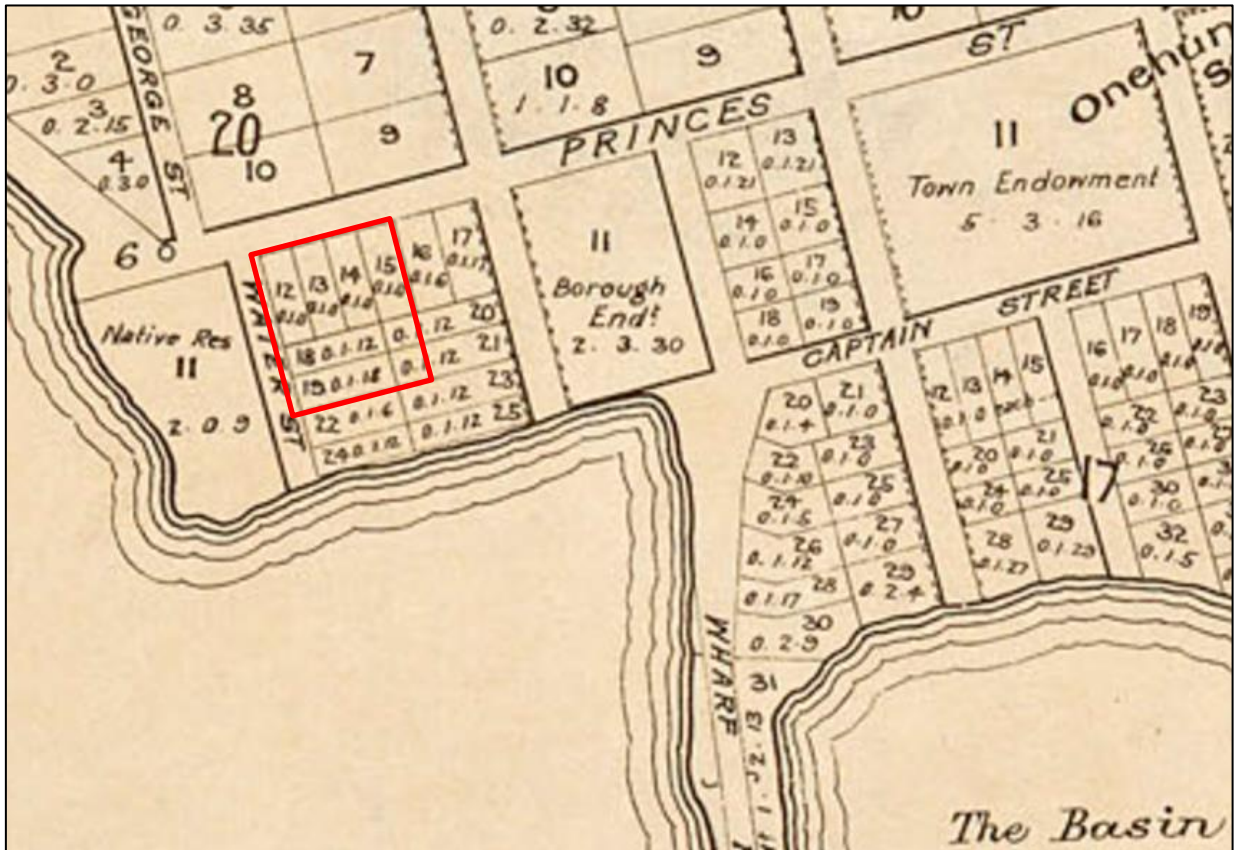


Figure 2.4 NZ Map 2673 dated 1906, showing the original allotment numbers of the properties within the project area. NB. Water Street is now Wharangi Street. Source: Sir George Grey Special Collections, Auckland Libraries, NZ Map 2673



Figure 2.5 Detail from a Royal Navy survey of the Manukau Harbour dated 1853, which depicts the original layout and shoreline of Onehunga. The block containing the property is marked with an arrow. Source: Sir George Grey Special Collections, Auckland Libraries, NZ Map 890

2. Background

2.3.2 Allotment History

Captain James Ninnis received a Crown Grant of Allotments 13,14, 15, 16 and 17 in January 1854 (see Figure 2.6). Allotment 12 was granted to Meade, who immediately onsold it to Ninnis. Captain Ninnis owned the Princes Street frontage from Hill Street to Water Street (later Wharangi Street).⁶ His property extended southward to the original curve of the shoreline. He built the still existing ‘Stone Store’ and several other cottages and outbuildings. In late 1861 his house and grounds as well as three cottages and lots ‘adjoining the residence of Captain Ninnis, on the side next to the beach’, were for sale.⁷ A more extensive description appeared in the *Daily Southern Cross* on 11 February 1862 that demonstrates Captain Ninnis’ development of the site:

‘These Properties are situated in the most valuable part of Onehunga, and constitute the Corner block adjoining the residence of Capt. NINNIS, on the side next the Harbour, having an equal depth of 82 feet, 6 inches.

Lot 1, immediately adjoining Capt. Ninnis’ house and has upon it a snug Cottage, with fenced yard, now occupied, and in good condition.

Lot 2 next to the above has a similar frontage of 36 feet to the street, and a small cottage thereon with double rows of fencing, and large yard.

Lot 3 is a valuable Corner Lot with frontage to the Harbour of 82 feet, and to Princes-street of 60 feet. A large Mechanic’s Shop and Smithy is erected upon the immediate corner; roomy out-buildings, stables, &c., stand upon the opposite inner extremity.

Lot 4 – 41 feet frontage to Water-street and the Harbour, with full depth of 120feet.

Lot 5 – 41 feet frontage to Water-street and similar.

Lot 6 – 41 feet frontage to Water-street and similar depth; has a Cow-shed on the corner adjoining the property of Mr Rout, all fenced.⁸

It is not clear from this description whether all of these lots were within the property in question. All properties apparently make up a corner block ‘on the side next the Harbour’, but whether this means the Beach to the west or the waterfront immediately to the south (see Figure 2.6) cannot be established without further research on the properties to the east. Some of the lots, however, are along Water (Wharangi) Street, implying that this was the corner block at the junction of Princes and Wharangi Streets (the current area of interest), extending from Captain Ninnis’ residence (the Stone Store?) to Water Street and then down Water Street.

⁶ Index 4A 238.

⁷ *Southern Cross*, 29.11.1861, p.2.

⁸ *Daily Southern Cross*, 11 February 1862, pp.1,2.

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Figure 2.6 Detail from Plan SO683 (undated), showing Allotments 13-17 along the Princes Street frontage granted to Captain Ninnis (circled) and Allotment 12 granted to Meade. Note also the shoreline running diagonally through the block (arrowed), and the Native Hostelry located to the west. Source: LINZ

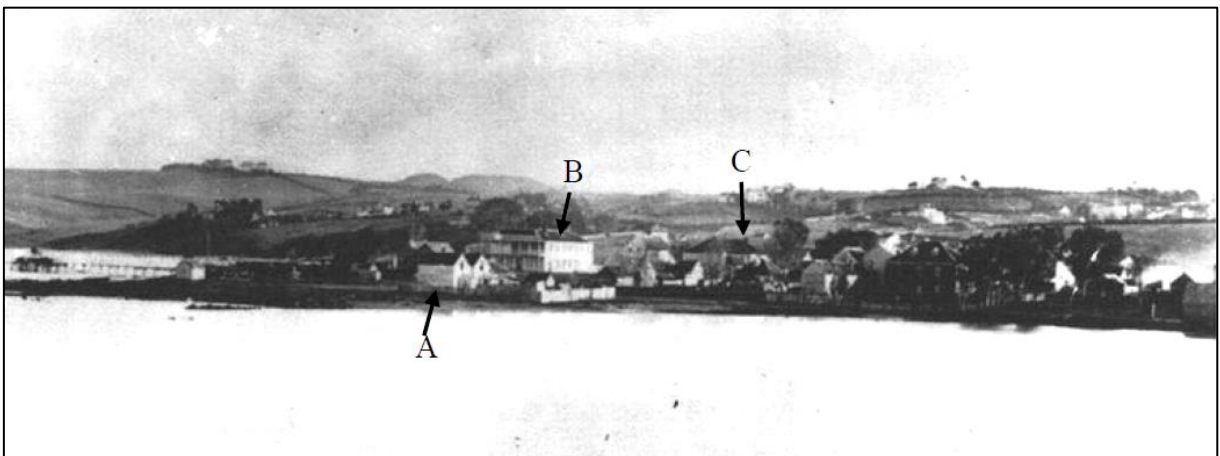


Figure 2.7 Photograph dated c.1860, looking northeast towards Onehunga, showing the Māori Hostel (A), the Royal Hotel (B) and Stone Store (C). Source: Sir George Grey Special Collections, Auckland Libraries, A3425

2. Background

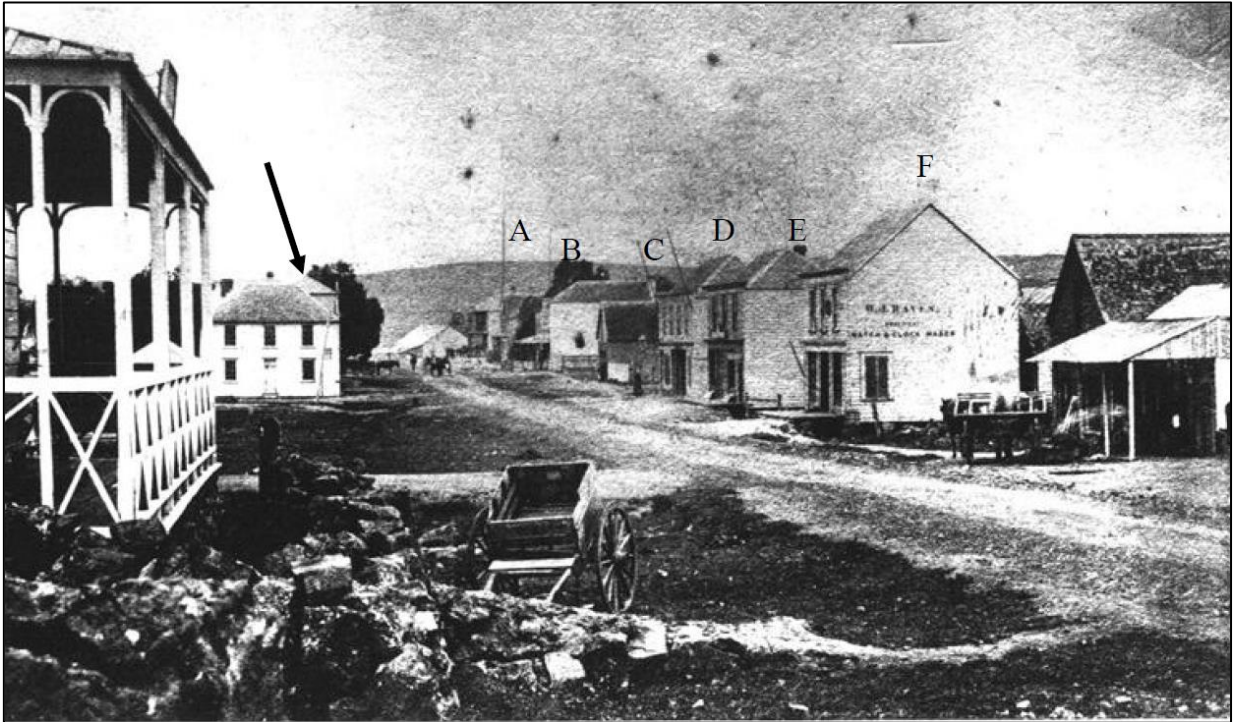


Figure 2.8 1866 photo by Richardson, looking west along Princes Street showing buildings on the northern side of the street. The Stone Store on the southern side is arrowed. Identified buildings on the north are: Royal Hotel (A), N. Spaulding's drapery (B), W. & M. Kelsall's bakery (C), the Exchange Hotel (D), the old Bank of Auckland (E), and W.J. Raven, watchmaker (F). Source: Sir George Grey Special Collections, Auckland Libraries, 4-952

2.3.3 Captain Ninnis

Captain James Ninnis, a mining engineer, was a notable figure in the early history of the Auckland province and had commercial interests in many parts of the province and beyond. Brought out from Cornwall in 1846 by the North British Australasian Company to manage the recently established copper mine on Kawau Island, he was the first occupant of the Mine Manager's house which later formed the core of Mansion House. He moved to Onehunga in the 1850s and remained there for some years, carrying on a warehousing and engineering business, eventually retiring to Waiuku, where he died in 1879. He was the father of 18 children (Salmond Architects 1992).

He had also been involved in copper mining on Great Barrier Island, coal mining at Waihoihoi, gold mining in the Coromandel, flax production (filing and receiving a patent in 1860) and had operated slaughterhouses on the beach at Onehunga and in Panmure (NZHPT 2012).

2.3.4 Former Buildings on the Property

The growing importance of Princes Street over the next decade can be seen in an 1872 photo taken by the owner of the Auckland Store, William Crawford (Figure 2.9). It shows six buildings along the Princes Street south frontage up to Water (Wharangi) Street from (and including) the Stone Store.

2. Background



Figure 2.9 1872 photograph by William Crawford, looking west along Princes Street. The Stone Store is shown on the left (A), adjacent to W.F. Crawford's Auckland Store (B). Between the Auckland Store and Water (Wharangi) Street are four more buildings: Captain Parnall's house (C), the Brindell family house (D), a house built by Captain W. Davies (E), and an unidentified house (F). Source: Sir George Grey Special Collections, Auckland Libraries, A16903

2.3.4.1 The Stone Store

The Stone Store was an imposing two-storied structure built by Captain Ninnis in the 1850s using the local volcanic bluestone. It is thought to have been designed by Walter Robertson, a Sydney architect who also designed the Smelting House on Kawau Island (Salmond Architects 1992: 7 and 20, citing *NZ Journal*, but no date provided). It was originally intended as a hotel but the license was refused, perhaps because the Royal Hotel, close by on the other side of the street (see Figure 2.7 and Figure 2.8), had been established in 1848, and perhaps also because of its proximity to the market where Māori sold their produce and to the neighbouring Māori Hostel.⁹ It was used as a general store (Mogford 1989:117) and was probably Ninnis' own residence as well. In 1861 the building was advertised for lease:

'The House is well built of Scoria, and contains 16 rooms, while extensive and costly building ground adjoining has been handsomely laid out as a Garden and Pleasure Grounds.'¹⁰

⁹ A similar proximity of hotel and Māori Hostel in Commercial Bay had been objected to by Māori.

¹⁰ *Southern Cross*, 19.11.1861, p.1.

2. Background

A Mr Aitken bought the property in 1862 and leased it to Grahame. During the New Zealand Wars of 1863-65 it is reputed to have been used as a Commissariat for provisioning the troops in the Waikato and as a hospital for the wounded. In later years the building became a peg factory and then a joinery works (Alexander n.d.:48 cited in Eaves et al. 2013).

2.3.4.2 Auckland Store

The building is thought by Mitchell to have been constructed by W.F. Crawford in 1855.¹¹ Crawford had formerly been in business in Auckland and moved to Onehunga in 1855, after which he built the Auckland Store. He dealt in groceries, ironmongery lines and men's tweeds. When business started to move from Princes to Queen Street from the mid-1860s his business dwindled. Crawford closed his business in 1871.¹²

The premises were taken over by Charles Hooper Green, a butcher whose wife was the eldest daughter of Captain James Ninnis. Ten years later Green took over Thomas Collins' grocery shop in the two-storied building which stood on the corner of Princes and Water Streets. He neglected his butchery in this building, and it disintegrated to a state of poor repair.¹³

2.3.4.3 Captain Parnall's House

Captain Parnall's tall house appears in William Crawford's 1872 photo (Figure 2.9) to be attached to the Auckland Store. Parnall built the house and established a coal and firewood business in the rear in 1855.¹⁴ On this rear lot (this would be rear west portion of Allotment 14) the Māori war canoe Te Toki a Tāpiri (the axe of Tāpiri) rested for some time after the end of the Waikato War. Captain Parnall, who was the Company Commander of the Onehunga Naval Volunteers, was the leader of the expedition in the *Lady Berkley*, which in July 1863 made a sudden swoop on the creeks and bays and inlets of the southern shore of the Manukau Harbour – Papakura Channel – to seize Māori canoes which might have been used by insurgent tribes to launch a raid on Auckland after having attacked Onehunga or by-passing it by way of the Whau portage route. A great fleet of canoes, of which Te Toki a Tāpiri was the largest (it could carry 100 fighting men), was captured and towed to Geddes Basin at Onehunga. Lt General Sir Duncan Cameron ordered that all the canoes be destroyed. However, prominent local men urged the General to exempt the famous Te Toki a Tāpiri. He reluctantly agreed and it was given to the care of Captain Parnall and the Collector of Customs Mr C.N. Brewer. After the war, the canoe was transferred to the Auckland Museum.¹⁵ Plan 2555 dated 1935 (Figure 2.10) shows a wooden house owned by A.M. Abrams on this site.

¹¹ However, the date does not tally with the 1862 advertisement for the sale of Ninnis' properties (quoted above), which appears to state there was a cottage on this site.

¹² Figure 2.6, however, is dated 1872 by the Auckland Libraries. It may have been taken at the time of sale.

¹³ G. Mitchell, Auckland Scrapbook August 1963-December 1963, pp.283-284.

¹⁴ Again, this date comes from G. Mitchell and does not tally with the 1862 ads, which mention a small cottage.

¹⁵ Auckland scrapbook August 1963 – December 1963, pp.283-284.

2. Background

2.3.4.4 Other Buildings

The small single-storied house next door to Captain Parnall's house (Figure 2.9) belonged to the Brindell family.¹⁶

Captain William Davies built the house with the verandah (Figure 2.9) in 1852,¹⁷ and it was said to be the first house to boast such an adornment in Onehunga. However, he did not purchase Allotments 12 and 13 until 1863,¹⁸ and must have leased the property if the date of construction is correct. Captain Davies ran a ship chandlery business in Water Street (Wharangi Street). He also dug a well which was available to shipping as well as the local population.¹⁹ It is not known where this was, but it is possible that it was on the southern portion of Allotments 12 and 13, with entry from Water Street.

Mr Douglas had a bakery on the premises with the ovens at the rear of the property.²⁰ In 1881 Mr John Boland, blacksmith, bought the house and the one next door. The house is shown on Plan 52360 dated March 1962 (Figure 2.10) and was demolished in 1965 to make way for Wilsons tile factory. It was 123 years old.

The builder of the two-storied house on the corner of Princes Street and Wharangi Street (Figure 2.9) is unknown. It was bought by John Boland (with the Davies house next door) and sold for removal in 1881. He established a blacksmith's forge on the site. There may have been an earlier smithy on the property, as the 1861 lease advertisement (see above) refers to a smithy on the 'immediate corner'. If it was on this rather than the north-eastern corner of the block, it had evidently been replaced by the house by 1871.²¹ Boland is reputed to have been a teller of fanciful stories involving leprechauns and shrieking banshees. In 1909 John Boland owned Allotments 12 and 13 and divided the southern portions to form a third lot. He gave the house and the Wharangi Street section to Mary, his wife.²² Mitchell notes that in 1955 the smithy had been demolished but the house was still standing.²³

¹⁶ Auckland scrapbook August 1963 – December 1963, pp.283-284.

¹⁷ Auckland scrapbook August 1963 – December 1963, pp.283-284.

¹⁸ Index 4A 238.

¹⁹ Auckland scrapbook August 1960 – October 1960, pp.278-279.

²⁰ Auckland scrapbook August 1963 – December 1963, pp.283-284.

²¹ *Daily Southern Cross* 11 February 1862. pp.1,2.

²² R157.281.

²³ G. Mitchell Box 4(a) Onehunga notes.

2. Background

2.3.4.5 Later Development

Water Street (Wharangi Street) appears to have remained residential until after World War II. Apart from a reference by G. Mitchell (1963) to Captain Davies' ship chandlery business, and the smithy on the corner, no source has mentioned commercial activities here before the war. The 1924-25 Directory for Auckland listed six properties on the east side of Water Street which appear to be domestic dwellings, except perhaps for Norman Simms, Bootmaker.

The 1935 plan (DP 25555, Figure 2.10) shows the stone store surrounded by a wooden building. The southern boundary is shown as Manukau Harbour, and the spring tide line extends into the eastern part of Allotments 18 and 19 (now the south-eastern corner of 19 Princes Street and 9 Wharangi Street respectively). The line of an 'old stone wall' (the old sea wall) is also shown along the eastern boundary of Allotment 18. The plan also shows a wooden shed on the southern end of Allotment 14.

Mitchell (in undated notes c.1960) states that Matthew Simes lived at No. 9 Wharangi Street and that his wife was formerly Miss Nealio.²⁴ However, by 1962 a plan (DP 52320, Figure 2.11) shows a large concrete building at No. 9 and factory buildings (Jandals Ltd) at 11 and 13 Wharangi Street rather than residences. A wooden house is still present at 15 Princes Street, while the Stone Store property and area to the south and west are now owned by Security Buildings Ltd.

²⁴ Auckland Directory 1924-1925 p.342.

2. Background

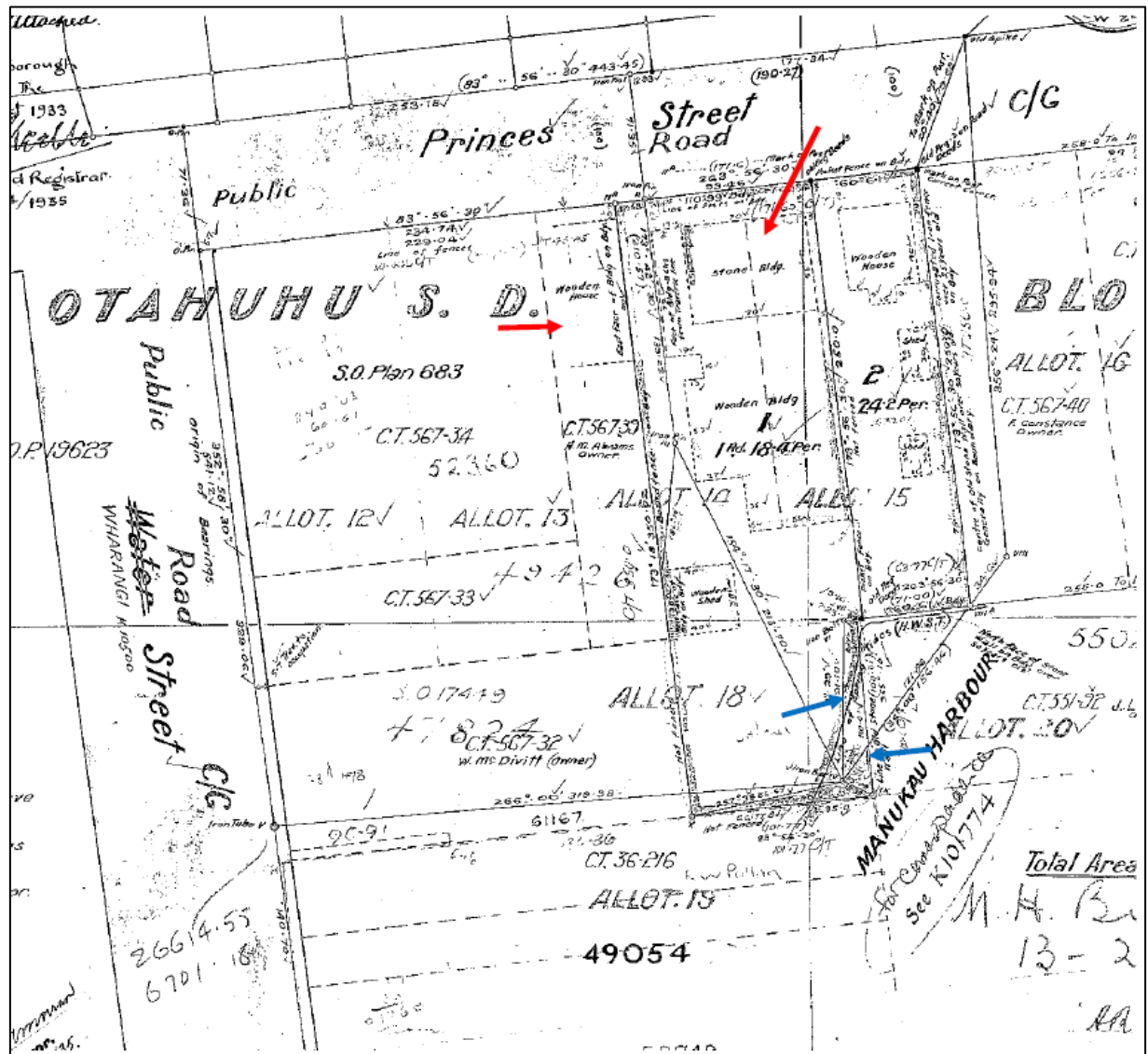


Figure 2.10 Detail from Plan DP 25555 dated 1935, showing 'stone building' and 'wooden house' (red arrows), and 'Line of spring tides' and 'Line of old stone wall' (blue arrows, left and right respectively). Source: LINZ

2. Background

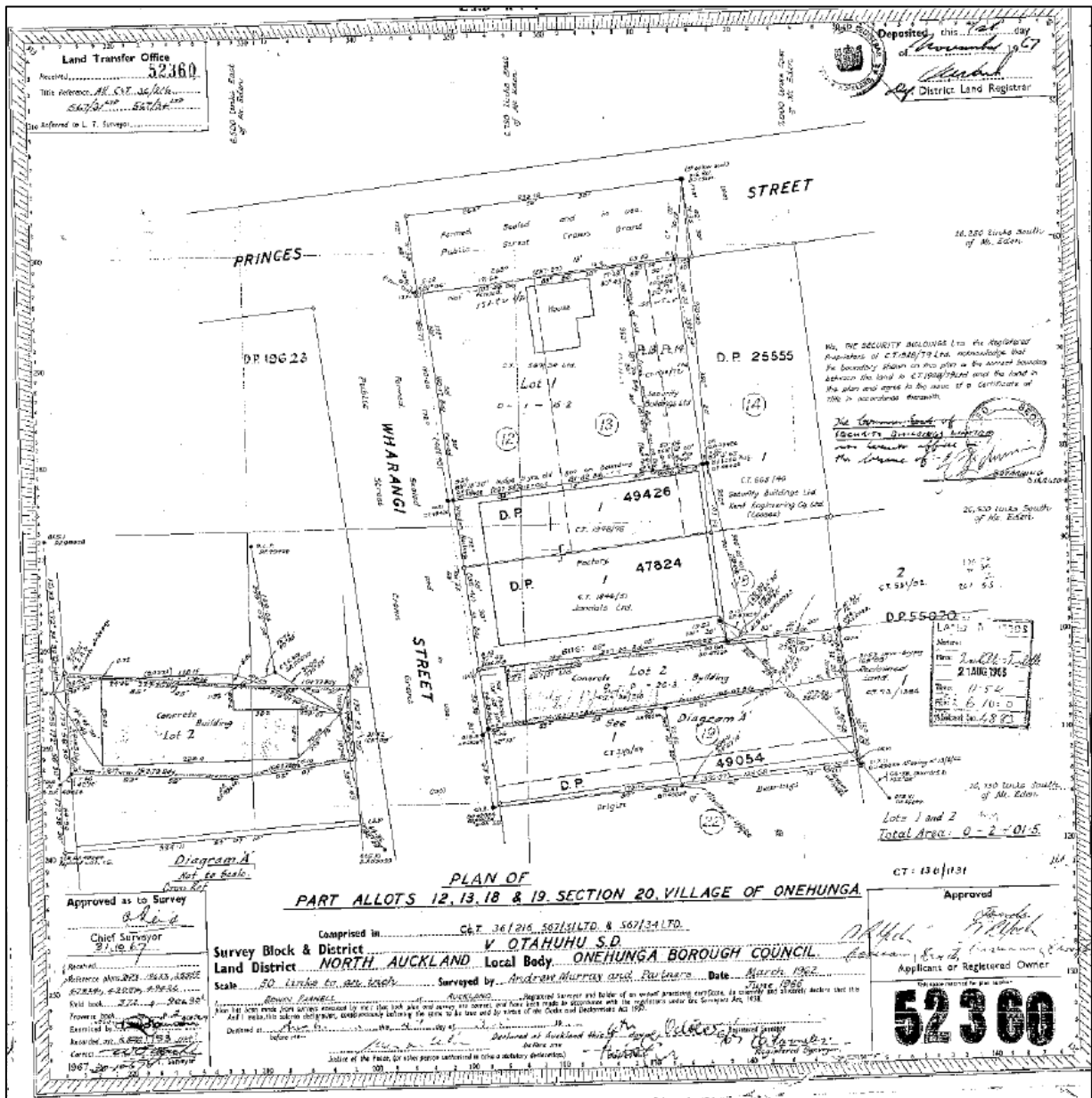


Figure 2.11 Plan DP 52360 dated 1962, showing 'House' at 15 Princes Street (Allotment 13) and Jandals Ltd factories at 11-13 Wharangi Street (Allotments 18 and parts 12 and 13). A concrete building occupies 9 Wharangi Street (Allotment 19). Source: LINZ

2.4 Summary

Overall, the results of the background research suggested the likelihood that archaeological remains of the 19th and 20th century businesses and residences were likely to remain on the property. This included the blacksmiths, bakeries and activities associated with the quarrying of stone. There was also a possibility of finding earlier evidence of Māori occupation and use of the foreshore.

3 GEOPHYSICAL SURVEY

3.1 Introduction

On 24 May 2011, ScanTec Ltd undertook a geophysical survey of an area of land immediately to the west of the Stone Store. The survey undertaken by Matt Watson consisted of Ground Penetrating Radar (GPR) and gradiometer (magnetometer with two sensors) measurements on a relatively flat, vacant, tar seal and concrete site of approximately 50m x 15m area (Figure 3.1). The equipment included an SIR-3000 GPR control system with 400MHz frequency antenna, and a GEM systems GSM-19-WG gradiometer.

All distances were recorded using 50m survey tape measures. For the GPR survey, the sampling interval utilised was 100 scans per metre with a parallel traverse interval of 0.5m. Processing was undertaken with RADAN 6.6 software. Processing algorithms included HP and LP FIR acquisition filtering, horizontal filtering, stacking, gain adjustments, construction of 3D data block and depth/time slicing. The gradiometer data was processed in custom software and involved manual data editing, assessment/reduction of interference levels, and gridding (kriging) in SURFER software. Full details are provided in Watson 2011, with the results summarised here based on Shakles and Clough (2011).

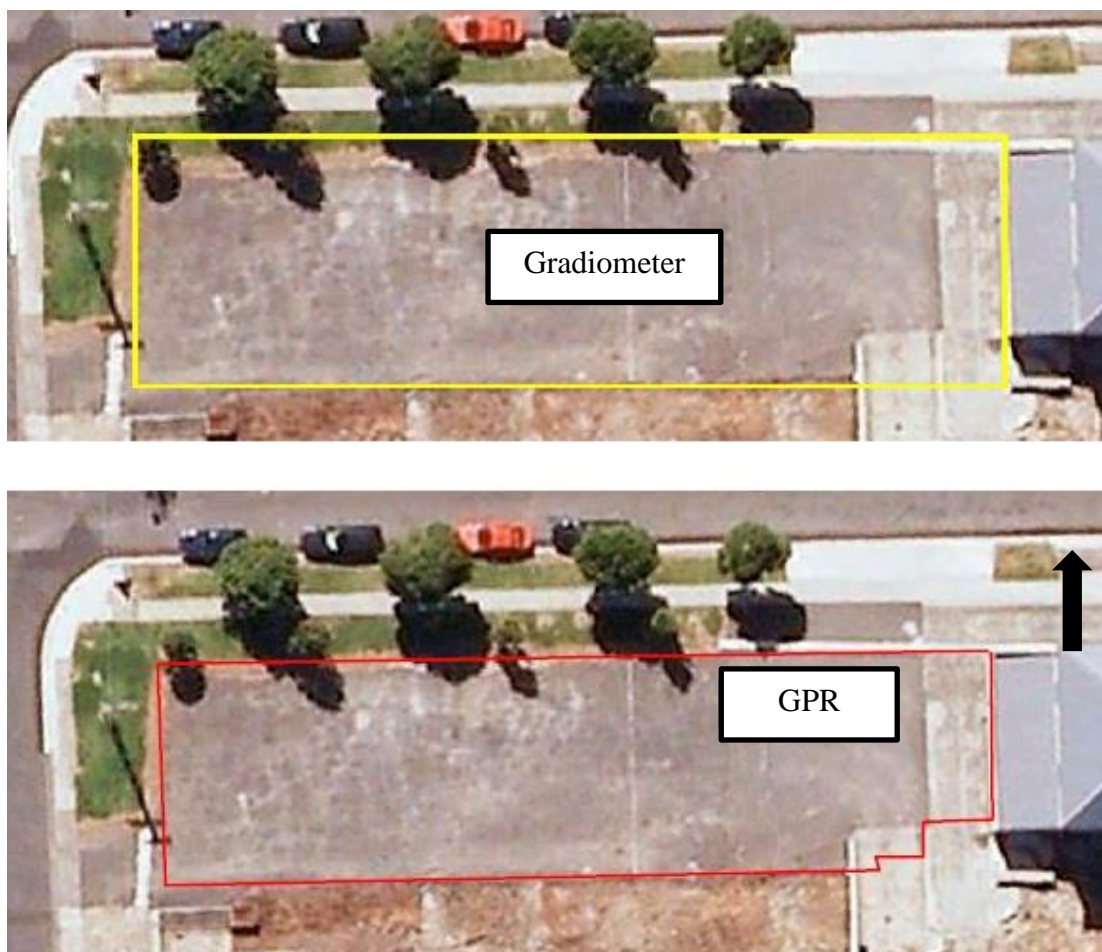


Figure 3.1 Location of GPR and gradiometer surveys at Princes Street, Onehunga

3. Geophysical Survey

3.2 GPR Survey Results

All result plans show north as down.

3.2.1 GPR Depth Slice 0.2m

The GPR depth slice at 0.2m (Figure 3.2) illustrates small variations in the signal intensity possibly consistent with variations in moisture content at surface level, or changes in the concrete/tar seal. There were some areas of standing water across the site due to recent rainfall prior to the survey. Modern services are also seen to the west and north of the site (lower and right-hand side of the image). An area of high intensity located on the southern boundary of the site approximately between 40m and 43m and about 1m wide may indicate the presence of metal close to the surface.

3.2.2 GPR Depth Slice 0.35m

The GPR depth slice at 0.35m (Figure 3.2) indicates similar variations in intensity levels, due to variation in subgrade aggregates and moisture content. Modern services are also seen to the west and north of the survey area. The area of high intensity located on the southern boundary of the site approximately between 40m and 43m is still visible but slightly reduced in size.

3.2.3 GPR Depth Slice 0.50m

The GPR depth slice at 0.50m (Figure 3.3) indicates several anomalies which may be related to former structures on the site. These are:

1. Anomaly A – High intensity anomaly indicating the presence of open air/void and/or metal. Would be consistent with the response of a well.
2. Anomaly B – Low intensity anomaly, possibly indicating building foundations and/or an excavation and subsequent backfilling with different or mixed material.
3. Anomaly C – Low intensity anomaly, possibly indicating building foundations and/or an excavation and subsequent backfilling with different or mixed material. The dashed lines across this feature may indicate an excavation and the subsequent backfilling with different and/or mixed material. This approximately matches the known route of drainage easement works that took place in 1981.
4. Anomaly D – Low intensity anomaly, possibly indicating building foundations and/or an excavation and subsequent backfilling with different or mixed material.
5. Anomaly E – A small (approximately 2m x 0.5m) high intensity anomaly. This may indicate an open air/void and/or metal. Possibly consistent with the base of a chimney flue.

3.2.4 GPR Depth Slice 0.75m

The GPR depth slice at 0.75m (Figure 3.3) illustrates the continued presence of the anomalies listed above with the further addition of a small high intensity anomaly (Anomaly F) like Anomaly E and also possibly indicating metal or a void such as could be found in the foundations of a chimney.

3.2.5 GPR Depth Slice 1.00m

The GPR depth slice at 1m (Figure 3.4) shows a lesser response from Anomaly A, a much subdued and sporadic response from Anomaly B, a weaker response from Anomalies C and D, while E and F are stronger. Immediately either side of Anomaly E (to the north and south) are two uniform areas approximately 1.75m x 1m displaying a stronger response than the surrounding Anomaly D. In conjunction with Anomaly E these areas may possibly indicate foundations such as could be associated with a large 'back to back' chimney.

3.2.6 GPR Depth Slice 1.50m

At a depth of 1.5m (Figure 3.4), Anomalies B, C, and D are completely absent. Anomaly A is still present, but much reduced in size and intensity and this may be due to multiples (reverberation effects) from the strong reflections observed between 0.5m and 1m depth over this feature. Anomalies E and F are still present with much the same intensity response as seen at 1m depth.

3.3 Gradiometer Survey Results

Magnetometer measurements involve very precise measurements of the earth's geomagnetic field. This is a 'passive' technique where no energy is sent out by the magnetometer. Instead, values of the magnetic field are measured at a very high resolution. Figure 3.5 shows the processed magnetic data presented as a grey scale image above a graph of the magnetic total intensity levels recorded at the site in nano-Tesla (nT). This demonstrates the very high levels of interference observed at this site. For an urban site, it is not unusually 'noisy', but would be typical of most streets in urban areas of Auckland. With the extensive levels of interference during the survey, and subsequent 'noise' in the acquired data, no interpretation of subsurface features is possible.

3. Geophysical Survey

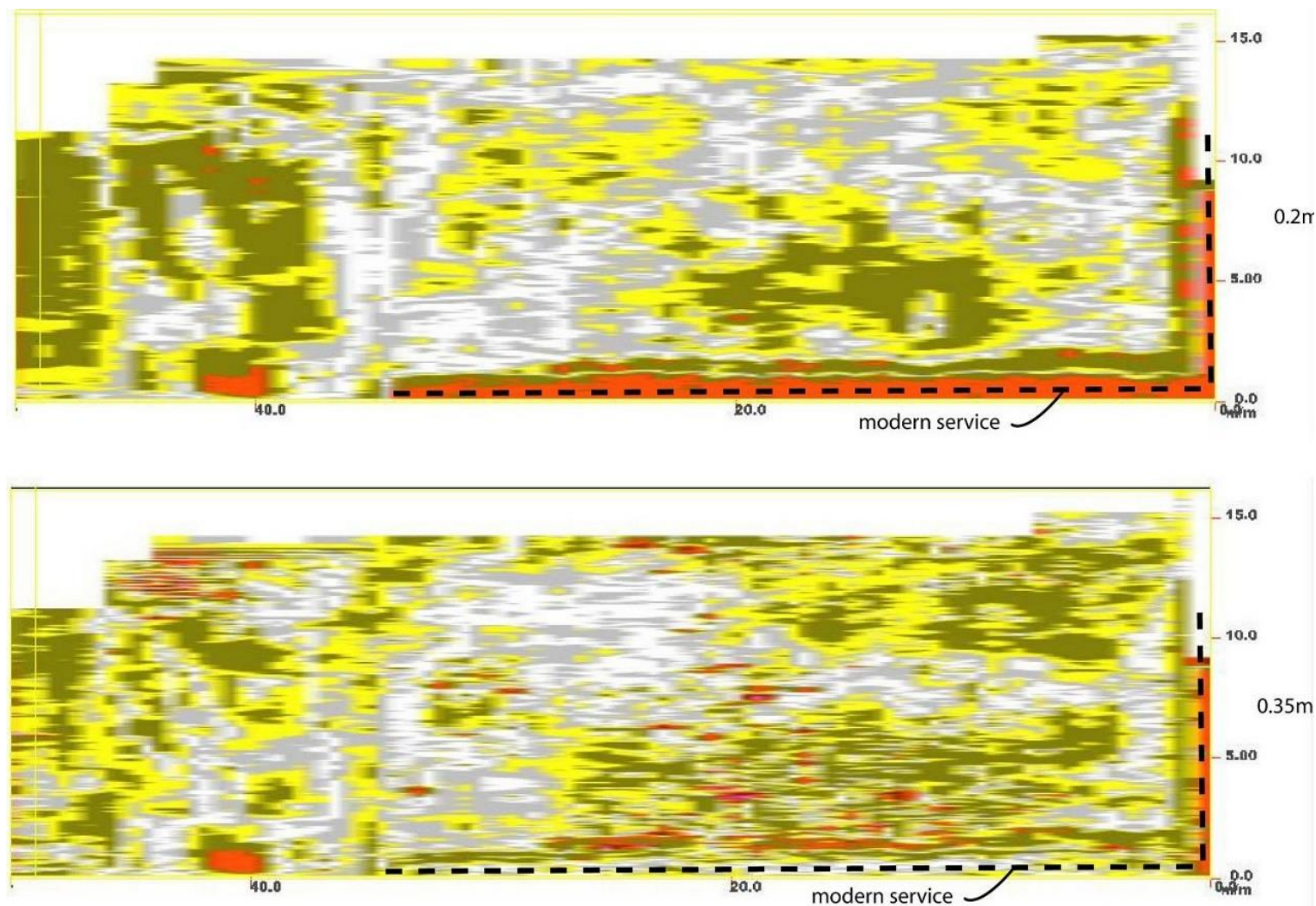


Figure 3.2 GPR depth slices at 0.2m and 0.35m (plans oriented with North at bottom of image)

3. Geophysical Survey

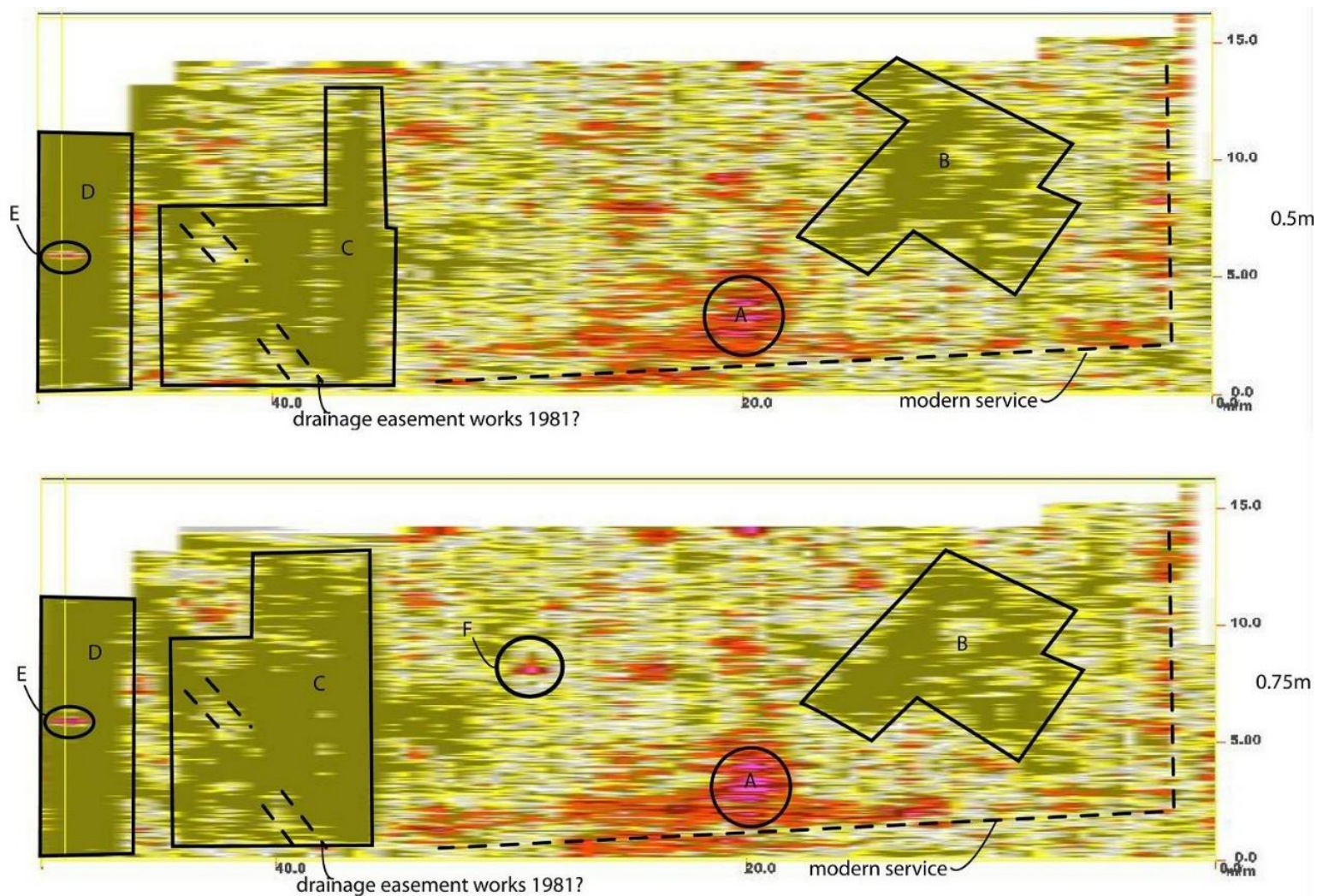


Figure 3.3 GPR depth slices at 0.5m and 0.75m (plans oriented with North at bottom of image)

3. Geophysical Survey

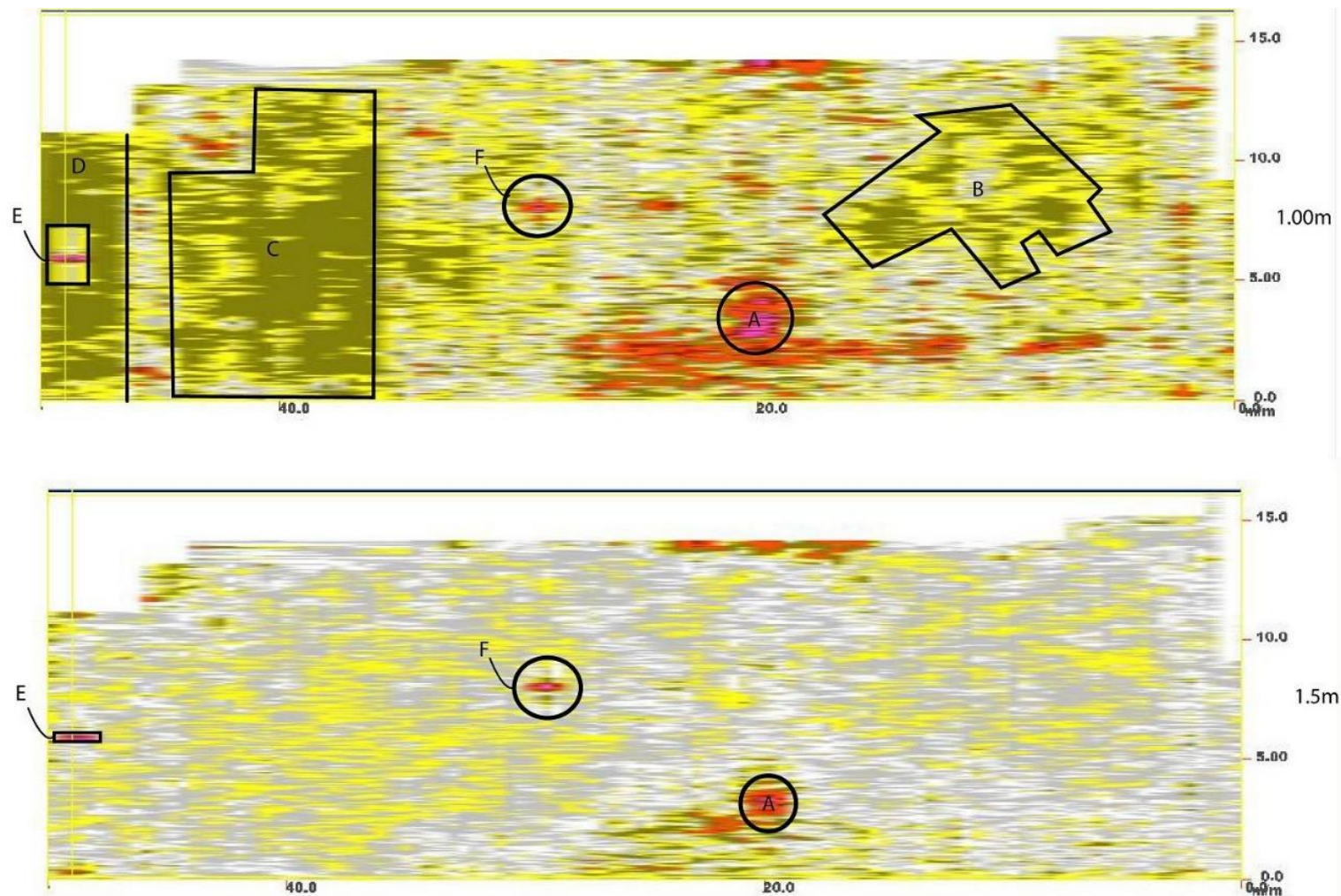


Figure 3.4 GPR depth slices at 1.m and 1.5m (plans oriented with North at bottom of image)

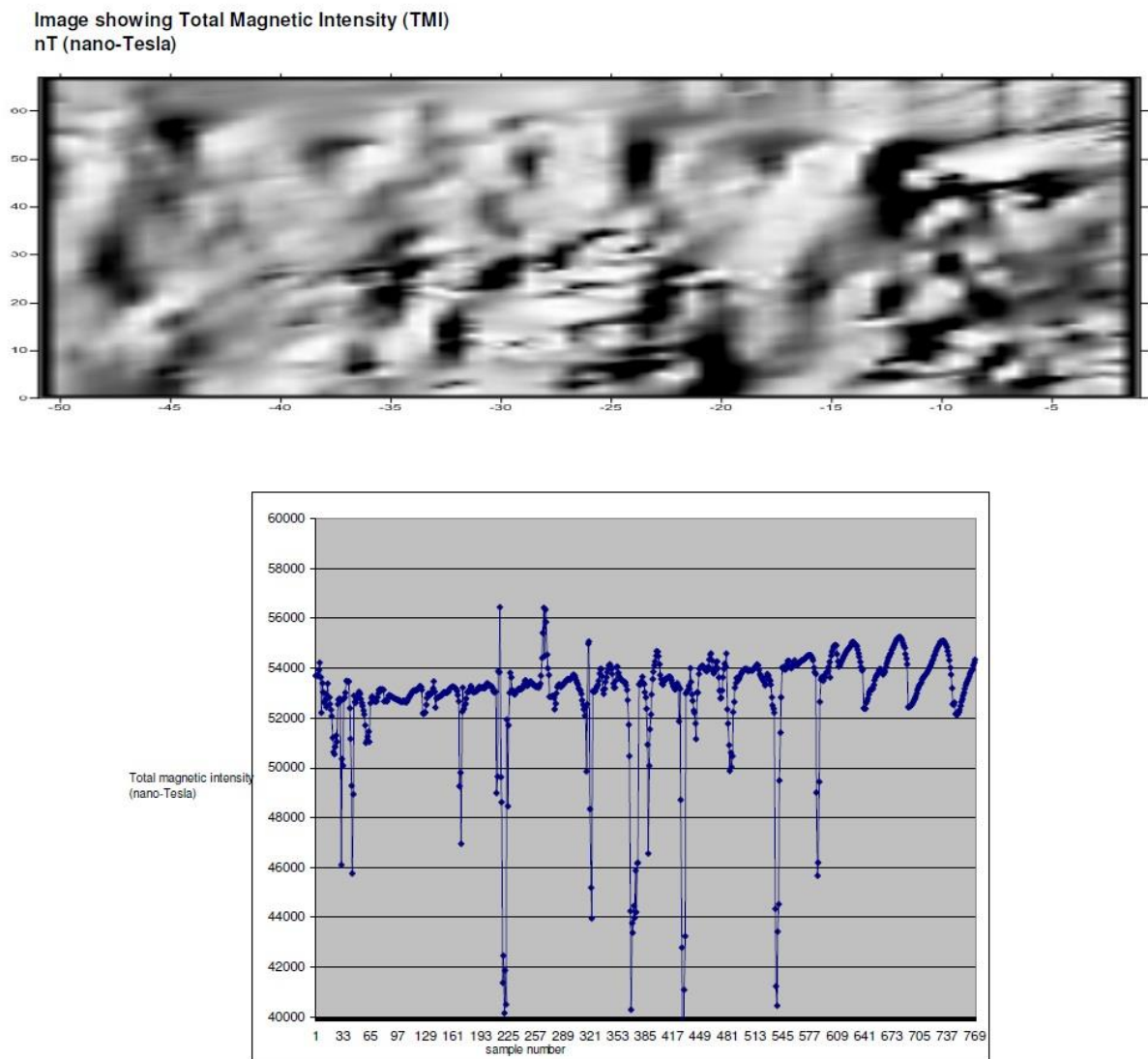


Figure 3.5 Grey scale image of the gradiometer data (oriented with North at bottom of image) and graph of magnetic total intensity levels from the magnetometer survey

3.4 Comparison of the GPR and Gradiometer surveys

There are a number of reasons why the GPR survey of the Princes Street site was successful in identifying subsurface anomalies, whereas the gradiometer survey failed to acquire any usable data. These reasons are primarily and in no particular order:

- Magnetic (and resistivity) survey over tar seal or paving is possible only in exceptional circumstances and in relatively unusual conditions, where no elements of the surface are magnetic (English Heritage 2008:15). This was not the case with the survey site, where basalt chippings within the tar seal comprising the carpark surface were observed. In contrast, both concrete and tarmac surfaces are conducive to the use of GPR (English Heritage 2008:29).

3. Geophysical Survey

- There was a significant amount of metallic contamination across the survey site. This included: a chain link fence with steel waratahs along the southern boundary of the survey area; overhead power lines situated to the immediate east and west of the survey area; motor vehicles; steel objects embedded within the carpark tar seal (especially in the eastern part of the area); while nails and washers were found across the site. These last were removed prior to survey, but presumably they were also concealed along the margins of the survey area.
- The thermoremanent effects of the underlying geology (magnetization that igneous rocks acquire as magmas or lavas cool) can prohibit survey over certain rock types such as basalts (English Heritage 2008:15). At Onehunga, the solid geology underlying the site comprises basaltic lava flows of the Auckland Volcanic Group. Basalt contains the mineral magnetite, which is highly magnetised. This also causes a large disturbance of the geomagnetic field. It is also possible that this type of aggregate was used as a basecourse beneath the carpark site, due to the local aggregate sources in this area, further exacerbating the problem.

It is perhaps no surprise that it was not possible to interpret the data acquired via the gradiometer survey when a professional body such as English Heritage have noted that: ‘The depth and complexity of most urban stratigraphy, closely constrained by modern intrusions, metallic contamination, services and adjacent structures, provides a near insuperable deterrent to successful geophysical survey’ (English Heritage 2008: 14-15). It should be stated, though, that an exception to the rule is where the object of a survey is to detect features associated with industrial archaeology, which are often characterised by distinctive and strong anomalies (English Heritage 2008: 13-15).

3.5 Summary

Two geophysical techniques were used at this site: Ground Penetrating Radar (GPR) and a magnetic gradiometer survey. Due to the excessive interference from above ground features and the subsequent ‘noise’ in the data, no analysis of subsurface features could be made from the magnetic survey data collected at this site. However, the GPR survey identified several anomalies in the 0.5 to 1.5m depth range.

It was thought possible that these anomalies might relate to previous construction, earthworks, occupation and/or associated activities at the site. Some of the anomalies were observed as being present in the depth slices for approximately 0.75m-1m and as such may have indicated the potential for surviving building foundations such as the base of chimneys and structures such as wells. These might well relate to the former Auckland Store (Anomalies D and E) that was located next door to the stone store; Captain Parnall’s house (Anomaly C); a house built by Captain W. Davies that was demolished in 1962 (Anomaly A); while Anomalies B and F could relate to other buildings and activities that have at some point in time occupied the respective areas. Additionally, it was noted that artefacts may be present in both negative features such as pits and found in demolition deposits spread across the site.

4 EXCAVATION RESULTS

4.1 Introduction

4.1.1 Excavation Areas

Only three distinct areas of archaeological horizons survived on the site, with the remainder of the project area consisting of low lying and sloping bare lava flows and basalt outcrops that would likely have been prone to inundations from seawater during high tides, and therefore not suitable for settlement. The archaeological excavations were undertaken in three stages from 19 December 2012 to 21 June 2016 (Figure 4.1). The first stage of excavations was located to the rear of the Stone Store and undertaken between 19 and 21 December 2012, while the second stage consisted of former Lots 11 and 13 in the southwest corner of the site which fronted Wharangi Street and was investigated between 7 and 10 January 2013. The third and final stage, and also the largest of the excavation areas, which fronted Princes Street and extended to the corner with Wharangi Street, was investigated from 19 May to 21 June 2016.

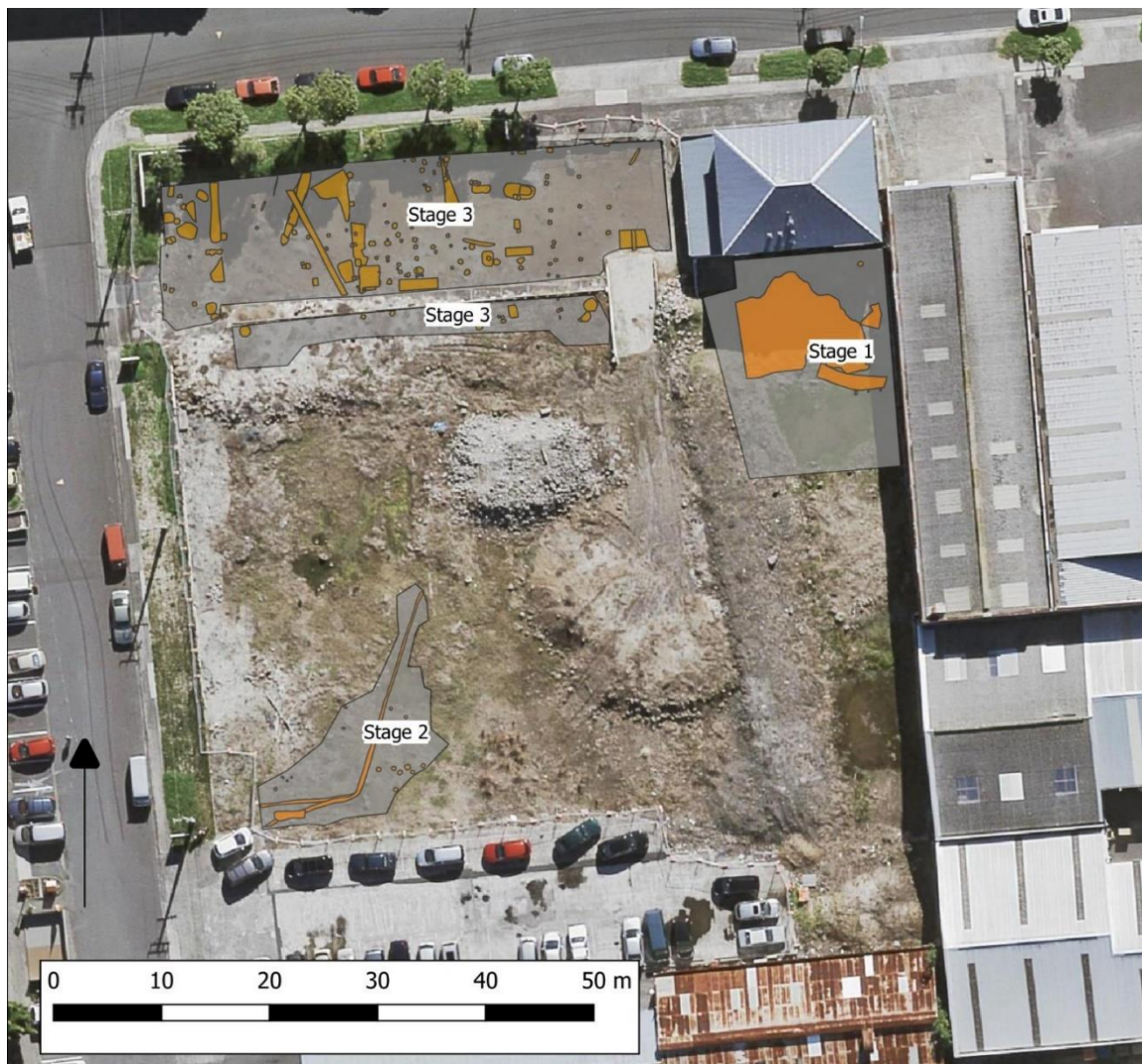


Figure 4.1 Aerial showing overlay of excavation area extents at 13-19 Princes Street (Stages 1 and 3) and 11–13 Wharangi Street (Stage 2) that were investigated between December 2012 and June 2016

4. Excavation Results

4.1.2 Excavation Methodology

As discussed earlier in Chapter 1, tracked mechanical excavators (7 ton and 3.5 ton) were utilised to remove vegetation, tar seal and modern overburden until archaeological deposits and features were exposed. All machine work was carried out under continuous archaeological supervision until archaeological horizons were reached (Figure 4.2). Archaeological surfaces and features were then cleaned with hand tools by the team of archaeologists in advance of excavation.



Figure 4.2. Excavation of upper layers of material

The excavation of archaeological features was undertaken for the most part by trowel, mattock and spade. The archaeological features and/or deposits were then assessed, investigated, recorded and sampled in accordance with accepted archaeological practice and within the framework of the research strategy and the requirements of the NZHPT authority (Figure 4.3).

The single context recording system was used, with each cut, deposit, layer and structure given an individual context number and recorded on a pro-forma context sheet which enabled the determination of occupation phasing on site and the production of a site Harris matrix. Individual cuts were planned at scales of either 1:20 or 1:50, and cuts and deposits were drawn in section or profile at scales of 1:10 or 1:20. A photographic record was compiled of all deposits and features with a digital camera as well as large site-scale images captured via an aerial drone.



Figure 4.3 Recording of archaeological features (Ellen Cameron and Dave Carley)

All artefactual material was collected, sorted and labelled according to context number on site and retained for specialist analysis. In the main, diagnostic items and/or a representative sample of artefact types were retained. All artefact categories and types, including discarded non-diagnostic pieces, were recorded on context sheets. Faunal material, and timber derived from 19th century features was also retained for specialist analysis.

4. Excavation Results

4.2 Stage 1

The initial vegetation and soil stripping was undertaken at the rear of the Stone Store assisted by a 7-ton tracked mechanical excavator (Figure 4.4) It was apparent that the clearance works following the 2008 fire had completely truncated any 20th century deposits from this part of the site.

The stratigraphic sequence observed immediately to the rear of the Stone Store mainly consisted of brown silty clay (context 100), that contained frequent 19th century cultural material interspersed with occasional later 20th century material, presumably redeposited during the clearing of the site after the 2008 fire. This layer sealed a brownish-orange consolidated tephritic clay subsoil (context 101), which in turn sealed further tephra/lapilli derived clays (context 102) that overlay lava flow and bluestone outcrops.

A range of features were found in the area cleared behind the Stone Store (Table 4.1, Figure 4.5 and Figure 4.6). Quarrying for basalt, presumably for building the Stone Store and other features, was evident in two quarry pits cut into the lava flows that were uncovered (Figure 4.7 and Figure 4.8). Blocks quarried out could still be discerned in the base of the quarry pit dug into the bluestone outcrop (Figure 4.9).

Some of the hollows in the pits were filled with 19th century rubbish including ceramics, glass and butchered animal bones (Figure 4.10). This is typical of 19th century properties prior to centralised rubbish collections. Other less obvious features, including four postholes and some back-filled pits (Figure 4.11) were also identified. A patch of small rocks seemed to form a small cobbled surface (Figure 4.12). Re-deposited marine shell (Figure 4.13) was also found in patches with one feature (120) which may have been part of a shell path relating to garden landscaping. Plans and sections are shown in Figure 4.14 and Figure 4.15.



Figure 4.4 Stripping of ground surface behind the Stone Store

4. Excavation Results

Table 4.1 Contexts in Stage 1

Context	Secondary Context	Feature	Phase
100	Modern greyish brown topsoil	Layer	Modern
101	Brownish orange silty clay subsoil	Layer	Modern
102	Orange and grey mottled clay natural	Layer	
103	Orange brown silty loam 19 th century topsoil	Layer	1-3
104		Layer	
105		Layer	
106	104 - upper fill 105 – lower fill 119 – General fill	Pit	
108	107	Posthole	2
110	109	Posthole	2
112	111	Posthole	2
114	113	Posthole in section	2
116	117 - fill of quarry cut 118 – quarry cut	Quarrying Area	2
120		Shell path	2

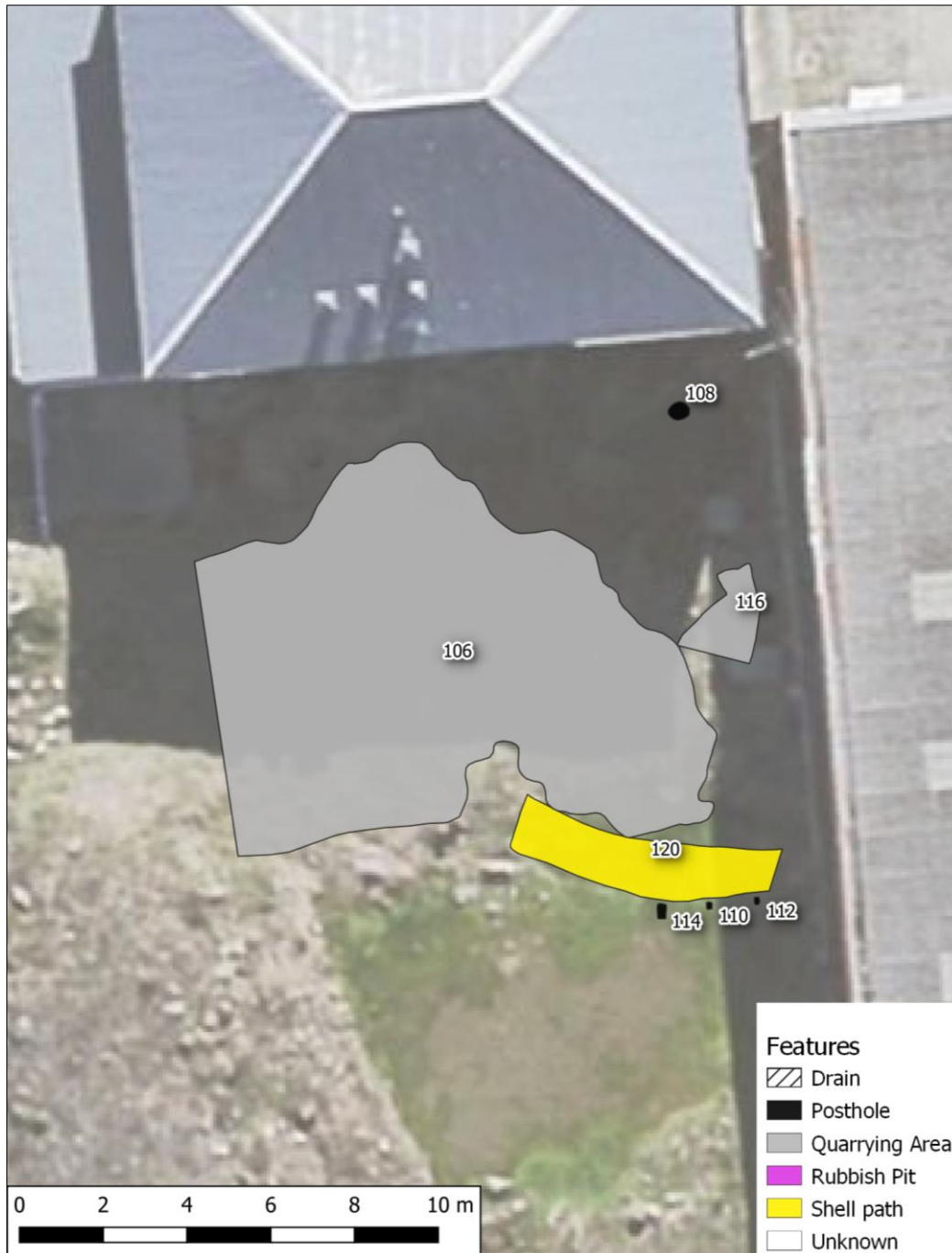


Figure 4.5. Plan of excavated features in Stage 1

4. Excavation Results



Figure 4.6 Area behind Stone Store showing range of features exposed



Figure 4.7 Behind the Stone Store showing underlying geology and areas of quarrying



Figure 4.8 Part of the large quarry pit located to the rear of the Stone Store exposed in plan following vegetation clearance. Facing east. Scale: 0.5m



Figure 4.9 Two slots excavated through the smaller quarry pit situated to the east of the larger pit (facing west. Scale: 2 x 0.5m)



Figure 4.10 Artefacts founds in back-filled pit 106

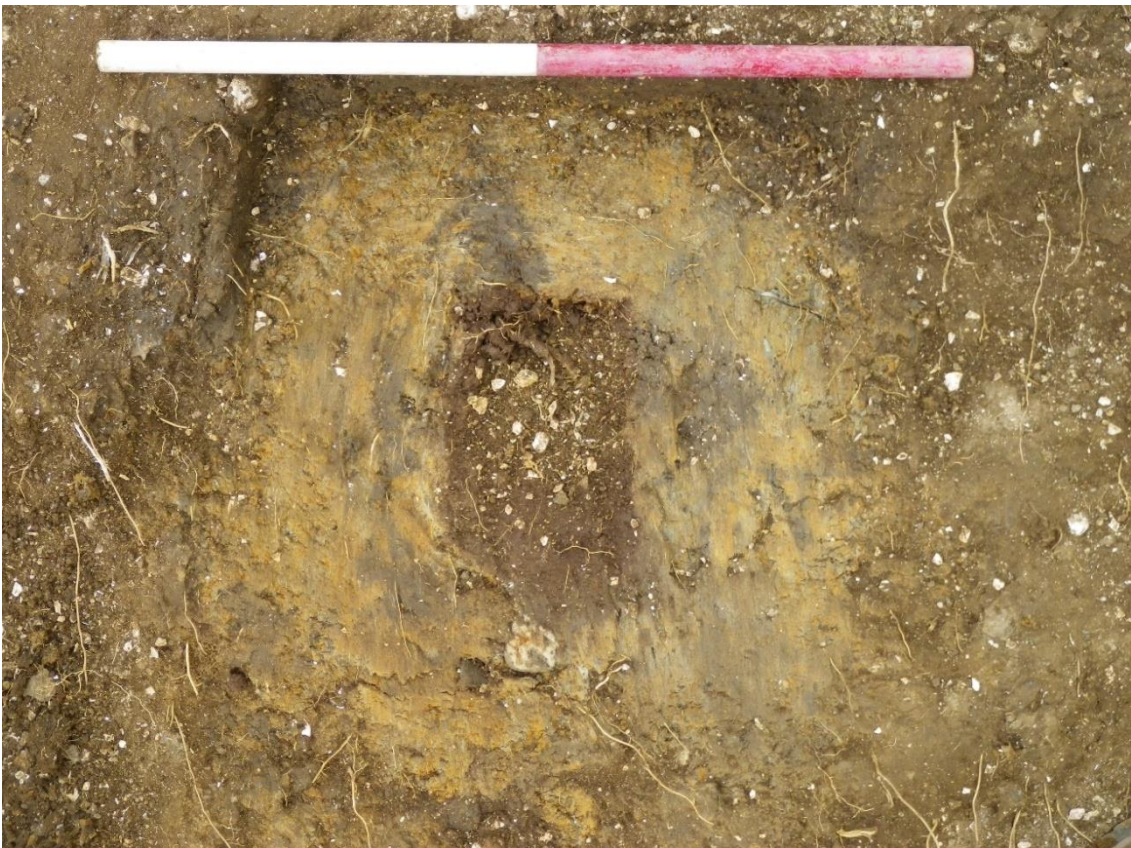


Figure 4.11 Small feature 114



Figure 4.12 Trench through possible cobbled area



Figure 4.13 Shell debris found behind the Stone Store

4. Excavation Results

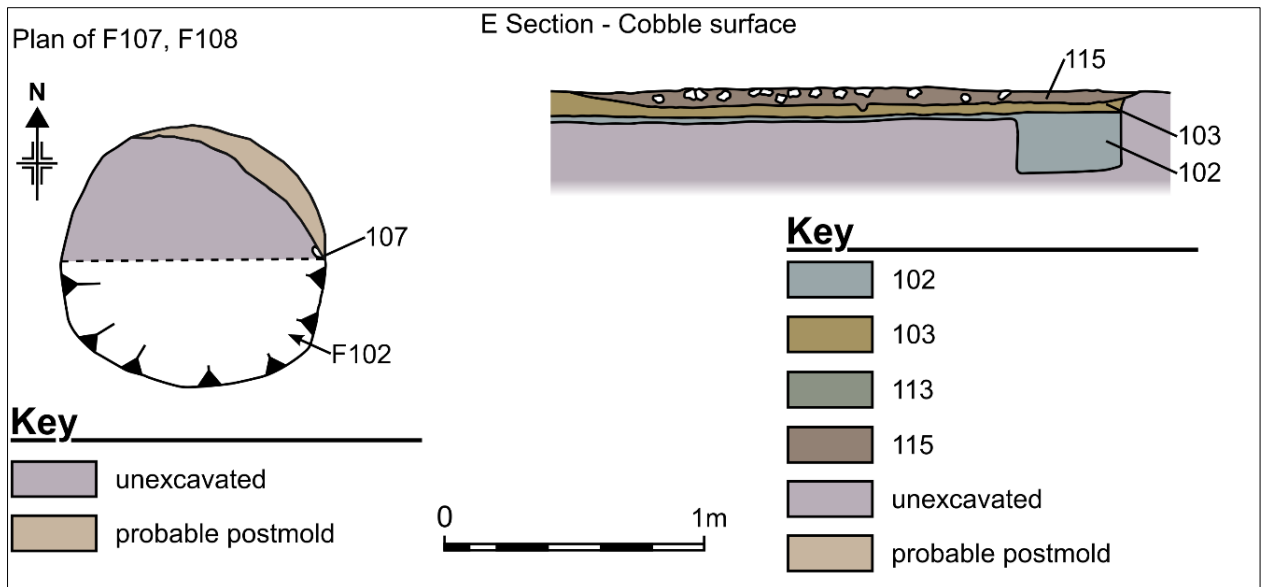


Figure 4.14 Plan of Feature 107 (108) and East section of cobbled surface in Stage 1

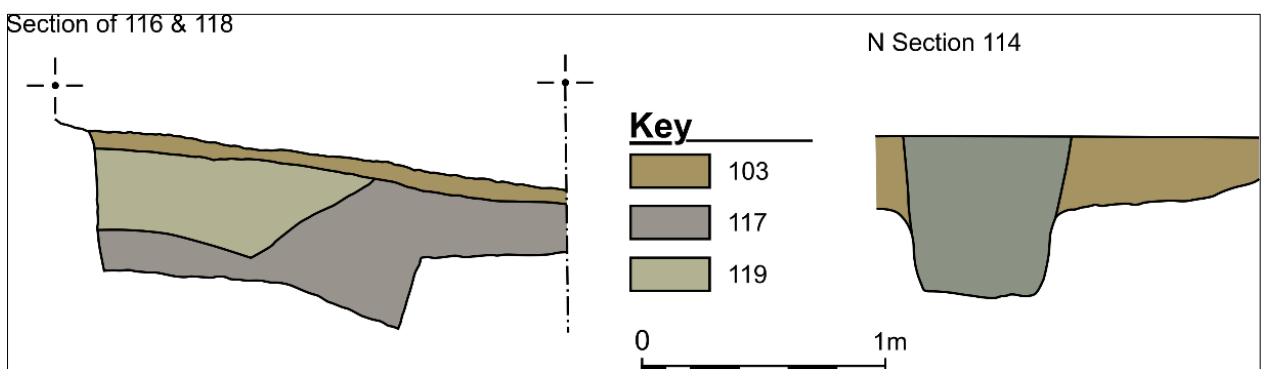


Figure 4.15. Section drawings of Features 114, 116 and 118

4.3 Stage 2

The second stage of excavations was confined to the southwest of the property (Figure 4.1) as the remaining area investigated to the south of the Stone Store and south of the carpark was devoid of archaeology. This was attributed to lava and bluestone across the block.

The stratigraphy over much of the area differed from Stage 1, where archaeological horizons were sealed by a 20th century rubbish-strewn dark greyish brown clay loam topsoil. Here, only a very thin rubbish strewn topsoil was present (Figure 4.16), with the underlying subsoils being consistent with those found to the rear of the Stone Store. It is likely that the clearance activities after the 2008 fire would have removed all archaeological deposits, if any were present in this area, with the exception of the southwest corner.

The southwest corner of the site did not have the lava and bluestone outcrops and here archaeology survived (Table 4.2): two intersecting earthen drains (contexts 126 and 128), 18 postholes and a large refuse pit (context 123) were exposed in plan (Figure 4.17–Figure 4.19).

Metre-wide slots were excavated through both drains and section and plan drawings were made (Figure 4.20, Figure 4.21). Of the postholes (Figure 4.22), nine were excavated with plan and sections drawings produced. The postholes excavated all produced 19th century artefacts.

The refuse pit was a rectangular trench aligned east–west and two 1m slots were excavated at either end (Figure 4.23). The drains and refuse pit yielded a large number of 19th century artefacts.



Figure 4.16 The majority of the site south of the carpark was covered by a very loose and thin topsoil covering outcrops of lava and bluestone. Facing southeast

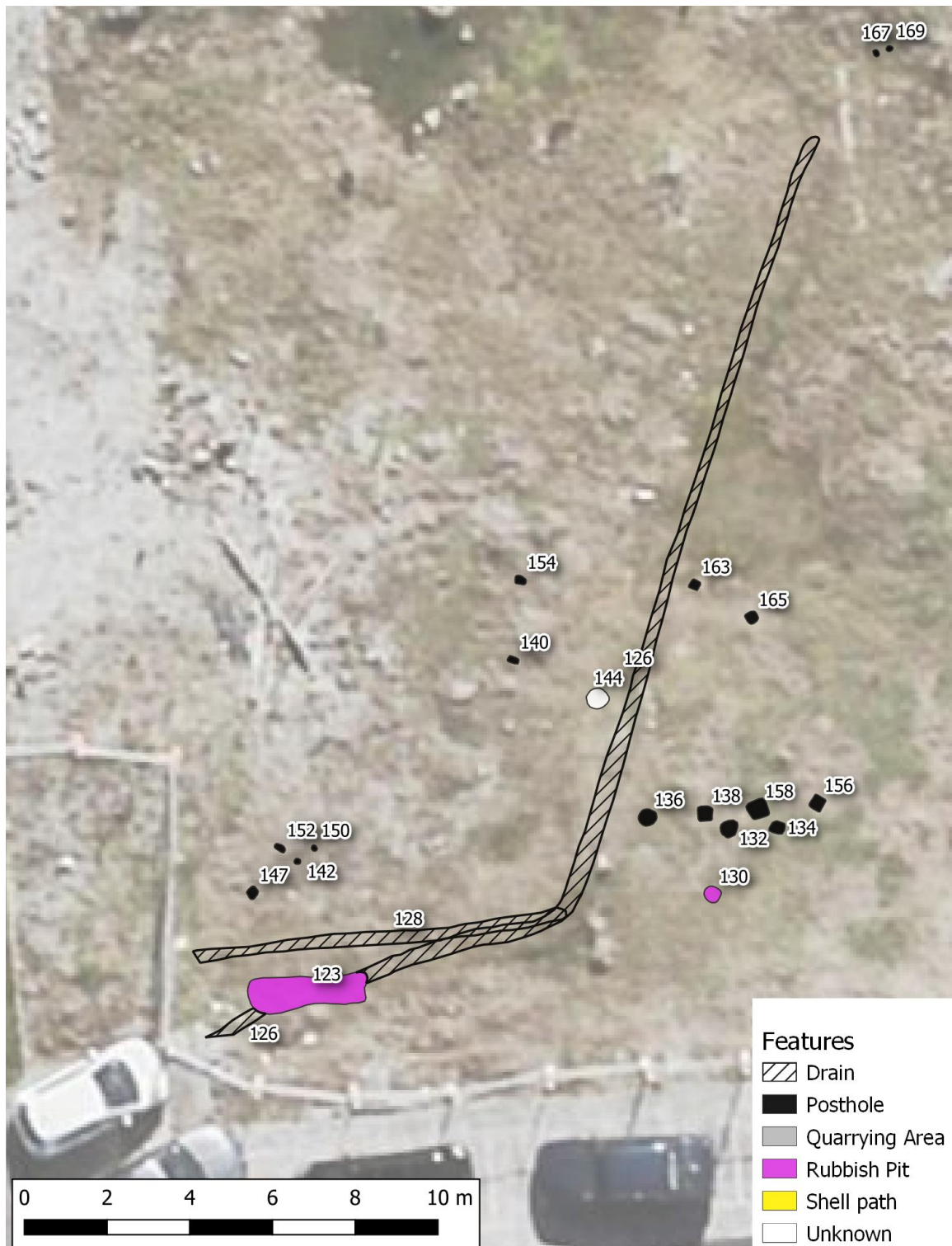


Figure 4.17 Plan of features in Stage 2 excavation

4. Excavation Results

Table 4.2 Contexts in Stage 2

Context	Secondary Context	Feature	Phase
123	121, 122	Rubbish Pit	2
126	125	Drain	2
126	125	Drain	2
128	127	Drain	2
130	129	Rubbish Pit	2
132	131	Posthole	2
134	133	Posthole	2
136	135	Posthole	2
138	137	Posthole	2
140	139	Posthole	2
142	141	Posthole	1
144	143	Unknown	
147	148	Posthole	0
150	149	Posthole	0
152	151	Posthole	3
154	153	Posthole	3
156	155	Posthole	3
158	157	Posthole	3
163	162	Posthole	3
165	164	Posthole	3
167	166	Posthole	3
169	168	Posthole	3



Figure 4.18 The two intersecting drains exposed in the southwest corner of the site. Facing west. Scale: 0.5m

4. Excavation Results

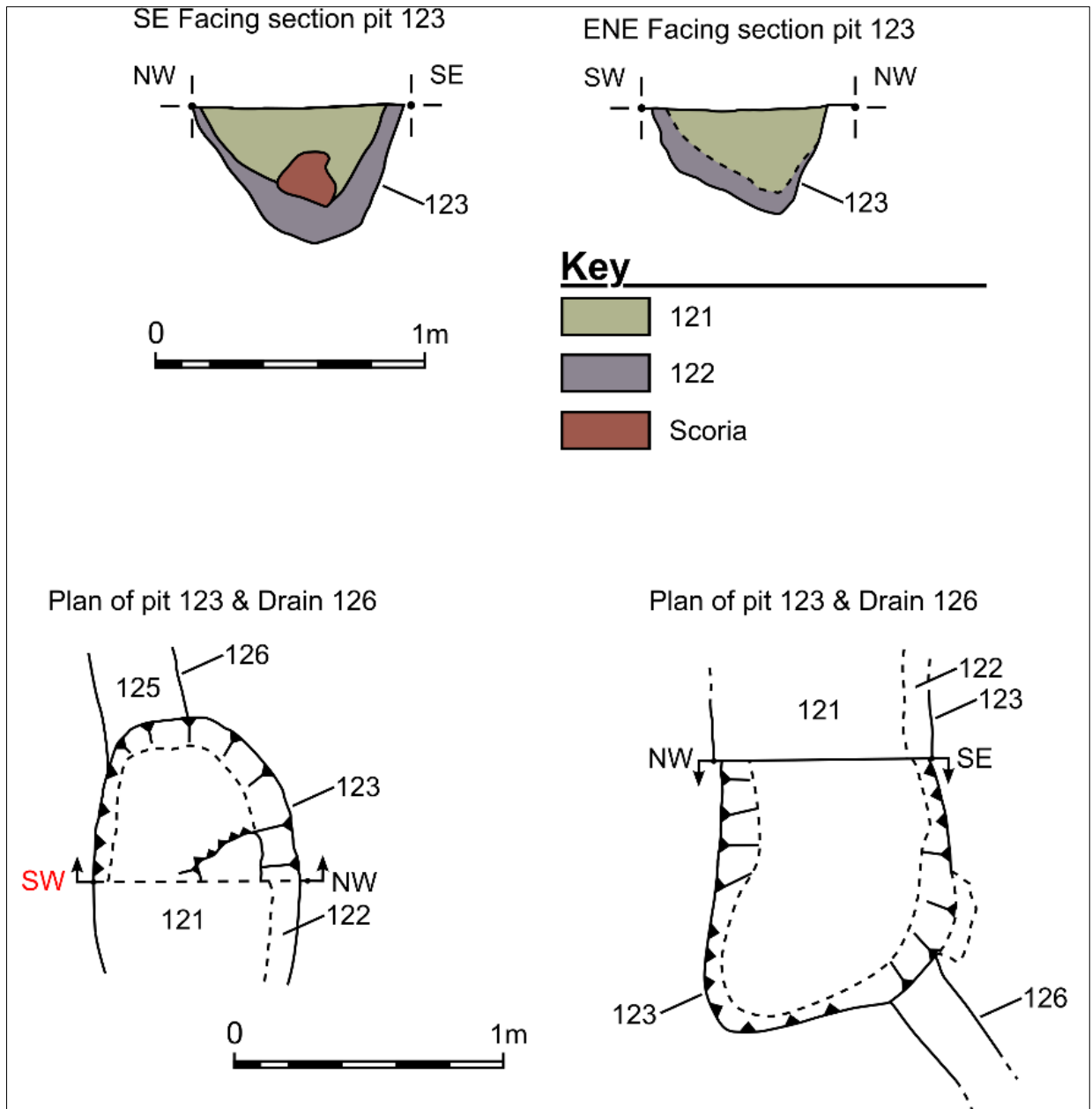


Figure 4.19 Plan and section of pit (context 123) with other nearby features

4. Excavation Results

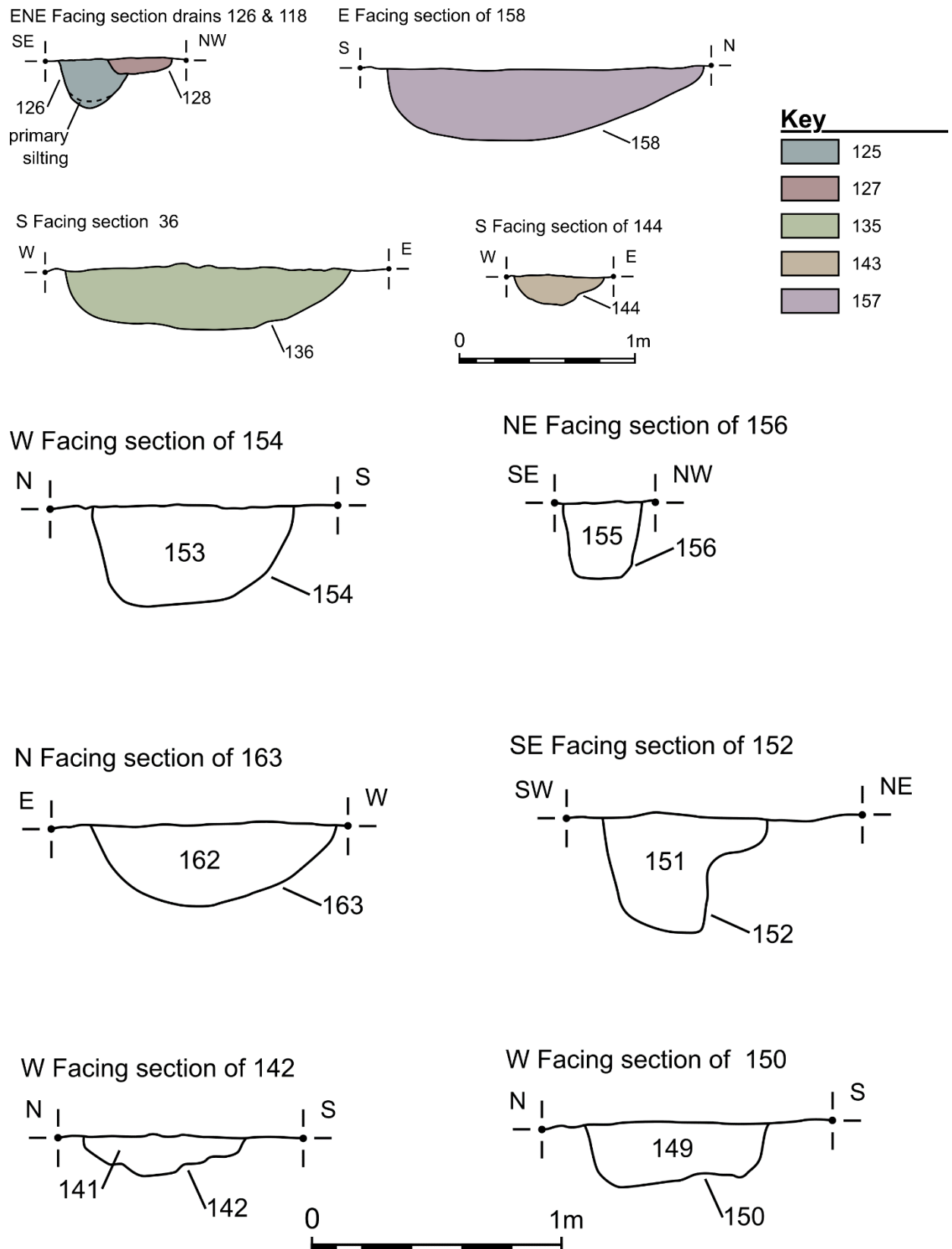


Figure 4.20 Section and plan drawings of main features in Stage 2

4. Excavation Results



Figure 4.21 East facing section of drain 126 and drain 128. Scale: 0.5m



Figure 4.22 Posthole found in the Stage 2 area



Figure 4.23. Working shot of slot excavated through refuse pit 123. Facing west. Scale: 2x0.5m

4. Excavation Results

4.4 Stage 3

Stage 3 incorporated the carpark area to the west of the Stone Store, as well as a 5m-wide strip adjacent to the southern boundary of the carpark (Figure 4.1, Figure 4.24). The surviving stratigraphy differed from the eastern to western ends of the site. This was due to the natural ground contours that followed the bluestone outcrop, which dipped markedly from the eastern (Stone Store) end of the site to Wharangi Street in the west. As a result, the depth of stratigraphy at the eastern end was as little as 0.5m, consisting of the remnants of a 19th century topsoil overlain by multiple 20th century made ground layers, in turn sealed by modern aggregates and tar seal. However, at the western end of the carpark area where the bedrock dipped steeply, the depth of stratigraphy was up to 1.4m and was dominated by 19th century made ground deposits reflecting a number of occupation phases. These deeper deposits contrasted with excavations during Stages 1 and 2.



Figure 4.24. View looking east across carpark prior to excavation

A relatively large volume of archaeological deposits and features were exposed across the Stage 3 excavation area (Figure 4.25; Table 4.3), the majority of which related to 19th century domestic occupation, with features and occupation surfaces seen in plan and recorded at differing levels across the area. The most common features observed were postholes. These varied in size and shape, and were mainly related to domestic structures, although some were derived from industrial activities. Other features recorded consisted of scoria boulder footings, beam-slots, a well, drainage ditches, a historic period Māori storage pit as well as potential cultivation/garden related features.

4. Excavation Results

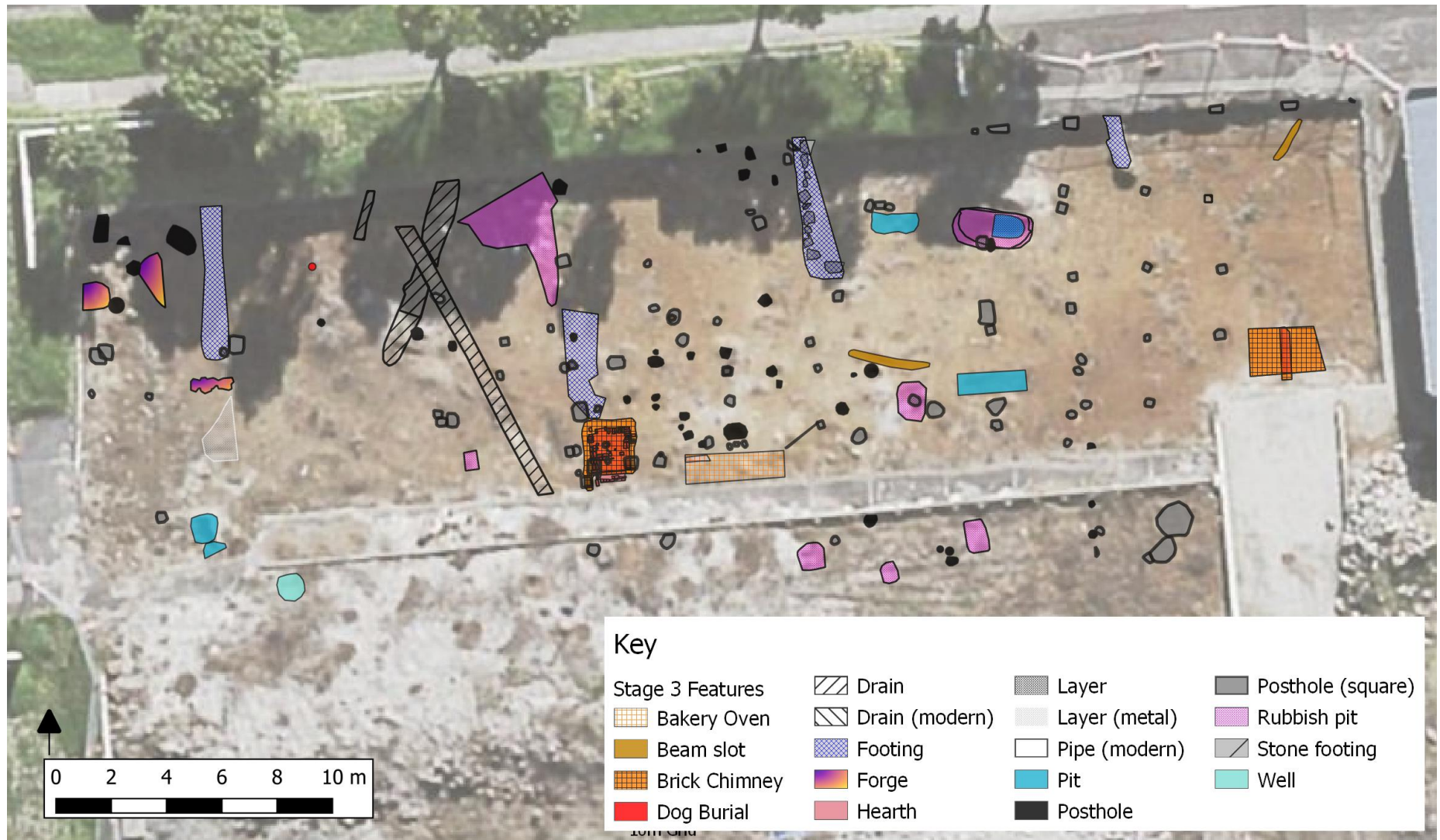


Figure 4.25 Plan of excavated features from Stage 3

4. Excavation Results

Table 4.3 Contexts in Stage 3

Context	Description	Secondary Contexts (Fill contexts unless indicated)	Feature Type
Pipe	Modern pipe (no context number)		Pipe (modern)
200	Carpark surface		Layer
201	Carpark-aggregate material		Layer
202	Carpark surface		Layer
203	Loosely compacted 20 th century building rubble compacted to create building surface	232	Layer
204	Cut of furnace/forging Box	205	Forge
206	Cut of bin pit/ post hole	207	Posthole
208	Cut of posthole	209; 313 (post-pipe)	Posthole
210	Cut of stone wall or footing	211	Footing
212	Cut of footing/base of furnace/forging box	213	Forge
216	Cut of posthole	217	Posthole
218	Foreshore dump – shell material for cellar?	233 in northern section	Layer
219	Natural subsoil		Layer
220	Natural sterile clay base		Layer
221-226	Voided contexts associated with rubbish layer	Associated with 203	Voided contexts
227	Dark stained layer/fill		Layer
228	Cut of possible posthole	229	Posthole
234	Clay cap/platform		Layer
235	Rubble fill layer in section		Layer
236	Medium brown loamy clay in section		Layer
237	Dark friable soil in section		Layer
238	Shell lens in section		Layer
239	Dark brown soil lens with orange clay specks in section		Layer
240	Medium brown loam in section		Layer
241	Historic fill south facing layer in section		Layer
242	See 258/399		
243	Cut of trough (VOID)	244	VOID
245	Fill/Layer of historic artefacts (see 468)	641 (fill of demo cut of 640 redeposited)	Layer
246	Cut of wall footing		Footing
247	Fill of wall footing		Stone footing
250	Voided feature	251	VOID
254	Cut of possible posthole	255	Posthole
256	Cut of possible posthole	257	Posthole
258	Rubbish dump with no clear cut. Bottle glass, button, ceramics. 0.4x0.35x0.2m.	See 399	Historic Rubbish dump
259	Cut of square well	260	Well
261	Cut of rectangular posthole to south of carpark	262	Posthole (square)
263	Cut of squarish posthole	264	Posthole (square)
265	Cut of rectangular refuse pit	266	Rubbish pit
267	Cut of square posthole	268	Posthole (square)
269	Cut of rectangular refuse pit	270	Rubbish pit
271	Cut of rectangular refuse pit	272	Rubbish pit
273	Cut of posthole	274	Posthole
275	Cut of posthole	276	Posthole
277	Cut of posthole	278	Posthole
279	Cut of circular posthole	280	Posthole
283	Cut of posthole	284	Posthole

4. Excavation Results

Context	Description	Secondary Contexts (Fill contexts unless indicated)	Feature Type
285	Cut of square posthole	286	Posthole (square)
287	Cut of posthole	288	Posthole
289	Cut of square posthole	290	Posthole (square)
291	Cut of rectangular posthole	292	Posthole (square)
293	Cut of large rectangular posthole	294	Posthole (square)
295	Cut of large rectangular posthole	296	Posthole (square)
297	Foundation of oven platform	354 (made floor)	Bakery Oven
298	Construction cut for possible brick chimney	300	Brick Chimney
299	Double breasted brick chimney		Brick Chimney
301	Hearth extension to south of 300		Hearth
302	Cut of square posthole	303 (Post remains), 304 (backfill)	Posthole (square)
305	Cut of probable circular posthole	306	Posthole
307	Cut of square posthole	308	Posthole (square)
309	Cut of rectangular posthole	310	Posthole (square)
311	Cut of square posthole	312	Posthole (square)
314	Cut of rectangular posthole	315, 394	Posthole (square)
316	Cut of rectangular posthole	317	Posthole (square)
318	Cut of rectangular posthole	319	Posthole (square)
320	Cut of circular posthole (large diameter)	321	Posthole
322	Cut of circular posthole (large diameter)	323	Posthole
324	Cut of small circular posthole	325	Posthole
326	Cut of possible beam slot	327	Beam slot
328	Cut of rectangular posthole	329	Posthole (square)
330	Cut of sub-rectangular or oval rubbish pit	331 (upper fill), 396, 397, 398	Rubbish pit
332	Cut of sub-rectangular or oval pit	333	Pit
334	Cut of rectangular posthole	335	Posthole (square)
336	Cut of sub-rectangular posthole	337	Posthole (square)
338	Cut of large rectangular rubbish pit	339	Rubbish pit
340	Cut of rectangular posthole	341	Posthole (square)
342	Cut of rectangular posthole	343	Posthole (square)
344	Cut of rectangular posthole	345	Posthole (square)
346	Cut of rectangular posthole	347	Posthole (square)
348	Cut of rectangular pit	349	Pit
350	Cut of square posthole	351	Posthole (square)
352	Cut of largish rectangular posthole	353	Posthole (square)
355	Cut of rectangular posthole	356	Posthole (square)
357	Cut of rectangular posthole	358	Posthole (square)
359	Cut of wall footing	360	Footing
361	Cut of rectangular posthole	362	Posthole (square)
363	Cut of rectangular posthole	364	Posthole (square)
365	Cut of rectangular posthole	366	Posthole (square)
367	Cut of rectangular posthole	368	Posthole (square)
369	Cut of rectangular posthole	370	Posthole (square)
371	Cut of rectangular posthole	372	Posthole (square)
373	Cut of rectangular posthole	375	Posthole (square)
377	Disturbed dog burial		Dog Burial
378	Topsoil beneath disturbed layer 202		Layer in Section
379	Less shelly material soil fill layer		Layer in Section
380	Rusty brown clayey material under 379		Layer in Section
381	Midden-like shell matrix		Layer in Section
382	Rusty brown clayey material under 381		Layer in Section
383	Buried old topsoil above subsoil 202		Layer in Section

4. Excavation Results

Context	Description	Secondary Contexts (Fill contexts unless indicated)	Feature Type
384	Possibly the same as 241 but shell but less rubbish		Layer in Section
385	Cut of possible pit seen in profile	Cut into 381 and all the way into 380	Layer in Section
386	Fill of 385		Layer in Section
387	Dense shell fill, no soil		Layer in Section
388	Fill of relatively modern drain cut		Layer in Section
389	Very thin and flat black layer	Above 390	Layer in Section
390	Thin shell layer	Between 389 and 392	Layer in Section
391	Tumbled mixed shell fill	Adjacent to 388	Layer in Section
392	Very thin black layer	Under 390	Layer in Section
393	Shell fill		Layer in Section
399	Cut of 258 on 242 - Rubbish Pit	400 (cut)	Rubbish pit
401	Cut of square posthole	402	Posthole (square)
403	Cut of square posthole	404	Posthole (square)
405	Cut of square posthole	406	Posthole (square)
407	Cut of square posthole	408	Posthole (square)
409	Cut of rectangular posthole	410	Posthole (square)
411	Cut of rectangular posthole	412	Posthole (square)
414	Cut of modern stormwater drain	415	Drain (modern)
416	Cut of rectangular posthole	417	Posthole (square)
418	Cut of square posthole	419 (fill); 420 (post-pipe)	Posthole (square)
421	Cut of circular posthole	422; 615 (post mould)	Posthole
423	Cut of circular posthole	424	Posthole
425	Cut of small circular posthole	426	Posthole
427	Cut of small square posthole	428	Posthole (square)
429	Cut of small square posthole	430	Posthole (square)
431	Cut of small square posthole	432	Posthole (square)
433	Cut of sub-circular large posthole	434	Posthole
435	Cut of sub-circular posthole	436	Posthole
437	Cut of square posthole	438	Posthole (square)
439	Cut of square posthole	440	Posthole (square)
441	Cut of square posthole	442; 467 (post-pipe)	Posthole (square)
443	Cut of sub-circular posthole	444 (timber post); 445 (fill)	Posthole
446	Cut of square posthole	447	Posthole (square)
448	Cut of square posthole	449	Posthole (square)
450	Cut of small posthole	451	Posthole
452	Cut of large posthole	453	Posthole
454	Cut of square posthole	455; 626 (post mould)	Posthole (square)
456	Cut of square posthole	457 (fill); 458 (post pipe)	Posthole (square)
459	Cut of posthole	460	Posthole
461	Cut of posthole	462; 463 (post-pipe)	Posthole
464	Cut of posthole	465; 466 (post-pipe)	Posthole
468	Large rubbish dump		Rubbish pit
469	Cut of square posthole	470	Posthole (square)
471	Cut of square posthole	472	Posthole (square)
473	Cut of square posthole	474	Posthole (square)
475	Cut of square posthole	476; 619 (post pipe)	Posthole (square)
477	Cut of square posthole	478	Posthole (square)
479	Cut of square posthole	480	Posthole (square)
481	Cut of small square posthole	482	Posthole (square)
483	Cut of circular posthole	484	Posthole
485	Cut of circular posthole	486	Posthole
487	Cut of sub-circular posthole	488	Posthole
489	Cut of sub-circular posthole	490	Posthole
491	Cut of sub-circular posthole	492; 618 (post pipe)	Posthole

4. Excavation Results

Context	Description	Secondary Contexts (Fill contexts unless indicated)	Feature Type
493	Cut of square posthole	494	Posthole (square)
495	Cut of square posthole	496	Posthole (square)
497	Cut of square posthole	498	Posthole (square)
499	Cut of square inter-cutting postholes	500	Posthole (square)
501	Cut of square inter-cutting postholes	502	Posthole (square)
503	Cut of circular posthole	504	Posthole
505	Cut of square posthole	506	Posthole (square)
507	Cut of large square posthole	508	Posthole (square)
509	Cut of square posthole	510	Posthole (square)
511	Cut of square inter-cutting postholes	512	Posthole (square)
513	Cut of square inter-cutting postholes	514	Posthole (square)
515	Cut of possible pit - Voided	516	VOID
517	Cut of square posthole	518	Posthole (square)
519	Cut of square posthole	520	Posthole (square)
521	Cut of possible drain	522	Drain
523	Cut of square posthole	524	Posthole (square)
525	Cut of black intercutting rectangular posthole	526	Posthole (square)
527	Cut of intercutting rectangular posthole	528	Posthole (square)
529	Cut of square intercutting rectangular posthole	530	Posthole (square)
531	Cut of sub-circular posthole	532	Posthole
533	Cut of circular posthole	534; 535 (post-pipe)	Posthole
536	Drain cut	537; 620 (primary fill); 621 (secondary fill); 623 (central waste water pipe); 640 (demolition Cut)	Drain
536	Drain cut	537; 620 (primary fill); 621 (secondary fill); 623 (central waste water pipe)	Drain
540	Circular black posthole	541	Posthole
542	Cut of large square posthole seen in section	543;544 (post-pipe)	Posthole (square)
545	Dark brown layer filled with metal		Layer (metal)
546	Thin grey layer beneath brick demo layer		Layer
547	Brick filled demo layer		Layer
548	Grey layer beneath 545		Layer
549	Forge box, chimney, original smithy		Forge
550	Cut of square infilled pit	551	Pit
552	Cut of square posthole	553	Posthole (square)
554	Cut of square posthole	555	Posthole (square)
556	Cut of rectangular posthole	557	Posthole (square)
560	Cut of pit feature in southern section	561	Pit
562	Cut of oval/circular posthole in southern side of pit 330	563; 564 (post-pipe)	Posthole
565	Cut of rectangular posthole	566	Posthole (square)
567	Recut pit through fill 397 or pit 335 for blacksmith's house		Pit
568	Cut of beam slot fill or beam slot	569; 570 (upper fill with post removal)	Beam slot
571	Cut of oval/rectangular posthole adjacent to 542	572	Posthole (square)
573	Cut of large square posthole	574	Posthole (square)
575	Cut of large rectangular posthole	576	Posthole (square)
579	Cut of large rectangular posthole	580	Posthole (square)
581	Cut of rectangular posthole	582	Posthole (square)
584	Cut of rectangular posthole	585	Posthole (square)

4. Excavation Results

Context	Description	Secondary Contexts (Fill contexts unless indicated)	Feature Type
586	Cut of rectangular posthole	587	Posthole (square)
588	Cut of rectangular posthole	589	Posthole (square)
590	Cut of rectangular posthole	591	Posthole (square)
592	Cut of rectangular posthole	593	Posthole (square)
594	Cut of irregular posthole	595	Posthole
596	Cut of posthole	597; 617 (post mould)	Posthole
598	Cut of posthole	599	Posthole
600	Cut of posthole	601	Posthole
602	Cut of infilled linear drain	603	Drain
604	Cut of small circular posthole	605	Posthole
606	Remains of brick chimney; Crawford Store ?		Brick Chimney
607	Cut of small rectangular posthole	608	Posthole (square)
609	Cut of posthole	610	Posthole
611	Sub rectangular posthole cutting pit 338	612	Posthole (square)
613	Cut of posthole	614	Posthole
624	Redeposited shell	In SE facing section	Layer
625	Dark grey silty sandy layer		Layer
628	Mortar rich sandy	Sealing 380	Layer
629	Redeposited greenish grey clay silt fill	Sealing 628	Layer
630	Redeposited yellow clay as capping	Post 1921	Layer
631	Demolition cut in North excavation edge	Cuts 628	Layer
632	Demolition fill	Cuts 631	Layer
633	Greenish brown beach deposit	Below 380	Layer
634	Cut of large feature in north edge of excavation	635 – Lower fill, loose scoria boulders in soil matrix 636 – Upper fill, sand and shell matrix	Feature in section
637	Cut for 20 th century drain	638	Layer
639	Fill layer with beach shell and sand in ashy matrix	Seals 219	Layer
640	Demolition cut	Through drain fil 537; 641 – redeposited from 245	Layer
642	Demolition cut to remove post	643	Layer
644	Brick and metal demolition layer in northern area	20 th century	Layer
645	Post hole and boardt slot	646	Posthole
647	Stakehole	In 645. 648 fill	Stakehole
649	Stakehole	650	Stakehole
652	Stakehole	651	Stakehole

4. Excavation Results

4.4.1 Carpark Area – West Side

Following removal of the asphalt (Figure 4.26), a range of artefacts and features were visible in the upper demolition layers. This included glass bottle dumps (Figure 4.27), concentrated collections of burnt material (especially at the western end of the carpark) and concentrations of rock (Figure 4.28, and see Figure 4.32, below).

The stratigraphy along the northern baulk (Figure 4.29, Figure 4.30) shows the overall pattern of the build-up of the site along the western side. A series of different fill layers, ranging from the aggregate below the carpark asphalt at the top through a range of different demolition layers containing first 20th and then 19th century artefacts and other materials, appeared to have been spread across the area to bring the Wharangi Street end of the site up to a similar level as that to the east. Marine shell was also visible in the section but appeared to be of redeposited natural origin rather than deriving from midden.

Features cut into the layers at different heights point to the levelling of the area having occurred on a number of occasions, with some levelling of the foreshore to build some initial structures. Historical research had suggested this was the area where two successive smithies might be located. The deposits encountered appeared to be related to the first smithy (discussed in section 4.4.1.2), followed by the levelling to create the area for the later smithy (discussed in section 4.4.1.1).

A number of likely forge bases were identified, along with concentrations of metal artefacts and slag. These features themselves were also then truncated by subsequent activities.

Modern services were also visible at several places in the Stage 3 area and are not further discussed.

Once the initial level had exposed the likely surface of the later smithy (Figure 4.32), features were recorded, and it was then decided to open the south-western corner of the area to a lower level, identified here as Area A. The reason for this was to establish the likely depth of deposits on the site and because there were few obvious features at the upper level. The results are discussed in the sections below.

4. Excavation Results



Figure 4.26 Examining material after removal of the asphalt and upper layers in the carpark (David Manson, Dave Carly and Richard Shakles)



Figure 4.27 Bottles and other debris (468) found in upper demolition layers

4. Excavation Results

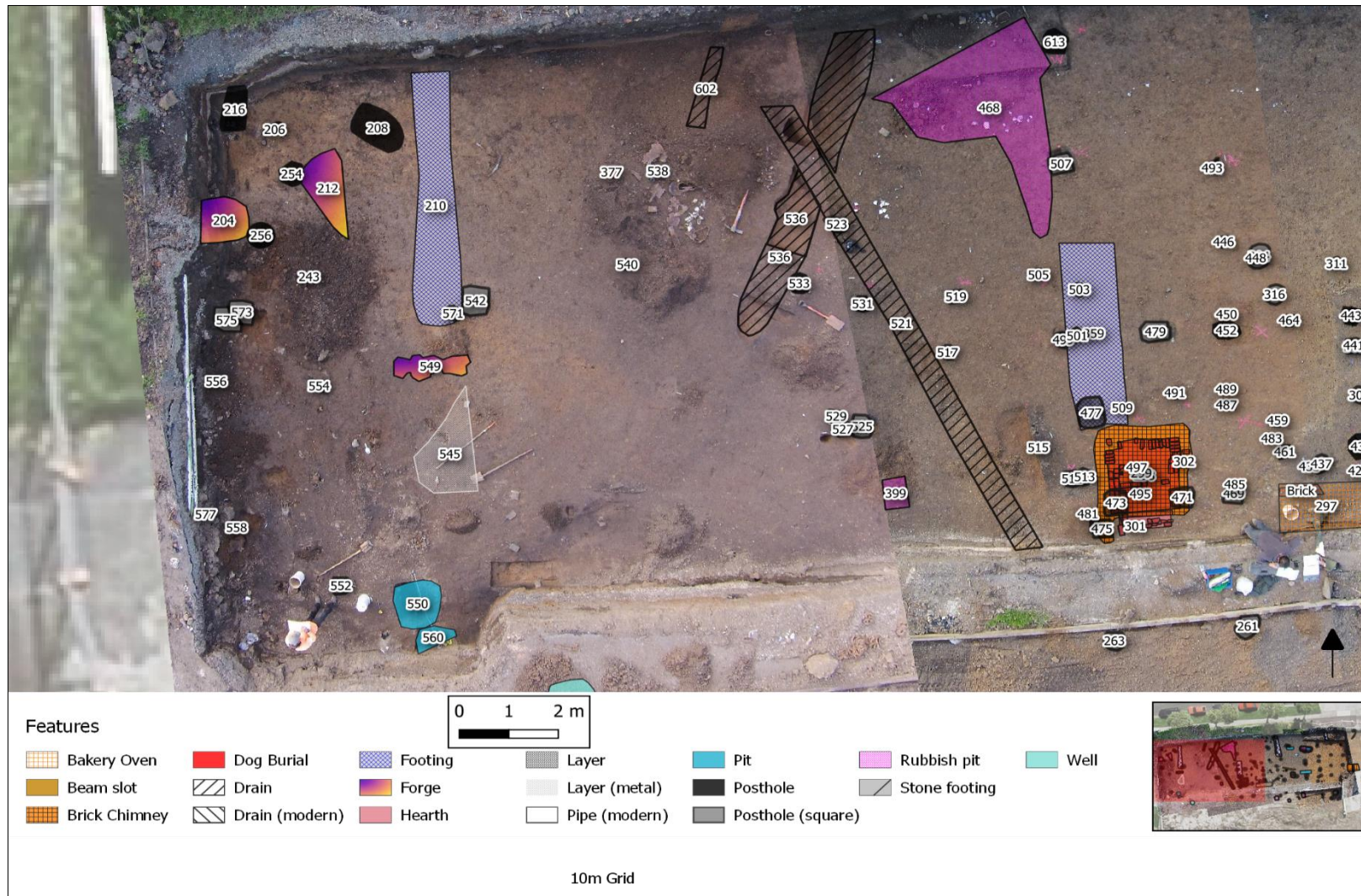


Figure 4.28 Plan of features excavated at western half of carpark (final level)

4. Excavation Results

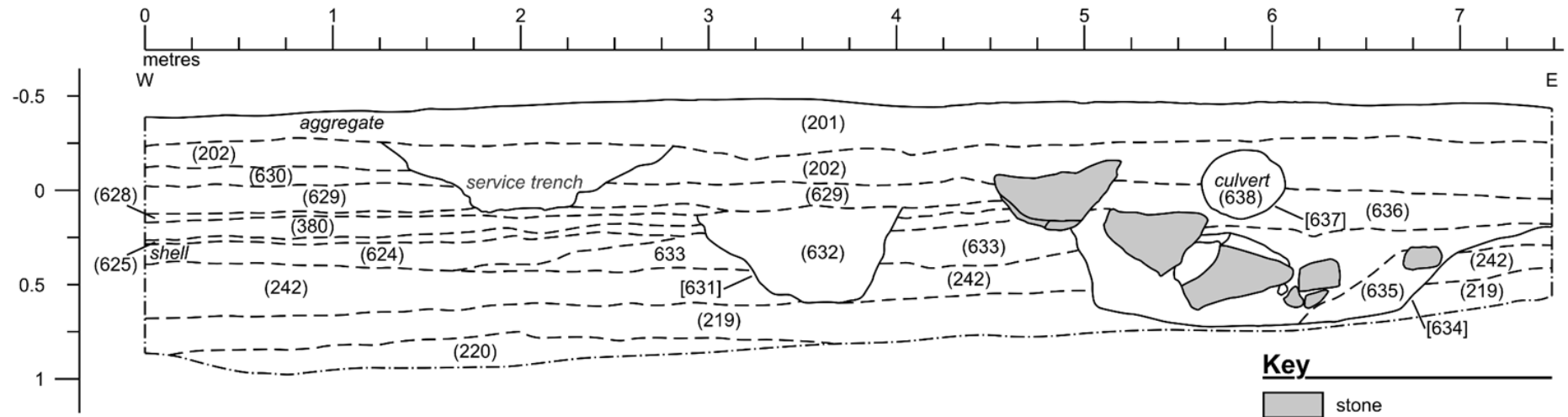


Figure 4.29 South facing section showing stratigraphy at the northwest part of the carpark excavation

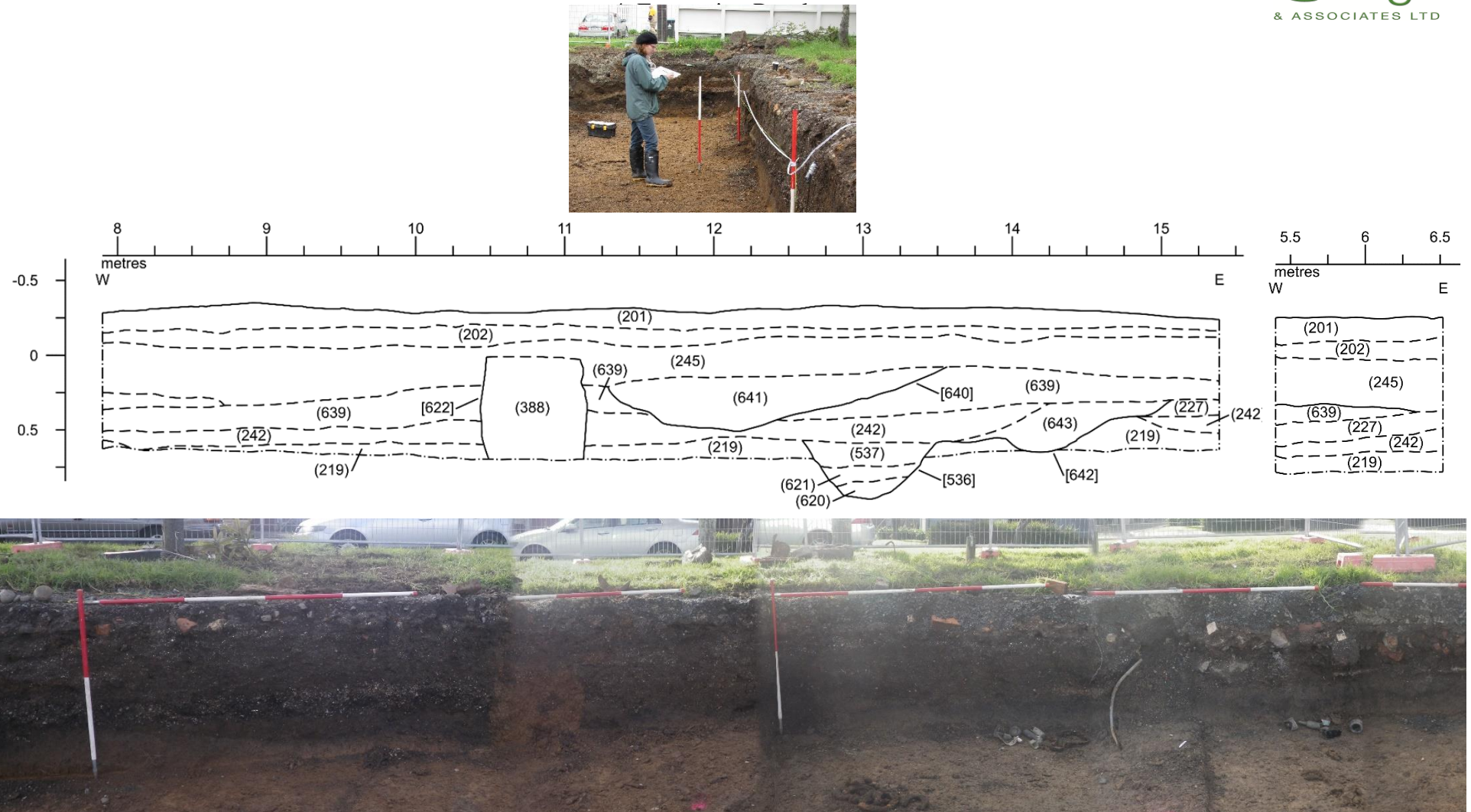


Figure 4.30 South facing section showing stratigraphy at central part of northern side of carpark

4.4.1.1 The Later Blacksmith's Forge

The features exposed in the upper levels of the excavation at the corner of Wharangi Street and Princes Street appeared to relate primarily to a blacksmith's forge. Dense concentrations of metal objects in variable condition were found, recorded and analysed (see Chapter 5). The range and variety of metal fragments suggested that the blacksmith was involved in the manufacture of a range of objects from horseshoes to domestic fixtures, although it is also likely that many of the objects were incomplete or broken and the material was waiting to be recycled.

Concentrations of charcoal and other burnt material (Figure 4.31–Figure 4.33) were found in small depressions as well as associated with rectangular basalt features. However, much of the area contained at least some artefacts associated with a smithy. The depressions – identified as either small bin-like pits or postholes – contained rubbish from the smithy.

The remains of a stone foundation [210] was found running south from the northern baulk (Figure 4.28 and Figure 4.32) and probably related to a house or the blacksmith's building itself, although it was not possible to know whether this was the eastern wall of a structure over the blacksmith's work area or the western wall of a neighbouring structure (or perhaps both). It is possible that another foundation could be located along the unexcavated Wharangi Street frontage.



Figure 4.31 Looking south across the later blacksmith's features on the corner of Princes Street and Wharangi Street. Scale: 2 x 1m

4. Excavation Results



Figure 4.32 View of north-western end of Stage 3 excavation and exposed features associated with the blacksmith's (looking south-east)



Figure 4.33 Plan of upper level of northwest corner of site

Two approximately 2m x 1m rectangular basalt block areas [204] and [212] (Figure 4.34 and Figure 4.35) were interpreted as the bases of the blacksmith's forges. It is likely that a brick superstructure would have been built on this foundation. However, none of the forge superstructure appeared to have survived.

Following excavation of Area A to the south, the features were removed to determine whether there were any other features below.



Figure 4.34 Feature [204], facing south



Figure 4.35 Feature [212], facing south-east

4. Excavation Results

4.4.1.2 Area A and the First Blacksmith's Forge

The excavations in Area A were approximately 5-5.5m wide and taken down to the original natural ground (Figure 4.36). The stratigraphy (Figure 4.37) here had been the first glimpse of the full extent of the changes to the site with the layers of demolition fill mixed with some redeposited shell, presumably from the foreshore nearby.

The excavation in Area A also provided evidence of the first of the blacksmiths on the property. The remains of a brick feature were observable in the eastern section of Area A (Figure 4.38–Figure 4.39). The bricks did not contain any maker's marks but probably belonged to the superstructure of the original blacksmith's forge.

Large basalt blocks, quarried from the lava flows nearby, were also in abundance and probably part of the original smithy located here (Figure 4.38–Figure 4.39) at lower levels, but also may have related to some of the upper levels and later structures. The stratigraphy across the eastern part of Area A was all related to the demolition of the structures.

In contrast, the stratigraphy along the western baulk (Figure 4.40) and southern areas contained the layered demolition material, shell debris and other made surfaces found to the north.

A very large rectangular 85cm wide posthole [542] relating to a structure from the late 19th to 20th century was visible in section and excavated in plan along the western baulk to a total depth of 1.04m (Figure 4.41). It was filled with dense layers of mixed soil and marine shell with a post-pipe also visible, indicating that the original post had been removed rather than left in situ.

Other features, including a possible stone foundation, were also found in situ and related to the use of this part of the site post-dating the original blacksmith's forge.

4.4.1.3 Other Features at the Base

Following recording of the upper layers in the northwest corner, the whole area was excavated to the sterile basal clay and a number of other features were recorded. Two pits were excavated at the southern end of the site (Figure 4.42). Pit [550] was around 1m in diameter and with an infilled upper layer of mixed shell and with a possible posthole. Pit [560] was visible in section, intercut [550] and appeared to have been dug later through a range of fills including the shelly material. It was sealed by a late demolition layer and so most likely related to the 19th century occupation. However, neither pit contained much artefactual material and their function was not definitively established.

A range of postholes and other more amorphous features were identified across the area (Figure 4.43). The postholes varied in size and shape, from circular to rectangular (Figure 4.44).

An unusual stone-lined 22cm diameter circular posthole was found near the drains (Figure 4.45). The stone was mostly basalt with a layer of small brick and degraded sandstone packing pieces underneath. Small fragments of unidentified and degraded wood were also observed in the fill. It was only 40cm deep, but still suggested the post was related to a relatively early European structure cut near the original foreshore level. Few artefacts were recovered from this layer.

Cut into the base was the remains of a shallow ditch [536] running approximately south from the section towards the original foreshore (Figure 4.46). The ditch had obviously been infilled but a small collection of worked bottle glass was found (discussed in Chapter 5). Such artefacts are unusual and generally are associated with early historic interactions between Māori and European settlers.



Figure 4.36 Plan of Area A during excavation showing location of the main features

4. Excavation Results



Figure 4.37 Stratigraphy from NW corner of excavation at SW part of carpark excavation (Area A)



Figure 4.38 Area A looking at NE corner



Figure 4.39 West facing section of stratigraphy showing demolition deposits relating to the original blacksmith's forge (Area A). Scale: 2 x 1m; 2 x 0.5m, and 0.3m

4. Excavation Results



Figure 4.40 East facing section at western end of the carpark excavation (Area A)



Figure 4.41 Feature [542], a very large posthole (Area A; top: plan; bottom: south facing section)

4. Excavation Results

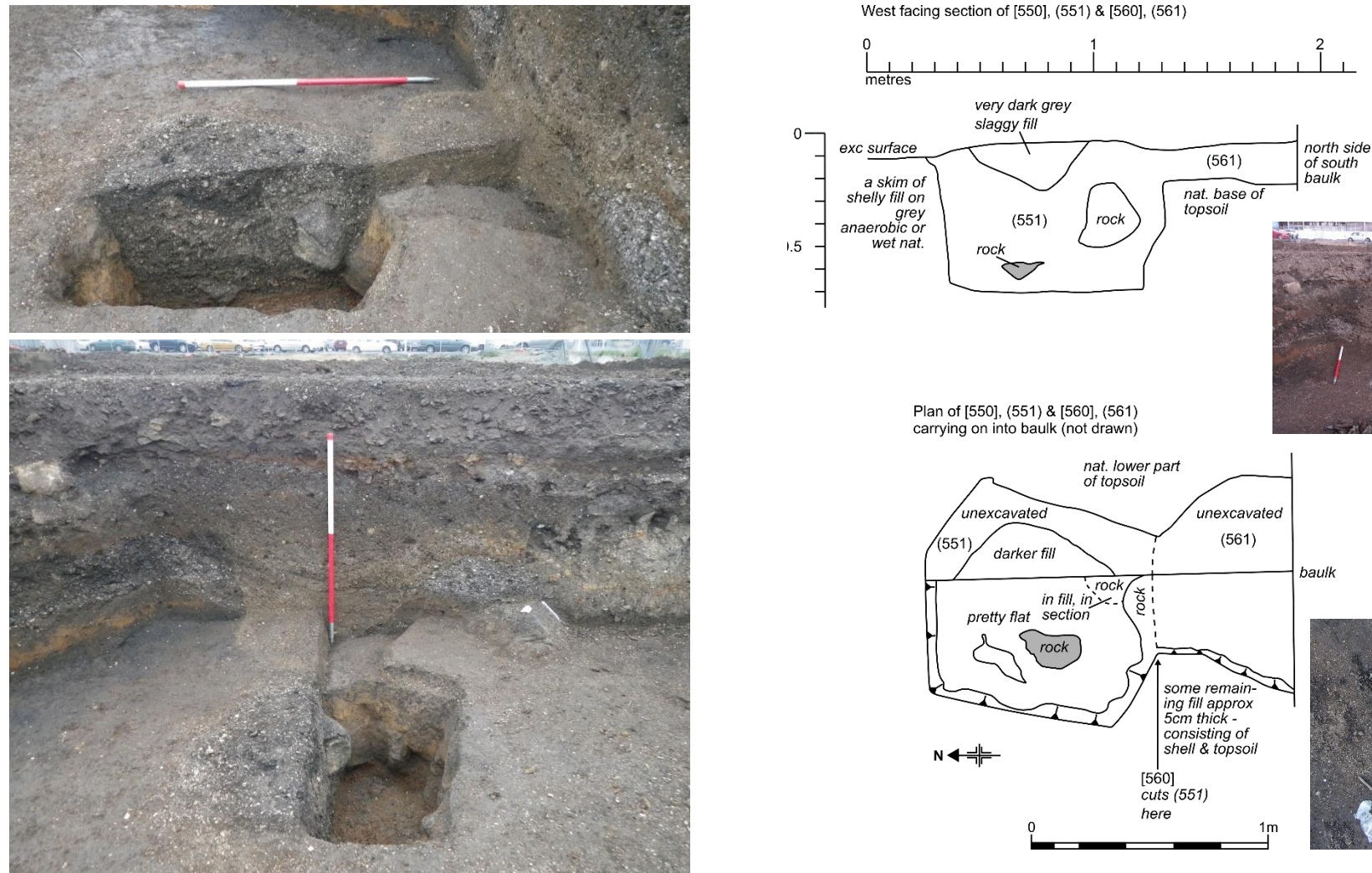


Figure 4.42 Features [550] and [560] in southwest corner of Stage 3 excavation with view of north facing section



Figure 4.43 Possible features at base level of SW corner of the carpark area



Figure 4.44 Postholes [499] and [500]



Figure 4.45 Stone-lined posthole, Feature [533]

4. Excavation Results



Figure 4.46 Left: excavation of ditch [536] at base of excavation (looking north). Right: recording of ditch in area where worked bottle glass was recovered

4. Excavation Results

4.4.2 Carpark Area – East Side

Excavation of the eastern side of the carpark was much simpler and the deposits much shallower than those towards the west. Features here (Figure 4.47, Figure 4.48) were within the top 1m of the carpark layer (with significantly less overlying material (Figure 4.49). Thin demolition layers containing 20th century and some 19th century material were found around 50cm below the asphalt and overlay the natural brown subsoil (Figure 4.50) into which features were cut.

Basalt stone foundations were found predominantly running north to south (Figure 4.47, Figure 4.48) running from the northern baulk to the south. Three such remnants were found across the carpark (Figure 4.25, Figure 4.51) including [210], discussed above at the western side of the excavation, and one further remnant [359] found in the middle of the excavation, although later work had destroyed the northern component (Figure 4.52). The basalt appeared to be from the quarry near the Stone Store and loose stones were found throughout the upper layers, suggesting that other such foundations had been demolished during later site clearance and levelling.

The remains of a double-breasted brick chimney [299] were identified at the end of the stone foundation [359] approximately 1.4-1.5m across cut into the subsoil (Figure 4.53–Figure 4.54). The bricks did not have a maker's mark, but most had a rectangular frog on one side. A smaller brick extension [301] was uncovered on the southern side of the feature, perhaps part of a fireplace relating to a later extension to the house or an external chimney. Three squarish postholes were uncovered under the brick.

Another long, 3.6 x 1m, brick structure [297] was also identified nearby (Figure 4.55). The bricks appeared to be machine-made. A pipe ran into the northeast corner of the structure, forking around the edges. This structure was most likely the base of a gas-fired bakery oven, as the historic research had identified a bakery in this area.

The stone foundations were removed from the area (Figure 4.56) during excavation and the ground stripped to reveal features cut into the subsoil. A 2.6m x 1.3m sub-rectangular pit [330] was clearly visible in the north-eastern part of the excavation (Figure 4.57–Figure 4.58). Several layers of infill were present in the pit and it is possible that the pit had been re-dug at least once. The material in the fills included soil, a crushed marine shell layer and a burnt charcoal layer over other mixed fill layers. The charcoal fill may have related to dumping of material from the nearby smithies or from a domestic fireplace. The pit mixture of cuts and fills suggested that the feature may have been of Māori origin and subsequently used during the colonial period.

Evidence of two postholes, [562] and [565] was also found on the southern side. Some mid-19th century artefacts were also recovered from the pit, suggesting that it had been used during the earlier part of the European use of the block (see discussion in Chapter 5).

Another shallower pit [332] was also found (Figure 4.59) to the west of [330]. This pit did not contain the same material as [330] and its function was not clear. A series of shallow circular indentations were observed in the base of the pit, suggesting it may have been a gardening feature. Soil analysis from the features (discussed below, Appendix 1) suggested that it had been used for grasses, perhaps indicating an area for growing or storing thatching material.

A rectangular feature [348] to the south was also identified with shallow indentations in the base.

Most of the other features identified in this area were post holes of various sizes and shapes (Figure 4.60–Figure 4.62). These included square and rectangular shaped postholes (Figure 4.61) that were associated with the 19th and 20th century structures on the property. Some smaller circular postholes (Figure 4.62) were reminiscent of pre-European Māori structures, but such attribution could not be definitive. A few amorphous features were also observed but were not able to be assigned a function.

4. Excavation Results

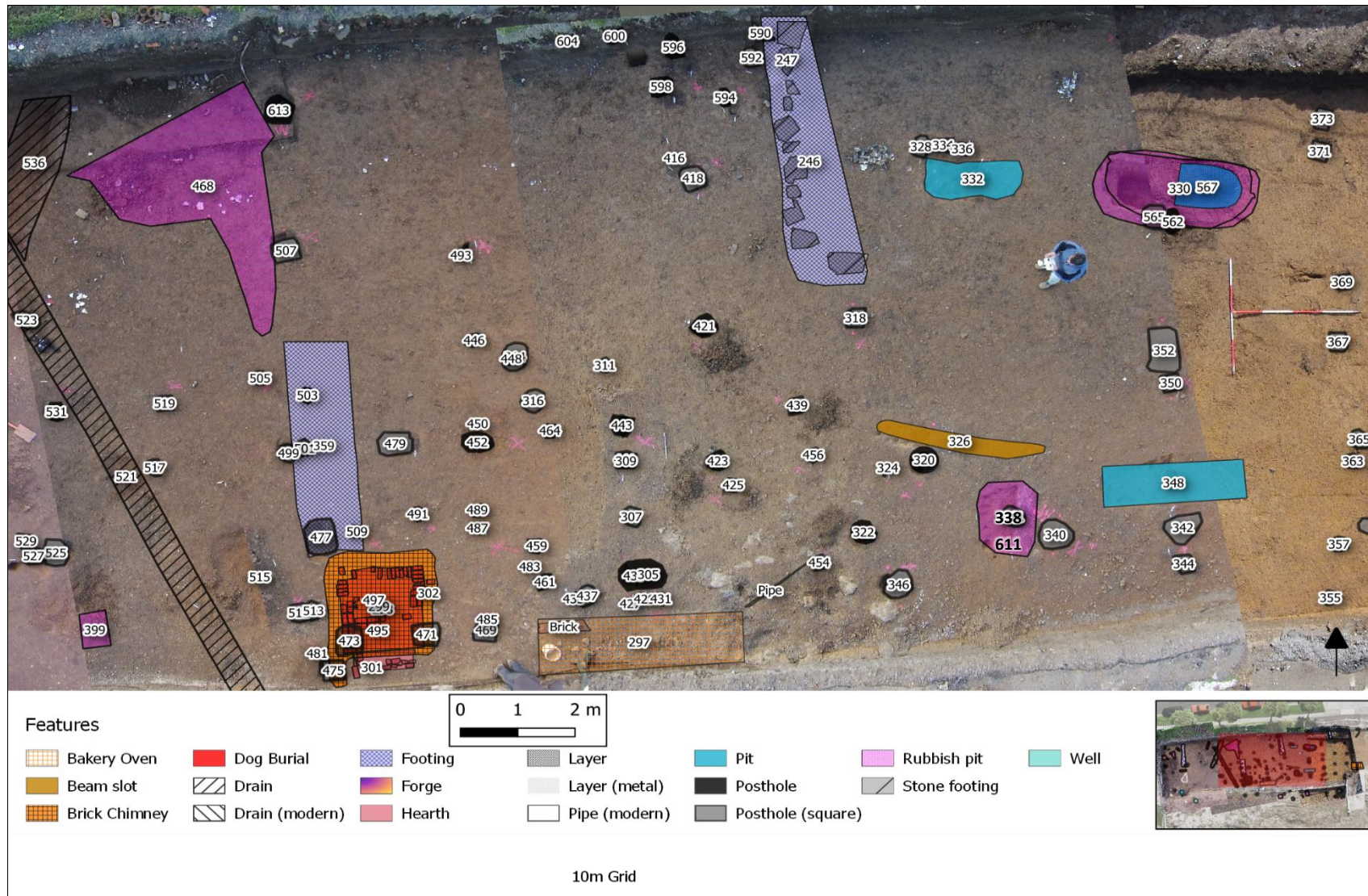


Figure 4.47 Plan of features excavated at eastern half of carpark

4. Excavation Results

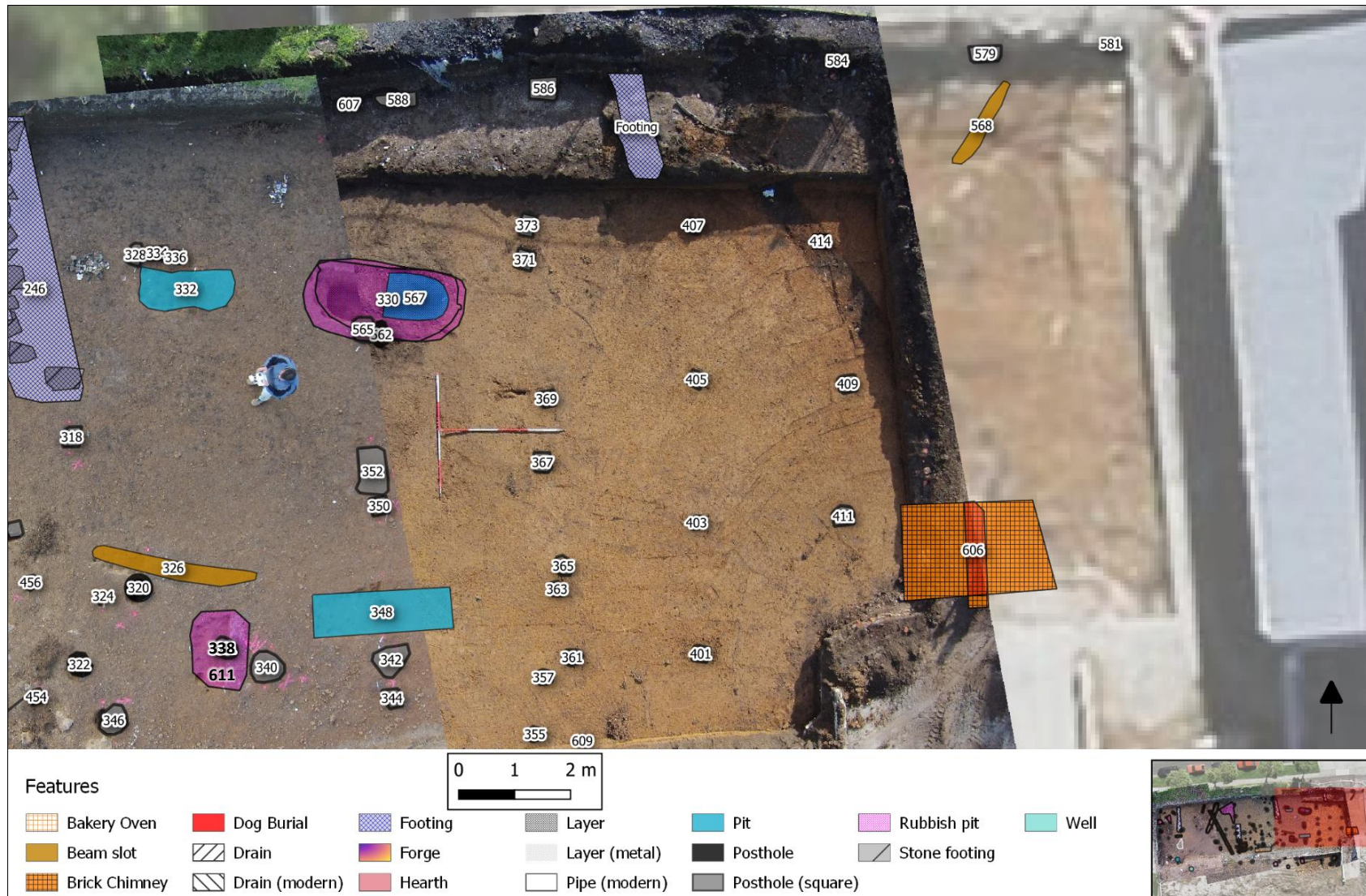


Figure 4.48 Plan of features excavated at north-eastern corner of carpark

4. Excavation Results



Figure 4.49. View of Stage 3 excavation looking west from eastern side of the carpark



Figure 4.50 South facing section along east side of carpark

4. Excavation Results



Figure 4.51 Stone foundation [246] (247) running from northern baulk to the south (top: looking east; bottom: plan view)

4. Excavation Results



Figure 4.52 Remnants of stone foundation [359] in centre of carpark excavation (looking north)



Figure 4.53 Remnant of brick chimney/fireplace (Features 298, 299 and 301)

4. Excavation Results



Figure 4.54 Plan of remnant of brick chimney/fireplace (Features 298, 299 and 301)

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Figure 4.55 Remains of brick bakery oven (Feature 297) looking east

4. Excavation Results



Figure 4.56. Looking east across the eastern end of the site illustrating postholes and pit features cutting the natural clay

4. Excavation Results



Figure 4.57 Excavation of Feature 330 and other related features, showing internal stratigraphy with burnt materials

4. Excavation Results

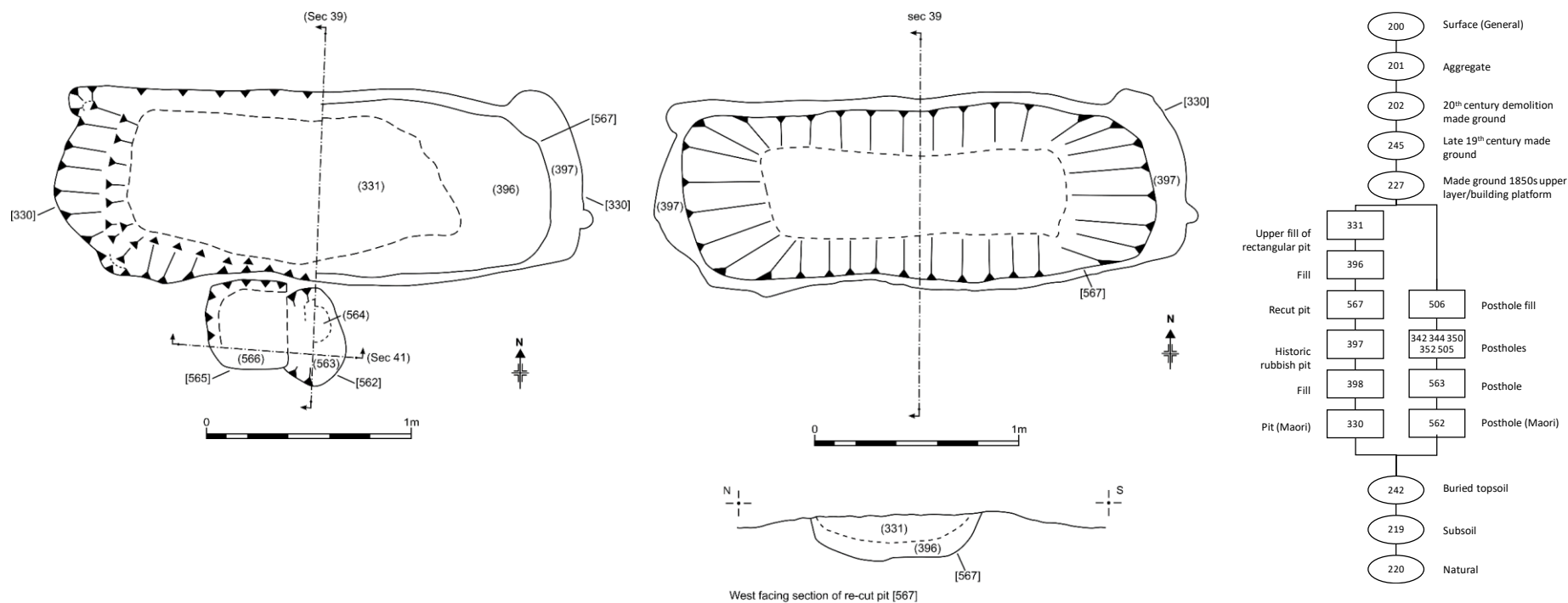


Figure 4.58 Plan of features associated with Feature [330] during excavation (left) and fully excavated (centre); and Harris Matrix of features associated with the pit and nearby

4. Excavation Results



Figure 4.59 Feature [332]

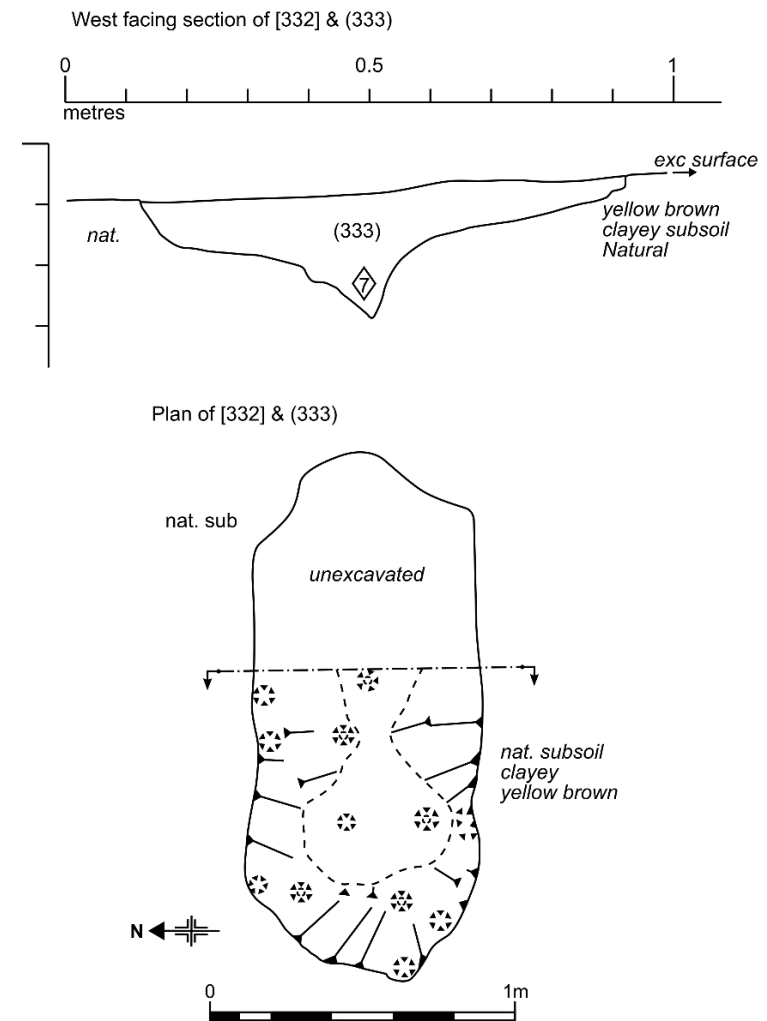




Figure 4.60 Posthole feature [314] with burnt clay infill showing square post pipe (448) (top: pre-excavation; bottom: half sectioned)



Figure 4.61 Square-rectangular postholes found in carpark east excavation (top: [405]; bottom: [586])



Figure 4.62 Circular postholes found in carpark east excavation (top: [489] and [487]; bottom: pit [433] with [429], [427], [431])

4. Excavation Results

4.4.3 South of the Carpark

The excavations in the ~3m strip south of the carpark were relatively limited as the ground had been cleared down to the same level as in the Stage 2 area. The carpark retaining wall did, however, offer a good stratigraphic view of the material to the north as well as a small number of features near the retaining wall that had been preserved (Figure 4.63–Figure 4.65).

Figure 4.63 shows the western end of the section south of the carpark and this is where the stratigraphy was deepest. Layers of rubble and shell material were the main features. To the right the shell material in the image is probably in its natural form with the shell mostly likely part of the original foreshore. Various intrusions from later periods have cut into the foreshore. The most obvious was the hole dug for a possible 1m x 1m well feature [259] at the western end of the section which is visible as a squarish feature at the base of the section (Figure 4.63). The water level here was not far off the original water table and whether this feature was effective for fresh water given the tidal flow that was likely here, or just served as a source of non-drinking water for the blacksmiths, is not known.

The complete section is shown in Figure 4.66–Figure 4.67. To the east the original ground surface rises. The shell material relating to the original foreshore diminishes and what remains is the ground surface created from the later 19th and 20th century building and demolition levelling of the lots.

East of the possible well feature (Figure 4.68), several features were found at the base of the section and included pits and post-holes (Figure 4.25). Figure 4.69 shows one possible large posthole excavated at the eastern end. Figure 4.70 shows a rubbish pit and some of the other pits and postholes identified. Some appeared to be related to the 19th and 20th century occupation, with rubbish disposal in the backyards following the small-scale reclamation of this area. It is possible that others could have been related to Māori occupation.



Figure 4.63. Stratigraphic sequence at the western end of the Stage 3 excavation site, with the well [259] seen in front of the section (arrowed). Scale: 2 x 1m

4. Excavation Results



Figure 4.64 Plan of features excavated at south of carpark (western side)

4. Excavation Results



Figure 4.65 Plan of features excavated at south of carpark, eastern end

4. Excavation Results

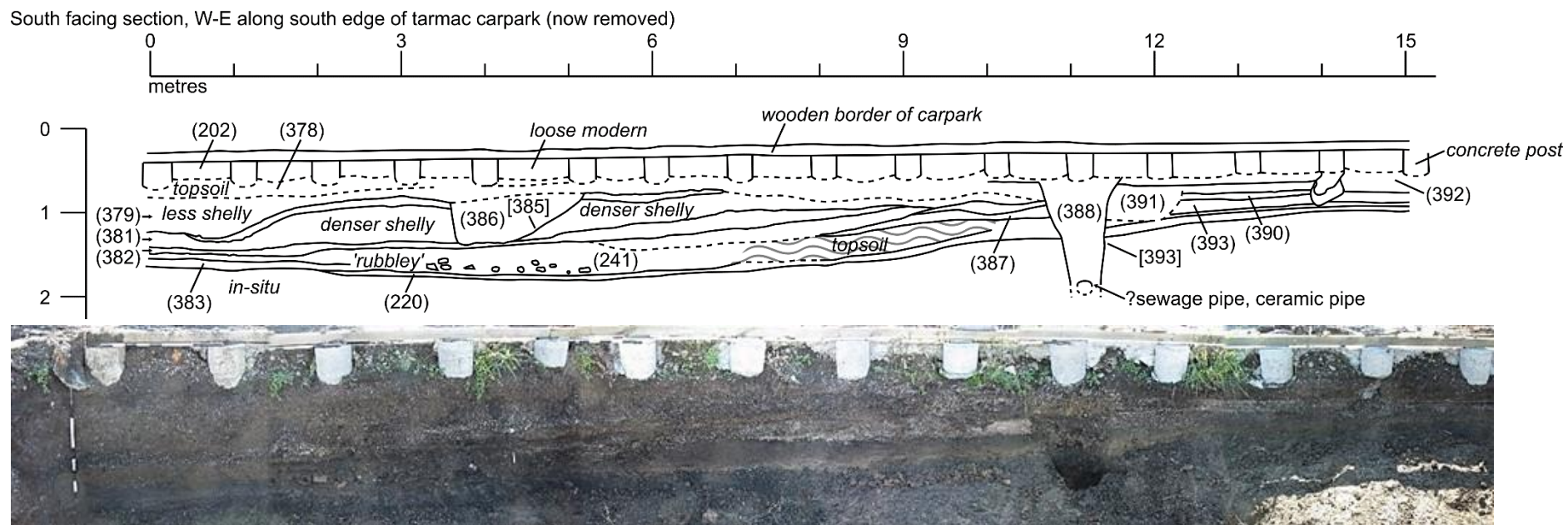


Figure 4.66 South facing section, south of carpark in Stage 3, western end

4. Excavation Results

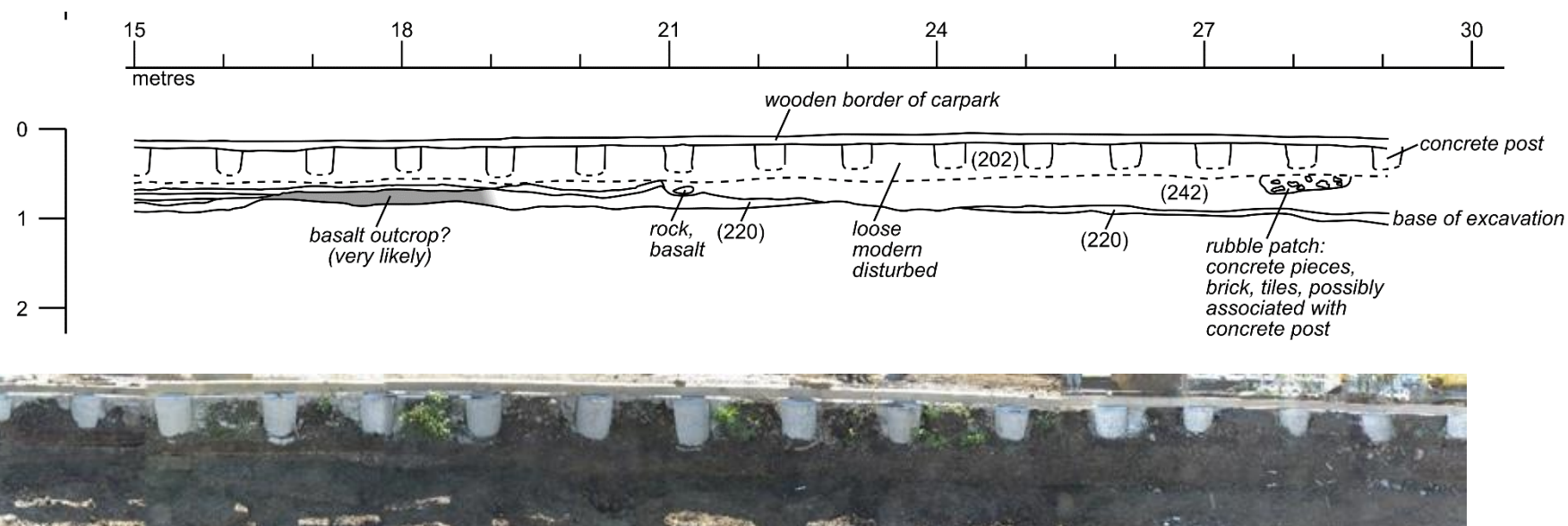


Figure 4.67 South facing section, south of carpark in Stage 3, eastern end



Figure 4.68 Possible well [259] – top: plan; bottom: south facing section

4. Excavation Results



Looking west



Looking North

Profile of [295] & (296)



Plan of [295] & (296)

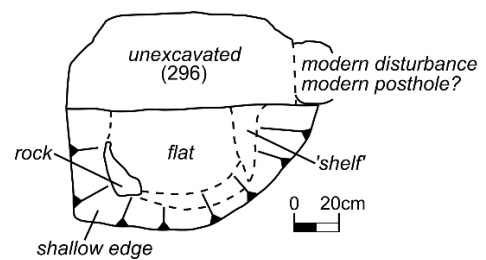


Figure 4.69 Feature 295 south of the parking lot

4. Excavation Results



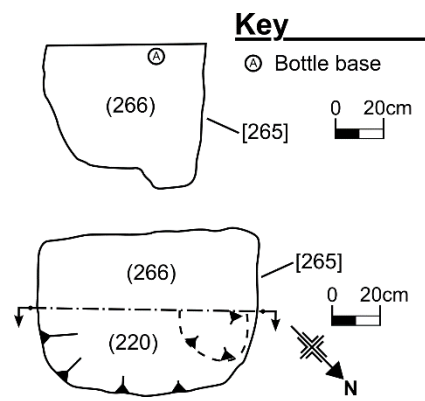
Top of refuse pit [271]



Posthole [279]



Feature 265 (266)



Features 269 (270)

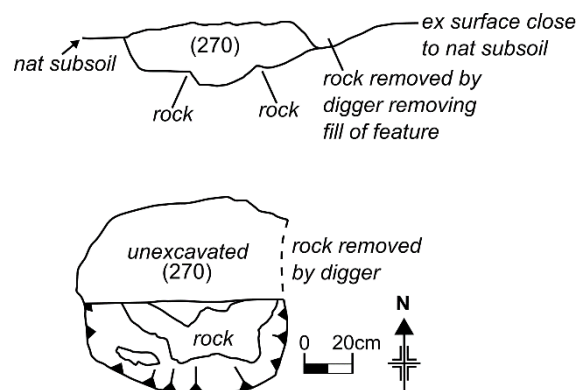


Figure 4.70 Features south of carpark

4.5 Summary of Results

Across the site, the majority of archaeological features related to 19th century domestic occupation, with features and occupation surfaces seen in plan and recorded at differing levels across the area. The most common features observed were postholes. These varied in size and shape, and were mainly related to domestic structures, although some were derived from industrial activities. Other features recorded consisted of scoria boulder footings, beam-slots, a well, drainage ditches, a historic period Māori storage pit as well as some potential historic period garden related features.

At the western end of the site a number of rectangular features with stone bases (some of which were bonded with mortar) were interpreted as the bases of forge boxes related to blacksmithing activities. The features were on two distinct levels and represent two different blacksmith operations on the site separated by approximately 20 years (based on historical research), with a house occupying the site following the demolition of the first smithy. Additional evidence of the first blacksmith's operations was the presence of the demolished forge chimney consisting of a large volume of firebricks, as well as tap, cinder and combination slag and the surviving base of the original forge box. The second smithy from the later 19th century seems to have been a large-scale operation with no fewer than four forge bases present.

Overlaying the results of the geophysical surveys (discussed in Chapter 3) on the excavated features provides some information regarding the effectiveness of such techniques in predicting the archaeological results. Figure 4.71 shows the archaeological plan superimposed on the geomagnetic results. There are some minor difficulties in correlating the overlays as the two phases of work were done some time apart and the accuracy of the initial surveys was not as detailed as later excavation plans, so comments can only be general in nature.

Figure 4.71 shows the archaeological features compared with the geomagnetic results. There are some possible elements which might match with the brick chimney in the southern central part of the block close to an anomaly observable in the geomagnetic data. Otherwise it is difficult to draw too much in the way of direct correlation between geophysical anomalies and excavated features. This is a bit surprising as the stone foundation walls might have been expected to be more apparent. In the western and central parts of the block, the results showed a range of high and low intensity elements which seem to fit the very mixed layering of metal, slag and other materials identified in demolition layers and pits there. Given the overall mixed up nature of excavated material found there, the results make sense but confirm the difficulty of using such techniques in heavily modified historic contexts.

The GPR results were similar (Figure 4.72). A high intensity area in the north central part of the survey area correlated to a rubbish dump that included horseshoes (see Chapter 5). Metal, slag and other material located in the western side of the block were spread across the area and may have given rise to the amorphous anomaly identified there. A possible foundation line associated with postholes (and possibly an infilled foundation ditch) may have given rise to a rectilinear anomaly identified in the eastern part of the block. As suggested in Chapter 3, this probably related to a previous house there.

Overall, however, while the results did reflect the general nature of archaeological deposits found during excavation, neither geophysical technique would be considered to have worked reliably at identifying most of the specific excavated archaeological features. While postholes were never likely to be identified, even largish brick structures were not reliably identified, and it would be ineffective to rely on geophysical results alone in determining the archaeological potential of an area such as this. The elements relating to the smithies were clear in excavation but mostly demolished, so that they were not distinguishable in the geophysical data. Even the house

4. Excavation Results

foundations, some of which were possibly identifiable in geophysical data, were by no means reliably found and the major stone foundations were masked by the demolition material in most cases.

A range of artefacts were recovered, both from in situ and secondary depositional contexts (e.g. demolition deposits). Glass and stoneware bottles, ceramic and other domestic related items were recovered, which is typical of mid-late 19th century settlement sites. Other items retrieved included trade tokens, coins, a large number of ferrous items including horseshoes, as well as copper nails that indicate boat building/repairing on the site. However, other artefacts that stood out were related to the military, in particular a small number of regimental buttons from the 14th and 50th Regiments, military belt buckles, a brass shotgun cartridge, and a Royal Navy epauletete stud, and a range of tools relating to the blacksmithing operations. Māori artefacts from the site included a broken re-worked argillite adze, as well as some chert and obsidian flakes and a collection of worked 19th century black beer bottle glass, related to historic Māori activities on the site. A small assemblage of animal bone was also collected from a number of features, as was fishbone and marine shell. These are described in detail in the next chapter.

4.5.1 Site Phasing

The main phases of activity discerned within the project area post-dated European contact and related to commercial and domestic occupation, and were as follows:

- Phase 1 – Post-European Contact Period Historic Māori Activity (1820-1840)
- Phase 2 – Early European Settlement and Ninnis' Stone Store (1841-1861)
- Phase 3 – Waikato Campaign of New Zealand Wars Period and Later 19th Century Commercial and Domestic Activity (1862-1900)
- Phase 4 – Post-1900 to Modern.

Figure 4.73 is a plan of the archaeological features identified according to the phase to which they belong.

4.5.2 Pre-European Landscape and Māori Settlement

No definitive archaeological deposits relating to the pre-European use of the area by Māori were encountered anywhere within the archaeological excavation, although some postholes, especially south of the carpark area examined in Stage 3, might pre-date European use of the property.

Although the volcanic tephra and lapilli derived soils would have made excellent cultivation soils, it was evident that any Māori garden soils and associated archaeological horizons that may once have been present had been truncated by earthworks relating to the early European occupation of the site. No pre-European palaeosols were encountered and it is likely that truncation extended a small way into the original subsoils. However, it was still possible to discern that the pre-European topography of the area had consisted of pronounced south and southwest trending slopes that followed the lava fields and bluestone outcrops down towards the original harbour shoreline.

The limited evidence of pre-European Māori use of the area was the small collection of lithics such as the argillite adze, chert and obsidian flakes found in various layers during excavation.

4.5.3 Phase 1 – Post-European Contact Period Historic Māori Activity (1820-1840)

Evidence of Māori activity during this period was relatively ephemeral but included two or three pits that appeared to be more similar to Māori storage pits than European refuse dumps, although in one case (context 330, Figure 4.57 and Figure 4.58), the pit may have been reused by European occupants for rubbish dumping. The demolition and landfill activities during the 19th and 20th centuries appear to have resulted in removing most evidence of the pre-European occupation along the original foreshore on the property. A small collection of artefacts including an adze fragment and a collection of worked bottle glass were most probably associated with the Māori occupation, the latter obviously post-contact, and may have been linked with the nearby 'Native Hostelry'.

4.5.4 Phase 2 – Early European Settlement and Ninnis' Stone Store (1841-1861)

Stage 1 features uncovered behind the Stone Store included the early quarrying activity that must have related to obtaining the material required to build the Stone Store. The quarry pits were quite distinctive, and it is likely that much of the stone used in the later foundations for the houses was also from this source. Later features including rubbish pits and other small depressions probably related to the period of the occupation of the Stone Store during the 19th century. No definitive evidence of the pleasure garden described in the historical records was identified behind the Stone Store, but the crushed shell path (120), the back-filling of the quarried pits, and some of the small depressions which could have related to planting of trees and possibly some small structures were all suggestive of landscaping for a garden. It is possible these features were put in during Phase 3 use (see below).

Evidence of an early smithy was identified (Figure 4.40) in the form of the collapsed remnants of a forge along the Wharangi Street side. As noted in Chapter 2, an 1862 lease advertisement stated that a 'large Mechanic's Shop and Smithy is erected upon the immediate corner; roomy out-buildings, stables, &c., stand upon the opposite inner extremity',²⁵ which would fit this feature. This forge was found under later material used to level the property and below the remnants of the Boland smithy from the 1880s.

4.5.5 Phase 3 – Later 19th Century Commercial and Domestic Activity (1862-1900)

The majority of features recovered related to this period, with a range of stone foundations and postholes associated with the various houses and other buildings present. Levelling of the western side of the property had been undertaken with layers of material, including shell, dumped on the street frontages to create level building platforms.

²⁵ *Daily Southern Cross*, 11 February 1862 p1,2.

4. Excavation Results

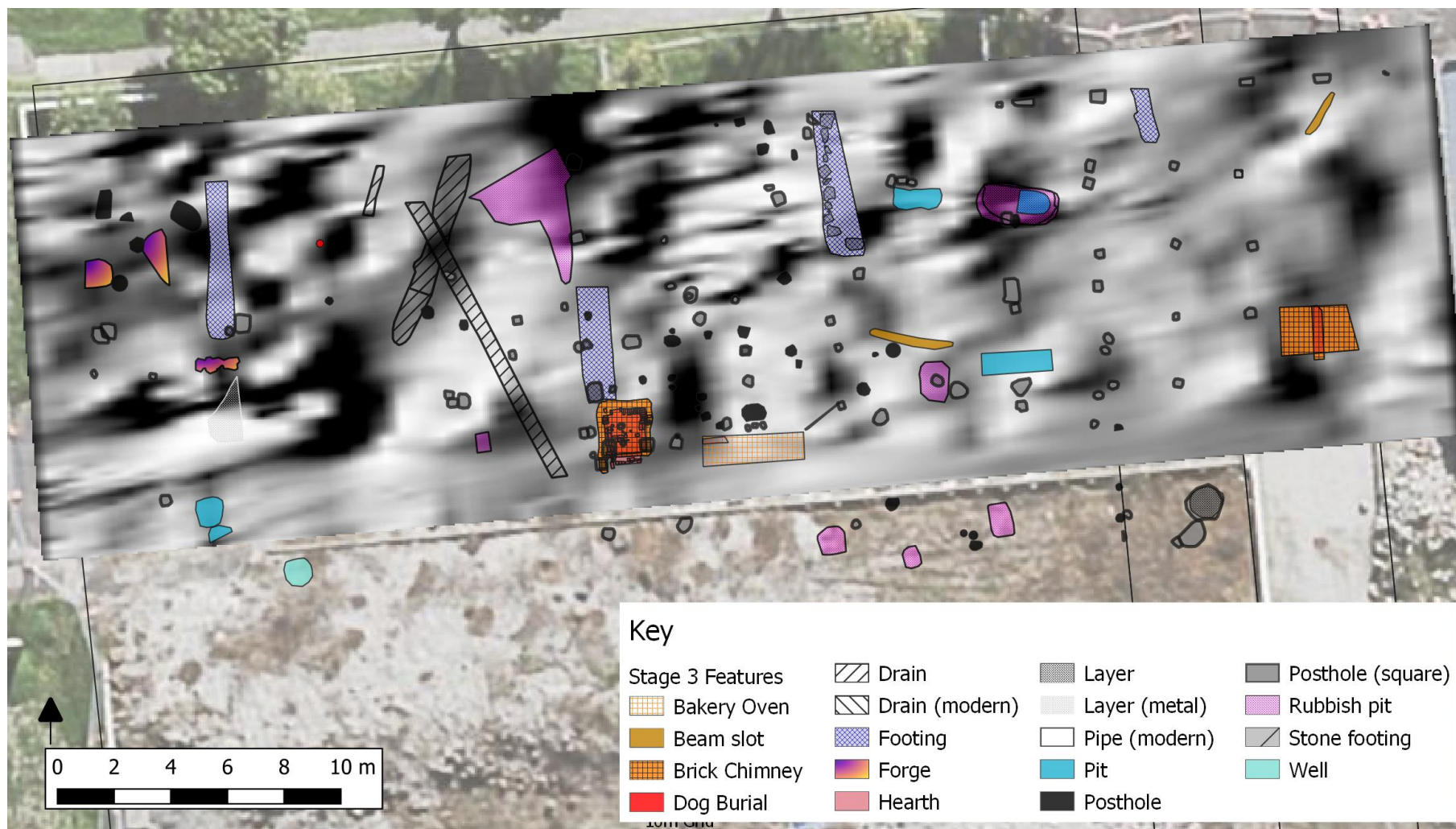


Figure 4.71 Overlay of geomagnetic results with excavated archaeological features

4. Excavation Results

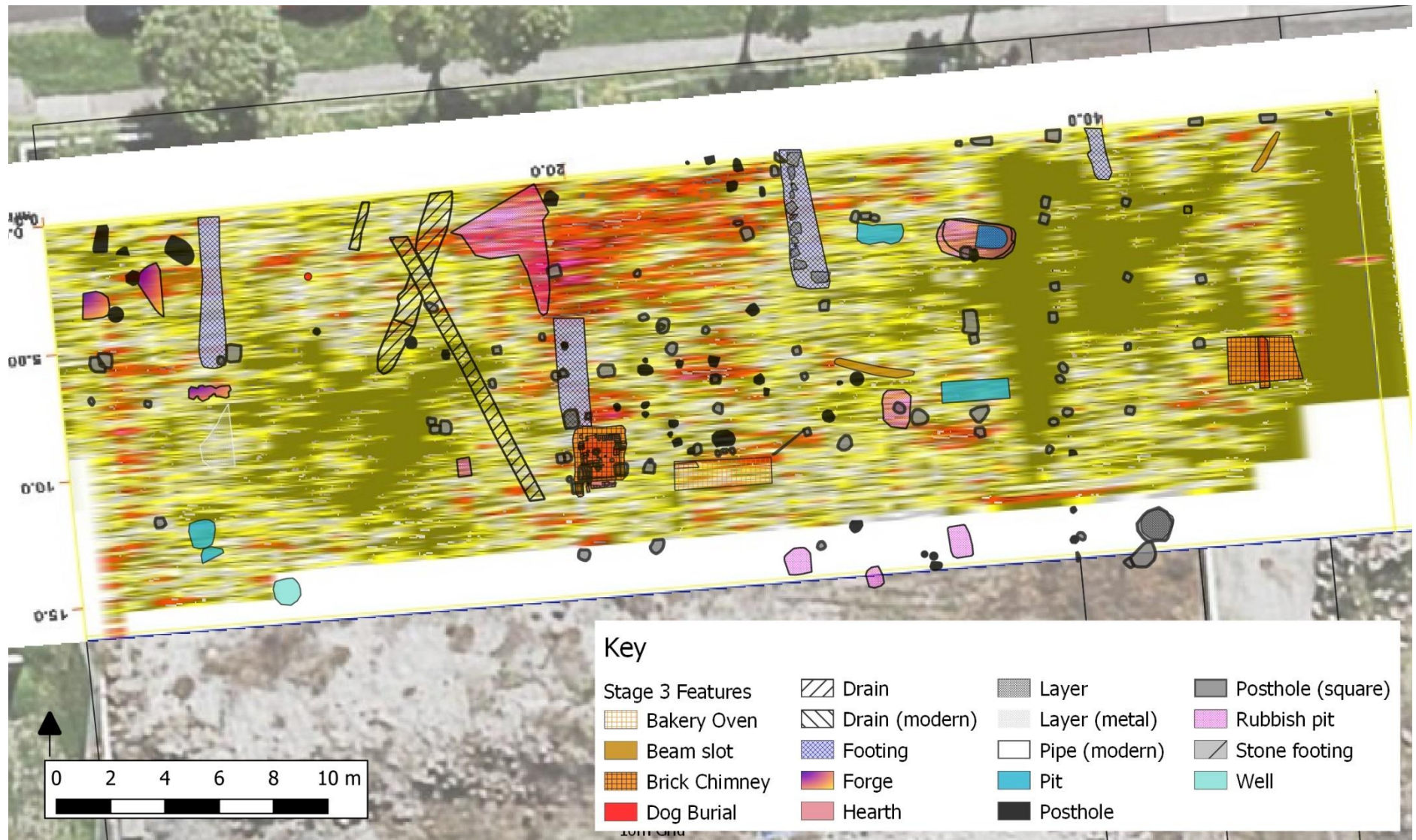


Figure 4.72 Overlay of GPR results (0.5m depth) with excavated archaeological features



Remains associated with the (later) Boland smithy suggested at least four forges on the corner of Wharangi Street and Princes Street, with large quantities of metal recovered from the area.

Military artefacts (described in Chapter 5) may also relate some of the rubbish pits and other features to the Fencibles period.

The stone foundations (Figure 4.74) identified in the upper layers of the property suggest they related to the houses built from the 1850s onwards in these allotments and visible in photographs dating to the 1870s (Figure 2.9), using material quarried to the south. Overlaying the archaeological features on 20th century survey plans suggests that the stone footing may have come from the wooden house adjacent to the Stone Store identified in DP 25555 dated 1935 (Figure 4.75), possibly along the western wall. It is possible that the stone foundation relates to an earlier structure, but it is difficult to be definitive as the known structure was gone by the 1970s (see below) and the allotment was subdivided later and the area cleared.



Figure 4.74 Stone footing at eastern end of Stage 3 excavations (modern drain visible to the right)

The stone foundations found in the centre of the Stage 3 excavations did appear to correlate with the house identified on DP 52360 dated 1962 (Figure 4.76). The foundations recovered seem to relate to parts of the western and eastern walls, although the 1962 plan suggests an extension to the house along the north-eastern corner beyond the stone foundation.

At the southwest corner, the excavated brick chimney/fireplace appears to fit this house convincingly – possibly starting as an external chimney, but either removed or truncated with the remodelling of the house.

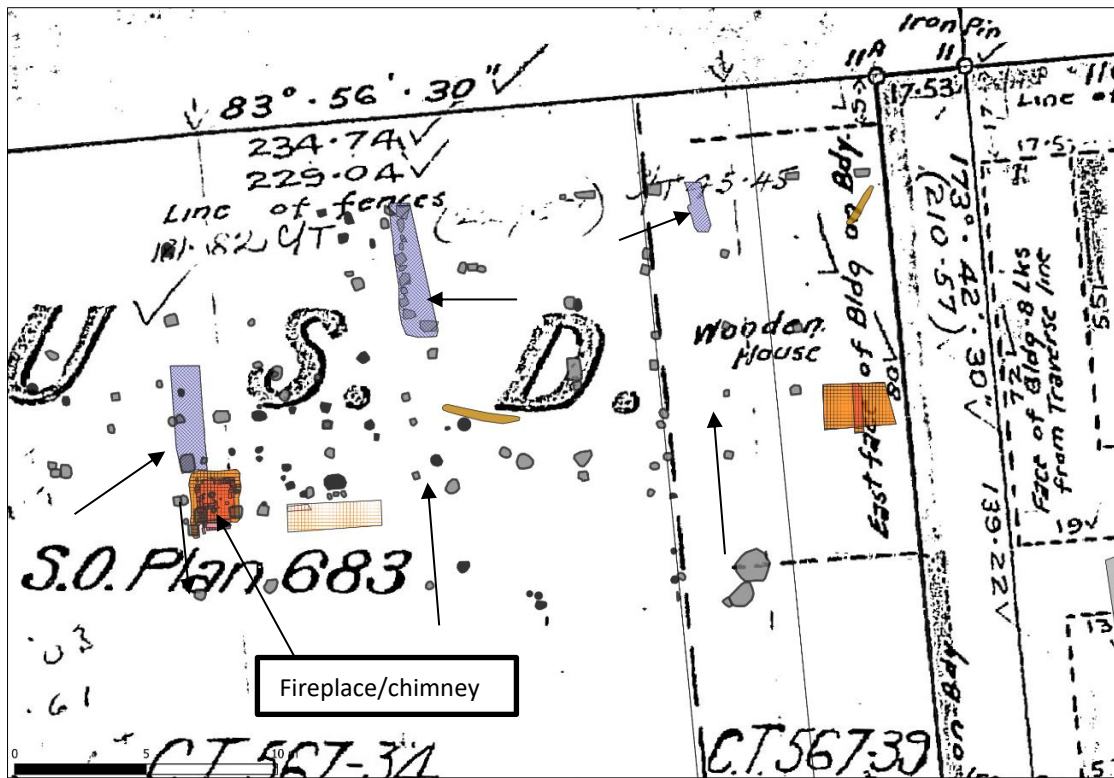


Figure 4.75 Overlay of some of the excavated archaeological features on DP 25555 dated 1935, showing 'Wooden House' at 17 Princes Street. Stone footings identified by arrow along with postholes (black and grey) (See Figure 4.25 for additional information)

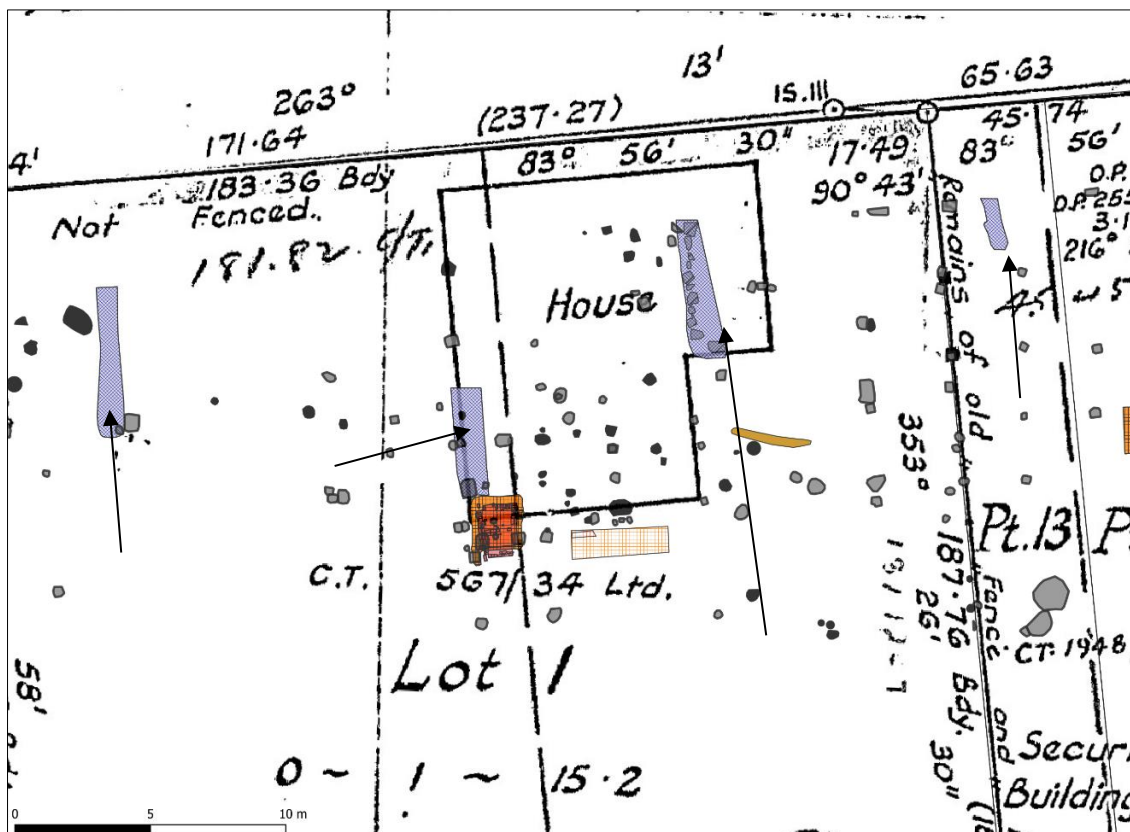


Figure 4.76 Overlay of some of the excavated archaeological features on DP 52360 dated 1962, showing 'House' at 15 Princes Street. Stone footings identified by arrow (See Figure 4.25 for additional information) with fireplace/chimney area located at the southwest corner of the house

4.5.6 Phase 4 – Post-1900 to Modern Period

Examination of aerial photographs shows some of the development that occurred on the site in Phase 4. In 1940, the house at 15 Princes Street was largely a square core with an extension to the south (Figure 4.77). By 1955 (Figure 4.78), there is an eastern extension that gives it the footprint shown in Figure 4.76. The house was gone by 1967 (Figure 4.79).

None of the 20th century plans or photos show a structure at the western end of the property, which suggests that archaeological features found there do relate to the 19th century activities.

Postholes associated with various structures were apparent and most likely to the range of houses built from the late 1800s and into the 20th century. These were also probably subject to various modifications during that time. The posthole pattern also suggests that there was a structure to the eastern side of the 'House' and west of the 'Wooden House' (Figure 4.75).

The features identified in the Stage 2 excavation in the southwest of the project area were overlaid with survey plans from 1962 when a number of warehouses had already been built (Figure 4.80). The aerial photographs from 1940 to the 1980s show the build-up of this part of the site (Figure 4.77 – Figure 4.79, Figure 4.81) and suggest that most of the structures built there were from the 1950s onwards. The drains appear to have been truncated by the footprint of the 'Jandal Factory' (Figure 4.80) and so probably related to pre-1950 work there, which is also supported by the material found in the rubbish pit (123) which puts them in the pre-1950 date range.

The other features and deposits that related to the post-1900 occupation provided evidence of the demolition of both the mid- and late 19th century commercial, industrial and domestic buildings that once stood on the site. The subsequent clearance and levelling of the site is also demonstrated by a number of made ground deposits that contained both artefactual and structural elements dating to the second half of the 19th century.

Some of the modern structures that post-dated the 1950s heavily impacted archaeological layers and perhaps features relating to the earlier phases of the site by way of vertical truncation, and this was particularly the case in the northern half of the site fronting Princes Street where a number of drains (connected with 20th century commercial premises and later stormwater drains and service trenches) crossed the excavation.



Figure 4.77 Aerial dated 1940 showing property (<http://retrolenz.co.nz> SN139 30/2). Stone Store outlined by box with house at 15 Princes Street indicated with an arrow



Figure 4.78 Aerial dated 1955 showing property (<http://retrolenz.co.nz> SN583 1921/32). Stone Store outlined by box with house at 15 Princes Street indicated with an arrow



Figure 4.79 Aerial dated 1967 showing property (<http://retrolenz.co.nz> SN1875 5045/19). Stone Store indicated by box, with house at 15 Princes Street no longer present

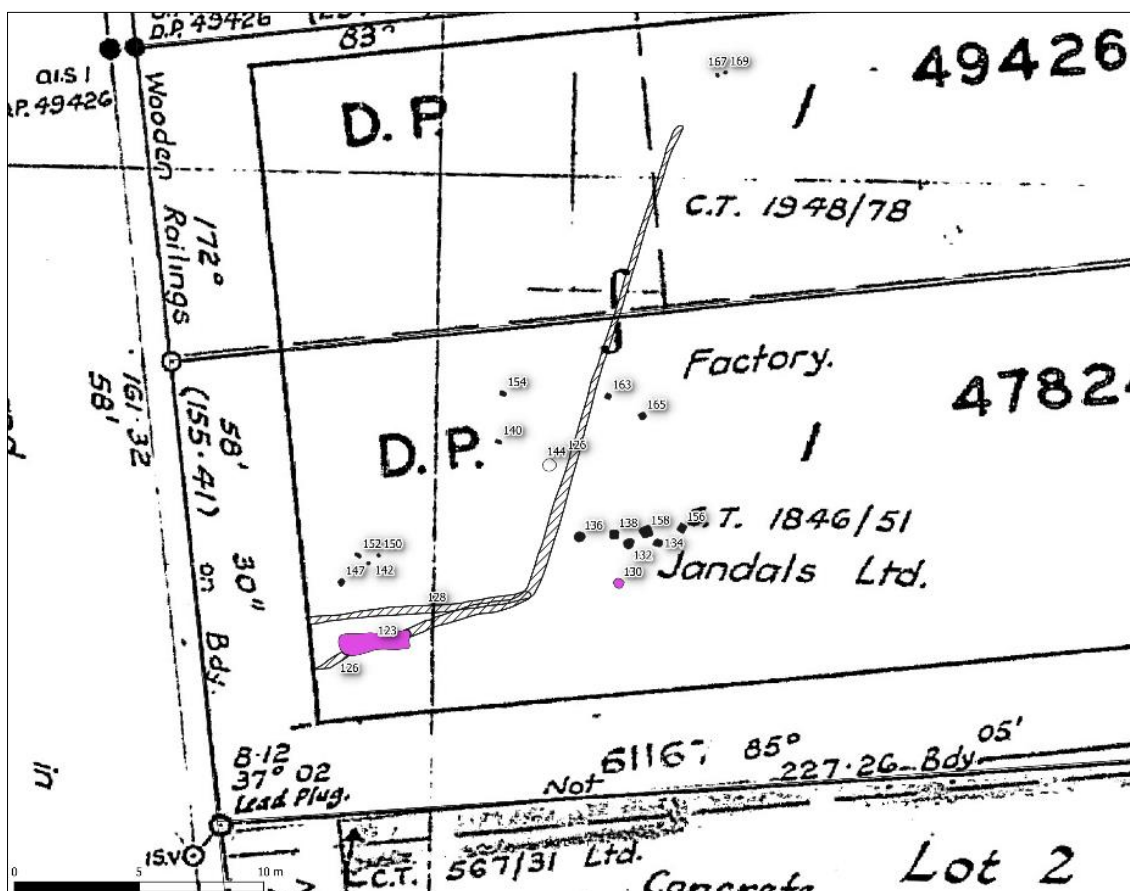


Figure 4.80 Overlay of some of the excavated archaeological features from Stage 2 on DP 52360 dated 1962



Figure 4.81 Aerial dated 1981 showing property (<http://retrolenz.co.nz> SN5905 A/5). Stone Store indicated

5 ARTEFACT ANALYSIS

5.1 Introduction

The majority of the artefact analysis was undertaken by Jen Low (ceramic, stoneware and glassware, Figure 5.1), Richard Shakles (tobacco pipes, militaria (assisted by David Rudd) and miscellaneous items), while Ben Jones undertook the analysis of metals. The assemblage overall comprised a range of materials common to 19th century sites (bottle glass, ceramics, stoneware, tobacco pipes, metal tools, fixtures, etc, and wooden items). However, the militaria assemblage is likely to have derived from several historical activities: fencible settler activity, the use of the site as a Commissariat for provisioning Imperial troops engaged in the Waikato Campaign of the New Zealand Wars, and by Naval volunteers stationed in the area during the same conflict.

Overall, despite a high degree of fragmentation, preservation of materials was good, with wooden and other organic artefacts surviving in good condition. Considering the modest size of the surviving areas of archaeology, the total number of individual artefacts recovered (around 4,000) is quite high and reflects the mercantile, commercial and domestic aspects of the history of the site.

Ceramic, stoneware, glassware and clay pipes were cleaned using a toothbrush in warm water. Once dry, material was sorted by context, with ceramic items within each context separated by decorative technique, pattern, colour and vessel form, and stoneware and glassware sorted by vessel form and colour. The material recovered was generally heavily fragmented and where fragmented items could potentially relate between contexts only one item was counted towards overall MNV (minimum number of vessels).

Ceramics, stoneware and glassware are presented for each excavation stage, given the richness of the material recovered. Other artefact types including metal and clay pipes are presented in separate sections as the overwhelming majority of data was from the Stage 3 excavation and the interpretation of the material from other areas was incorporated into the overall assemblage.



Figure 5.1 Jennifer Low sorting horseshoes from Stage 3 excavation

5. Artefact Analysis

5.2 Stage 1 Artefacts

5.2.1 Ceramic

A total of 1150 fragments of ceramic were collected from 9 contexts from the excavations to the rear of the Onehunga Stone Store (Table 5.1). The material recovered was generally highly fragmented, and where fragmented items could potentially relate between contexts, only one item was counted towards overall MNV (minimum number of vessels).

The fill of a large quarry pit (context 105) produced the largest portion of the assemblage, with 984 fragments collected. Ceramic material was generally highly fragmented with very few near complete vessels recovered.

Table 5.2 details the minimum number of vessels represented, with tableware items accounting for 179 of the 208 items, or 86% of the assemblage. Plates, numbering 46, may have consisted of saucers, side plates or dinner plates where the size of the plate could not be determined. Four items remained unidentified. Creamware vessels, a common fabric for 19th century ceramic items, made up 195 of the vessels (94%).

Five items carried maker's marks which were able to be identified and date range of production estimated. All were recovered from the large quarry pit, context 105. The potential manufacturing date for all of these items spread from 1820 to 1870, suggesting the material is likely to have related to the store and commissariat period of the site occupation.

Table 5.1 Summary of Stage 1 ceramics (Stone Store)

Context	NISP	MNV	Context	NISP	MNV
103	21	3	112	8	2
104	30	6	114	1	1
105	984	183	116	2	1
107	3	1	118	92	9
109	4	1			

Decorative Techniques

Of the 208 vessels recovered from excavations at the rear of the Onehunga Stone Store, 195 contained some form of decoration, with 13 being undecorated examples. Table 5.3 summarises the decorative techniques used by vessel fabric type and provides an overall percentage for each technique.

The dominant decorative technique within the assemblage was underglaze transfer printed designs, generally in a single colour. Transfer printed wares comprised 169 vessels or 81.2% of the sample with a further 1% having transfer prints with additional decorative techniques.

The range of transfer print colours is shown in Table 5.4, providing both the MNV for each colour and the percentage of the total sample of transfer printed wares. Analysis indicates that blue print was the most common, with 55.6% of the total sample; however this increases to 66.9% when dark blue and flow blue are included.

5. Artefact Analysis

Table 5.2 Minimum number of individual vessel forms by fabric, Stage 1 (Stone Store)

Vessel Form	Blueware	Creamware	Earthenware	Semi-Vitreous	Terracotta	Total
Bathroom/Bedroom						(19)
Chamberpot		11				11
Ewer		3				3
Pot Lid		1				1
Soap Dish?		1				1
Toilet Box		1				1
Washbowl		2				2
Household						(5)
Candle Holder		2				2
Child's Teaset - Teacup				1		1
Flowerpot					2	2
Kitchenware						(1)
Cheese Pot		1				1
Tableware						(179)
Bowl		5				5
Child's Mug		1				1
Child's Plate		1				1
Chinese Sauce Dish				1		1
Cup		1				1
Dinner Plate		7				7
Dish Lid		2				2
Egg Cup		3		1		4
Jug	1	3				4
Mug		2				2
Plate		45		1		46
Platter		8				8
Saucer		35		2		37
Serving Dish		3				3
Serving Dish - Vegetable		1				1
Side Plate		7				7
Teacup	1	42		2		45
Teapot			1			1
Teapot Lid		1				1
Tureen		1				1
Tureen Lid		1				1
Unidentified						(4)
Unidentified		4				4
Total	2	195	1	8	2	208

Table 5.3 Decorative techniques by vessel fabric and as a percentage of the Stage 1 ceramic assemblage

Decorative Technique	Blueware	Creamware	Earthenware	Semi-Vitreous	Terracotta	Total	%
Hand-painted		11		4		15	7.2
Hand-painted/Transfer				1		1	0.5
Relief	1	1				2	1.0
Relief/Hand-painted		1				1	0.5
Relief/Transfer		1				1	0.5
Sponged		4				4	1.9
Sprigged		1		1		2	1.0
Transfer		169				169	81.2
Undecorated	1	7	1	2	2	13	6.2
Total	2	195	1	8	2	208	100

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Table 5.4 Transfer print by colour, MNV and percentage of total Stage 1 transfer printed wares

Transfer Colour	MNV	% of Total Sample
Black	11	6.5
Blue	94	55.6
Brown	8	4.7
Dark Blue	3	1.8
Dark Grey	1	0.6
Dark Grey/Red	1	0.6
Flow Blue	16	9.5
Green	12	7.1
Grey	8	4.7
Grey/Black	1	0.6
Polychrome	1	0.6
Purple	10	5.9
Purple/Yellow/Green	1	0.6
Red	1	0.6
Washed Black	1	0.6
Total	169	100

Context 103: Topsoil layer

Twenty-one fragments of ceramic were collected from context 103 with 19 fragments likely relating to vessels identified elsewhere. These included seven fragments of a Willow patterned plate and a fragment of a grey Rhine patterned plate, single fragments of a gilt banded and a blue Fibre patterned saucer, and five fragments from at least two teacups bearing unidentified patterns. One fragment of plain white ceramic was also collected. Fragments contributing to minimum numbers of vessels included a fragment of a blue printed saucer (OSS013)²⁶ and a single fragment of a purple printed plate (OSS118).

Context 104: Upper Pit Fill [106]

Thirty fragments of ceramic were collected from context 104 with 24 fragments likely relating to vessels calculated elsewhere. Six fragments contributed to overall MNV with each fragment representing a single vessel form. These included a grey Rhine print dinner plate, the well of a Tealeaf saucer, a fragment of a blue sponged saucer (OSS077), a green print saucer (OSS115), a green print teacup (OSS116) and a purple print chamber pot (OSS117). None of the ceramic items carried maker's marks.

Context 105: Secondary Pit Fill [106]

There were 984 individual fragments of ceramic collected from the large quarry pit, representing a minimum of 183 individual vessels (Table 5.5). Much of the material was highly fragmented although a number of larger sherds were present. In this context 172 of the items were Creamware, comprising 94% of the vessel assemblage.

Tableware items (n=156) accounted for 85% of the vessels recovered, with plates (of unknown sizes) calculated at 42 examples, teacups at 39 examples, and saucers at 28 examples. Examining the teacups and saucers indicated a potential for only seven matching pairs: single pairs of

²⁶ The prefix OSS indicates Onehunga Stone Store and the numbering applies to new unidentified patterns found at the site.

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Alhambra, Banded (gilt), Fibre, sprigged, and OSS009 patterns, and two pairs of OSS005 pattern. The Willow pattern was present on a minimum of 24 tableware items including a teacup, bowls, platters, plates, serving dishes and tureens (Figure 5.2–Figure 5.4). One of the more unusual tableware items recovered was a partially complete Chinese sauce dish with a transfer print and hand-painted dragon design (OSS050, Figure 5.6, right). Items manufactured specifically for children included a plate with a floral relief rim and the alphabet transfer printed in the well (OSS002, Figure 5.5, right), and a portion of a green transfer printed mug (OSS014).

Eighteen individual items were recorded within the bathroom and bedroomware category including 10 chamber pots, three ewers, two washbowls, and single examples of a pot lid, soap dish and toilet box. Only two items, a washbowl and a ewer, had a matching pattern (OSS013). The pot lid, possibly from a toothpaste, was decorated with a polychrome image featuring a woman leaning on a windowsill with turrets of a building beyond (OSS025, Figure 5.7, right).

General household items included a teacup from a child's teaset, a portion of a candle holder and two terracotta flower pots. A single cheese pot was recorded within the kitchenware category. Four items remained unidentified, two of which are commonly referred to as Cornishware.

Seven items carried manufacturer's marks, with five of these able to be identified; the date range of production is provided in Table 5.6. The earliest possible date for manufacture of an item was 1820, while the latest date of production was 1870, which suggests the material was discarded during the use of the premises as a store and commissariat, with items likely manufactured c.1850 to mid-1860s.

Twenty-five ceramic patterns were identified in all, with 86 patterns remaining unidentified and assigned a unique number (e.g. OSS001). Figure 5.2–Figure 5.4 show several of the identified ceramic patterns recovered from context 105 while Figure 5.5–Figure 5.7 show some of the unidentified patterns.

Table 5.5 Vessel form and fabric, context 105

Vessel Form	Creamware	Blueware	Earthenware	Semi-Vitreous	Terracotta	Total
Bathroom/Bedroom ware						(18)
Chamber pot	10					10
Ewer	3					3
Pot Lid	1					1
Soap Dish?	1					1
Toilet Box	1					1
Washbowl	2					2
Household						(4)
Candle Holder	1					1
Child's Teaset - Teacup				1		1
Flowerpot					2	2
Kitchenware						(1)
Cheese Pot	1					1
Tableware						(156)
Bowl	5					5
Child's Mug	1					1
Child's Plate	1					1
Chinese Sauce Dish				1		1
Cup	1					1
Dinner Plate	5					5
Dish Lid	2					2
Egg Cup	2			1		3

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Vessel Form	Creamware	Blueware	Earthenware	Semi-Vitreous	Terracotta	Total
Jug	3	1				1
Mug	2					2
Plate	41			1		42
Platter	8					8
Saucer	27			1		28
Serving Dish	2					2
Serving Dish - Vegetables	1					1
Side Plate	7					7
Teacup	37			2		39
Teapot			1			1
Teapot Lid	1					1
Tureen	1					1
Tureen Lid	1					1
Unidentified						(4)
Unidentified	4					4
Total	172	1	1	7	2	183

Table 5.6 Vessel manufacturers and date range of production, context 105

Vessel	Manufacturer	Date Range
Teacup	Copeland late Spode	1847-1867
Toilet Box	Davenport	1820-1860
Dinner Plate	Davenport	1850-1870
Saucer	H.N.A.	Unidentified
Platter	Podmore, Walker & Co.	1834-1859
Plate	T	Unidentified
Platter	Thomas Godwin	1834-1854



Figure 5.2 Alhambra pattern saucer (left), Forest pattern saucer (centre), and Windsor pattern teacup (right)

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Figure 5.3 Dinner plate bearing Eton College print in brown (left) and base of chamber pot bearing Missouri print in blue (right)



Figure 5.4 Fibre pattern saucer (left) and Willow pattern platter (right)



Figure 5.5 Hand-painted saucer OSS001 (left) and relief/transfer printed child's plate OSS002 (right)



Figure 5.6 Blue transfer printed saucer OSS005 (left) and hand-painted/transfer Chinese Sauce Dish (right)



Figure 5.7 Two views of mug decorated with an unidentified print OSS088 (left and centre) and polychrome pot lid (right)

Context 107: Posthole Fill

Three fragments of ceramic were collected with a fragment of a Bouquet printed plate and a fragment of a Willow printed plate not contributing to overall MNV. A single fragment of a teacup was decorated with an unidentified purple print (OSS090).

Context 109: Posthole Fill

Four fragments of ceramic were collected from context 109 including a fragment of a Willow patterned side plate and a fragment of a flow blue printed saucer (OSS086). Two fragments of a flow blue printed candle holder (OSS091) contributed to overall MNV.

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Context 112: Posthole

Eight fragments of ceramic were collected, including five fragments of a flow blue printed plate (OSS092), one fragment of a flow blue printed teacup (OSS093) and two fragments of plain white ceramic where vessel form could not be identified.

Context 114: Posthole

A single fragment of a black printed saucer bearing an unidentified print (OSS094) was collected.

Context 116: Posthole

A fragment of a blue printed plate (OSS028) did not contribute to overall MNV, while a plate fragment was decorated with an unidentified grey print (OSS095).

Context 118: Pit

Ninety-two pieces of ceramic representing a minimum of nine individual vessels were collected from context 118, all from within the Tableware category (Table 5.7). Forty-seven fragments representing a minimum of three vessels were decorated with the blue Willow pattern. Twenty-six fragments related to a single teacup decorated with the Formosa pattern (Figure 5.8). Thirteen fragments of a teacup were decorated with a Fibre pattern. This example is not to be confused with the commonly seen Fibre pattern (Figure 5.9).

Two saucers, a plate and an egg cup were decorated with unidentified transfer prints.

Table 5.7 Vessel form and fabric, context 118

Vessel Form	Creamware	Total
Tableware		(9)
Dinner Plate	1	1
Egg Cup	1	1
Plate	1	1
Saucer	3	3
Serving Dish	1	1
Teacup	2	2
Total	9	9



Figure 5.8 Partially reconstructed teacup bearing the Formosa pattern, from context 118

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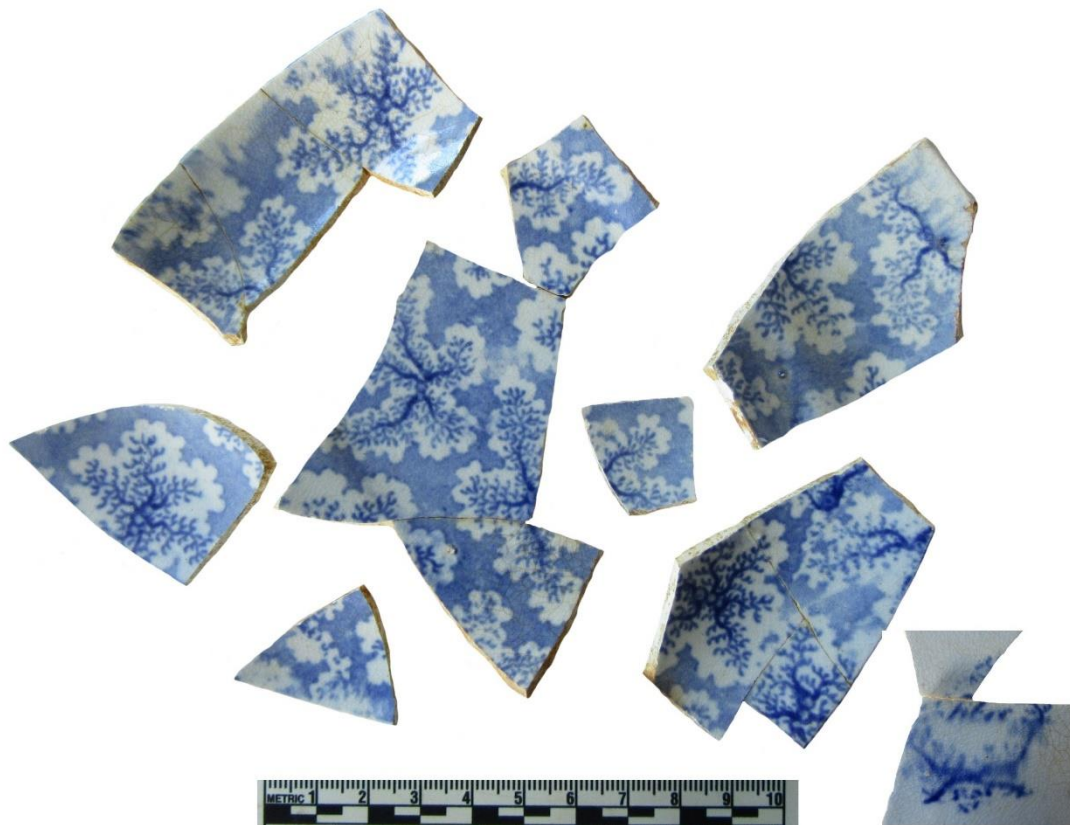


Figure 5.9 Fragments of a fibre pattern saucer retrieved from context 118

5.2.2 Stoneware

The stoneware assemblage recovered from the Onehunga Stone Store was generally moderately fragmented, and where fragmented items could potentially relate between contexts, only one item was counted towards overall MNV (minimum number of vessels). Items were compared across the whole assemblage as fragments from one vessel could be present within multiple contexts. Where this has potentially occurred, the vessel was calculated within one context only.

Eighty pieces of stoneware were collected from five contexts during excavations behind the Onehunga Stone Store representing a minimum of 20 individual vessels (Table 5.8). The greatest number of vessels were recorded within Context 105, the fill of a quarry pit. Fifteen of the vessels were identified as having contained general household products, seven contained a beverage and one contained alcohol (Table 5.9).

Only two of the items contained a manufacturer's mark, both of which were identified as manufactured by James Stiff between 1843 and 1863.

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Table 5.8 Summary of stoneware for Stage 1 (Stone Store)

Context	NISP	MNV	Context	NISP	MNV
103	2	0	112	1	0
104	1	0	118	1	0
105	75	20			

Table 5.9 Minimum number of stoneware vessels

Product	MNV
Alcohol	(1)
Beer	1
Beverage	(7)
Ginger Beer	7
Household	(12)
Blackening	3
Bowl	1
Container	1
Container/Planter	1
Grease/Blackening	1
Jar	1
Jug	1
Oyster Jar	2
Penny Ink	1
Total	20

Context 103: Old Topsoil

Two fragments of a cream coloured bottle were collected but the likely contents were not identified.

Context 104: Upper Pit 106 Fill

A single fragment of a cream coloured bottle was collected and may have related to the two fragments collected from Context 103.

Context 105: Lower Pit 106 Fill

Seventy-five fragments of stoneware were collected from context 105, representing a minimum of 20 individual vessels (Table 5.10). The partial base and body of a cream coloured bottle was identified as likely having contained beer.

At least seven ginger beer bottles were identified from 26 fragments. None of the bottles were complete examples and none contained a stamped maker's mark. Colour of the bottles varied and included: brown, brown/fawn, cream, fawn, grey, grey/brown, tan/cream. One of the ginger beer bottles was partially reconstructed, with the bottle having a misshapen rim (Figure 5.10, right).

Thirty-two fragments of stoneware were recorded within the household items category, with a minimum of 12 vessels present. At least three partial blackening bottles were present, one of which had a partial stamp 'Sti.../London', which was identified as the mark of James Stiff, who opened his own works in 1843 but brought his sons into the business in 1863, resulting in a name change (Godden 1991:599). A complete grease or blackening jar standing 170mm high with a base diameter of 76mm was manufactured by James Stiff, reliably dating the manufacture of this

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particular vessel to 1843-1863 (Figure 5.10, left). Seven pieces of a large bowl were incised using a rouletting wheel. Four fragments of a cream coloured container were identified and a large fragment including the handle of a container or planter was recorded. The body fragment of a yellow jar and five body fragments of a brown jug were noted. An almost complete penny ink bottle had a base diameter of 46mm. Three fragments from at least two oyster jars were also collected.

Sixteen fragments of stoneware were too fragmentary to assign to a specific category but may have related to a number of the vessels calculated within the overall MNV.

Table 5.10 Minimum number of stoneware vessels from context 105

Product	MNV
Alcohol	(1)
Beer	1
Beverage	(7)
Ginger Beer	7
Household	(12)
Blacking	3
Bowl	1
Container	1
Container/Planter	1
Grease/Blacking	1
Jar	1
Jug	1
Oyster Jar	2
Penny Ink	1
Total	20



Figure 5.10 Complete grease or blacking bottle manufactured by James Stiff 1843-1863 (left) and partially reconstructed ginger beer bottle with misshapen rim (right), from context 105

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Context 112: Posthole

A single fragment from an unidentified brown coloured bottle was recorded.

Context 118: Quarry Cut Fill

A single fragment from an unidentified brown coloured bottle was recorded and may have related to the fragment collected from context 112.

Context 120: Shell Path

Five fragments of ceramic representing a minimum of two individual items were recovered. Three of the fragments related to items recorded elsewhere (in overall MNV). A single fragment of a blueware teacup and a fragment of a flow blue printed (OSS100) saucer were noted.

5.2.3 Glassware

A total of 346 pieces of glassware were recovered from 8 separate contexts, with a minimum number of 128 vessels or items present (Table 5.11). The greatest concentration of glassware was within context 105, which had 120 individual items calculated (94.5% of the total assemblage).

Table 5.12 provides the minimum number of individual vessels for each product type. Of the 128 vessels or items recorded, 74 of these were alcoholic beverage bottles (57.8% of the assemblage). General household items accounted for 19.5% of the assemblage, while food product accounted for 15.6%. Pharmaceutical products and mineral water or soda were represented by smaller numbers, with 3.9% and 3.1% respectively.

Table 5.11 Summary of glassware, Stage 1 (Stone Store)

Context	NISP	MNV	Context	NISP	MNV
103	26	3	109	4	0
104	21	4	114	1	0
105	288	120	118	1	0
107	2	0	120	3	1

Table 5.12 Minimum number of individual glassware vessels, Stage 1 (Stone Store)

Product	MNV
Alcohol	(74)
Black Beer	62
Case Gin	2
Schnapps	1
Unidentified	1
White Wine/Brandy	5
Wine	3
Food	(20)
Coffee	1
Fruit/Jam	1

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Product	MNV
Oil	1
Pickle	6
Preserves	1
Salad Oil	8
Sauce	1
Vinegar	1
Household	(25)
Drinking Glass	7
Jar	1
Jug	1
Stopper	2
Vase	1
Window	12
Wine Glass	1
Pharmaceutical	(5)
Castor Oil	2
Medicine	3
Water	(4)
Mineral Water/Soda	4
Total	128

Context 103: Old Topsoil

Twenty-six fragments of glass were collected, with 23 fragments being small body sherds from an unidentified aqua bottle which did not contribute to overall MNV. Alcoholic beverages were represented by the partial base of a wine bottle, while food was represented by the rim and neck of a sauce bottle and the partial base of a pickle bottle.

Context 104: Upper Pit 106 Fill

Twenty-one pieces of glass were collected from context 104; however, 17 of these did not contribute to MNV. The four pieces of glassware contributing to MNV included a complete Lea & Perrins stopper from a Worcestershire sauce bottle, the partial base of a blue aqua medicine, the rim and neck of a clear glass medicine, and the green rim of a mineral water or soda bottle.

Context 105: Lower Pit 106 Fill

Two hundred and eighty-eight pieces of glass were recovered from the fill of the quarry pit, representing a minimum of 120 individual vessels or items (Table 5.13). Seventy-two of the items (60% of the assemblage) were alcoholic beverage bottles with five varieties identified and one remaining unidentified. Food items accounted for 15% of the assemblage, with salad oils and pickles dominating. General household items accounted for 20% of the total assemblage with coloured window glass and drinking glasses providing the greatest total within this category. Pharmaceutical and Water/Soda each accounted for 2.5% of the total.

Seventy-two alcoholic beverage bottles were identified from 74 individual pieces. Three of the vessels were almost complete missing the rims and partial neck. The majority of bottles were

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calculated from base portions only. Sixty-two of the bottles were identified as black beer bottles and included the three almost complete vessels (Figure 5.11). Fifty-four of the bases were able to have the type of kickup identified: conical kickup (34); layered conical kickup with circular point (8); domed kickup (4); layered dome (1); shallow dome with mamelon (5); skewed kickup (1); skewed kickup with mamelon (1).

Three of the bases were embossed. One was embossed with the letter 'C' while a second was embossed with the letter 'P'. Neither of these manufacturers was conclusively identified. The third base was embossed 'Richd Cooper & Co Portobello'. This particular vessel likely postdates 1868 when the Cooper & Wood partnership dissolved, and Richard Cooper continued works under his own name (Toulouse 1971:139-140). Two case gin bottles were identified from bases and a single schnapps bottle was identified from a body sherd. A minimum of five white wine or brandy bottles were present, identified from base portions. A single red wine was identified from a partial base. The partial base of a green bottle likely contained an alcoholic beverage, but the specific variety could not be determined.

Eighteen food product vessels were identified from 34 pieces of glassware, two of which were complete examples. A complete Symington & Co. Essence of Coffee and Chicory bottle stood 212mm high (Figure 5.12, left). Thomas Symington of Edinburgh began producing coffee essence (essentially instant coffee) about 1880 (Marwick 1964). At least five pickle bottles were noted, many too fragmentary to conclusively identify body shape. One bottle, however, was complete, standing 235mm high (Figure 5.12, right). The square bottle was embossed 'B & A' within a scroll below the shoulder; however, the manufacturer of the pickles could not be identified. A fruit or jam jar was identified from a partial base and a preserves jar was noted from a partial rim. At least one fluted oil bottle was present, along with the base of a diamond-shaped vinegar bottle. At least eight salad oil bottles were identified, all from rim and neck portions of the bottles. Seven of the bottles were small sizes while one bottle was a large size.

At least seven drinking glasses were identified among 10 pieces of glassware. All of these glasses were calculated from complete or partial bases and all were constructed of clear glass. At least three of these vessels were panelled glasses, while at least one was confirmed as plain round. The foot and stem of a wine glass was also noted. A single jar was evidenced from a partial rim. The partial handle of a jug was constructed from orange/red glass with milk glass striations. The peg portion of a bottle stopper was noted and may relate to a food or pharmaceutical product. A fragment of a clear glass vase was decorated with raised nipples around the body.

At least 12 individual window panes were represented from 30 fragments. These could be further sub-categorised into general window glass (aqua), decorative glass, fanlight, and privacy glass (Figure 5.13). Two decorative glass items were both manufactured of clear glass. Portions of seven fanlight panes were noted. Fanlight panes are typically coloured glass used for decorative purposes around front windows and doors. Single examples of an amethyst and a mulberry fanlight were present, while at least five differing emerald panes were noted. The privacy glass included aqua fragments, ridged on one side only and a fragment of amber glass with a raised floral design on one side.

Three pharmaceutical bottles were identified. Two of these were cobalt castor oil bottles evidenced from complete and partial bases. The third bottle was nearly complete, was not embossed and stood 51mm high with a base diameter of 19mm. The bottle had a pressed rim and likely contained pills or powder medicine (Figure 5.14).

A fragment of a Hamilton's Patent 'torpedo' bottle contained some embossing identifying 'Roberto France manufacturer of glass bottles of every description'. Roberto France was not identified as a manufacturer despite the embossing, with no entries in British newspapers

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associated with this company. Advertisements for Roberto France's celebrated aerated waters were identified in Australian papers (*Launceston Examiner*, 5 December 1863:5) and it possible the product was an export only item with Roberto France perhaps being an agent rather than manufacturer. Two other mineral water bottles were calculated: a second Hamilton's patent 'torpedo' from a plain fragment unrelated to the previously described vessel; and a fragment from a bottle (possibly Codd) embossed '...rey', likely referring to John Grey, John Grey & Sons, or Grey & Menzies. This particular vessel could not have been manufactured prior to 1874.



Figure 5.11 The three almost complete black beer bottles recovered from context 105

Table 5.13 Minimum number of individual glass vessels from context 105

Product	MNV
Alcohol	(72)
Black Beer	62
Case Gin	2
Schnapps	1
White Wine/Brandy	5
Wine	1
Unidentified	1
Food	(18)
Coffee	1
Fruit/Jam	1
Oil	1
Pickle	5
Preserves	1
Salad Oil	8
Vinegar	1

Product	MNV
Household	(24)
Drinking Glass	7
Jar	1
Jug	1
Stopper	1
Vase	1
Window	12
Wine Glass	1
Pharmaceutical	(3)
Castor Oil	2
Medicine	1
Water	(3)
Mineral Water/Soda	3
Total	120

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Figure 5.12 Symington & Co. Coffee Essence bottle (left) and B. & A. pickle bottle (right) recovered from context 105

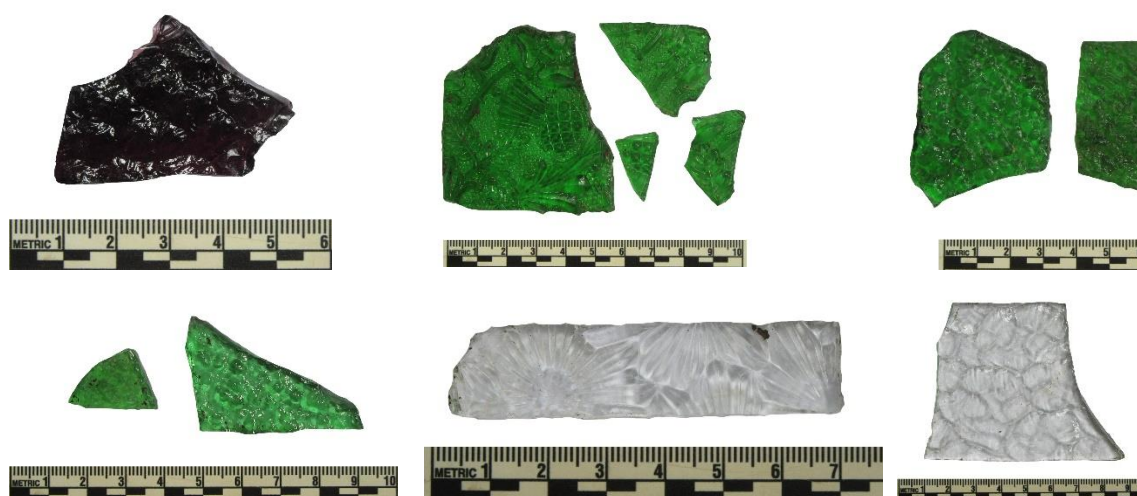


Figure 5.13 Examples of some of the fanlight and decorative window glass panes recovered from context 105

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Figure 5.14 Small pill or powder bottle retrieved from context 105

Context 120: Shell Path

The partial base of an olive-green wine bottle was present.

5.2.4 Tobacco Pipes

A total of 56 fragments of tobacco pipes representing a minimum of 22 individual pipes, were recovered from the Stage 1 area of the Princes Street site (Figure 5.15 - Figure 5.16). The assemblage was in the main highly fragmented, and no complete pipes were present, with the overall assemblage consisting of 17 bowl, 36 stem and 3 mouthpiece fragments that were collected from four contexts (Table 5.14). The majority of the pieces collected were unmarked and undecorated and the assemblage consisted of white clay, some of which had been produced of fine ball clay.

Approximately 80% of the assemblage was recovered from a single context (105), the fill of a large quarry pit (Table 5.14).

A total of six manufacturers were identified from markings present on 21 bowl or stem fragments retrieved from the four contexts. All but three of the identified pipes had been manufactured in Scotland (see e.g, Figure 5.15) , the majority of which (72.25%) were produced in Glasgow, while three (16.65%) were from London and a single example from Edinburgh (produced by Thomas White & Co.), (Table 5.15). Additionally, an Irish pipe produced in Cork was present, but a maker's mark was absent.

The most remarkable of the pipes (Figure 5.16, top left) featured a ship on one side and a train on the other impressed on the bowl.

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Table 5.14 Summary of tobacco pipe fragments, Stage 1

Context No.	Bowls	Stems	Mouthpieces	NISP	MNI
103	3	3	1	7	2
104	1	1		2	1
105	13	30	2	45	18
109		2		2	1
Total	17	36	3	56	22

Table 5.15 Summary of identified clay pipes per context from Stage 1

Manufacturer	Date Range	Contexts	MNI	% of Assemblage
Paul Balme, Mile End Road, London	1840 -1856	105	1	5.88
William Balme, Mile End Road, London	1856- 1861	105	1	5.88
Alexander Coghill, Glasgow	1826-1904	105, 109	3	17.65
James Critchfield, London	1828-1894	103	1	5.88
Duncan McDougall, Glasgow	1846-1891	103, 104, 105	10	58.83
Thomas White & Co., Edinburgh	1823-1876	105	1	5.88
Total			17	100



Figure 5.15 McDougall pipe bowl from context 103



Figure 5.16 Pipes from context 105

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5.3 Stage 2 Artefacts

5.3.1 Ceramic

A total of 94 fragments of ceramic were collected from six contexts in the Stage 2 excavations at 11-13 Wharangi Street (Table 5.16). The material recovered was generally heavily fragmented and where fragmented items could potentially relate between contexts only one item was counted towards overall MNV (minimum number of vessels). Once processed, material was sorted by context with items within those contexts separated by decorative technique, pattern, colour and vessel form.

The largest portion of the assemblage was recovered from context 125 (the fill of a drainage ditch), with 88 fragments collected representing 34 individual items.

Table 5.17 details the minimum number of vessels represented with tableware items accounting for 36 of the 38 items, or 95% of the assemblage. Plates, numbering 12, may have consisted of saucers, side plates, or dinner plates where the size of the plate could not be determined. One item remained unidentified.

Thirty-five of the vessels (92%) were Creamware vessels, a common fabric for 19th century ceramic items.

Three items carried maker's marks, only one which was able to be identified and a date range of production estimated. All of the marked items were recovered from context 125. The potential manufacturing date for the identified item spans the range 1839 to 1864.

Table 5.16 Summary of ceramics, Stage 2

Context	NISP	MNV	Context	NISP	MNV
125	88	34	157	1	1
143	1	1	162	1	0
155	2	1	164	1	1

Table 5.17 Vessel form and fabric, Stage 2

Vessel Form	Creamware	Blueware	Semi-Vitreous	Total
Bathroom/Bedroom ware				(1)
Toilet Box	1			1
Tableware				(36)
Bowl	1			1
Egg Cup	1			1
Jug		1		1
Mug	1			1
Plate	11	1		12
Platter	1			1
Saucer	8		1	9
Serving Dish	1			1
Teacup	9			9
Teapot				1
Unidentified				(1)
Unidentified	1			4
Total	35	2	1	38

Decorative Techniques

Of the 38 vessels recovered from the Stage 2 excavations, 34 contained some form of decoration, with 4 being undecorated examples. Table 5.18 summarises the decorative techniques used by vessel fabric type and provides an overall percentage for each technique. The dominant decorative technique within the assemblage was underglaze transfer printed designs, all in a single colour. Transfer printed wares comprised 32 vessels or 84% of the sample.

The range of transfer print colours is shown in Table 5.19, providing both the MNV for each colour and the percentage of the total sample of transfer printed wares. Analysis indicates that blue print was the most common, with 43.7% of the total sample, but this increases to 59.4% when dark blue and flow blue are included.

Table 5.18 Decorative technique by vessel form and as a percentage of the Stage 2 ceramic assemblage

Decorative Technique	Blueware	Creamware	Semi-Vitreous	Total	% of Total
Hand-painted		1		1	3.0
Sponged		1		1	3.0
Transfer		32		32	84.0
Undecorated	2	1	1	4	10.0
Total	2	35	1	38	100

Table 5.19 Transfer print by colour, MNV and percentage of total transfer printed wares

Transfer Colour	MNV	% of Total Sample
Black	7	21.8
Blue	14	43.7
Brown	8	3.2
Dark Blue	1	3.2
Flow Blue	4	12.5
Green	2	6.2
Grey	1	3.2
Purple	2	6.2
Total	32	100

Context 125: Drain Fill

Eighty-eight fragments of ceramic representing a minimum of 34 individual vessels were recovered from context 125 (Table 4.20). All but three of the items were Creamware. Two fragments of blueware were noted, from a plate and a jug, which contributed to overall MNV. One fragment of a semi-vitreous saucer was also recorded.

Three fragments of a single toilet box decorated with an unidentified purple print (OSS107) was the only item recovered that was usually kept within a bathroom or bedroom.

Thirty-two items were recorded within the tableware category, with the largest numbers recorded from plates (10), teacups (8) and saucers (8). There were three matching teacup and saucer sets within this context; one decorated with the Udina print (Figure 5.17, left), and two with unidentified prints (OSS102 and OSS109). Plate fragments numbered 34, representing at least 10 plates; however, four of the 10 did not contribute to overall MNV as it is possible these fragments related to items already recorded elsewhere. Of the six plates contributing to MNV,

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one was decorated with the Milanese pattern, one was undecorated blueware, and four were decorated with unidentified prints (OSS052, OSS104, OSS105 and OSS106).

Eleven fragments of a single platter were decorated with a previously unrecorded scenic pattern named British Rivers (Figure 4.16, right). Other identified patterns included a Cornishware mug, a Fibre printed bowl, and a Willow pattern serving dish. An egg cup with an unidentified black print was noted (OSS110).

Three of the items contained complete or partial maker's marks, but only one maker was able to be identified. This was the Udina patterned teacup manufactured by Joseph Clementson, who operated out of the Phoenix Works in Staffordshire from 1839 until 1864 when a name change resulted in a differing mark (Godden 1991:150).

Table 5.20 Vessel form and fabric, from context 125

Vessel Form	Creamware	Blueware	Semi-Vitreous	Total
Bathroom/Bedroom ware				(1)
Toilet Box	1			1
Tableware				(32)
Bowl	1			1
Egg Cup	1			1
Jug		1		1
Mug	1			1
Plate	9	1		10
Platter	8			1
Saucer	7		1	8
Serving Dish	1			1
Teacup	8			8
Unidentified				(1)
Unidentified	1			1
Total	32	2	1	34

Context 143: Fill of Unidentified Feature

A fragment of a teacup bearing an unidentified black transfer print (OSS112) was collected.

Context 155: Posthole Fill

Two pieces of ceramic were collected with one plate fragment bearing the Albion print in blue, which may relate to a plate recorded elsewhere, and the second piece from a saucer decorated with an unidentified blue transfer print (OSS114).

Context 157: Posthole Fill

A single fragment of a plate was decorated with an unidentified flow blue transfer print (OSS113).



Figure 5.17 Udina pattern teacup manufactured by Joseph Clementson (left) and British Rivers pattern platter (right), retrieved from context 125

Context 162: Posthole Fill

A single fragment from a plate decorated in the blue Willow pattern was collected.

Context 164: Posthole Fill

One fragment of a plate bearing an unidentified black transfer print (OSS111) was recovered.

5.3.2 Stoneware

Twenty-four pieces of stoneware were collected from two contexts during the Stage 2 excavations, representing a minimum of three individual vessels (Table 5.21). Two vessels were recorded within context 125, while a single vessel was recorded in context 133. All three vessels were identified as having contained general household products: one was a blacking jar, one a penny ink and one a lid (Table 5.22). None of the vessels contained a manufacturer's mark.

Table 5.21 Summary of stoneware, Stage 2

Context	NISP	MNV	Context	NISP	MNV
125	9	2	133	15	1

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Table 5.22 Minimum number of individual stoneware vessels, Stage 2

Product	MNV
Household	(3)
Blackening	1
Lid	1
Penny Ink	1
Total	3

Context 125: Drain Fill

Nine fragments of stoneware were collected. A complete blackening jar stood 125mm high with a base diameter of 59mm. The jar was not stamped with a maker's mark. Two fragments of a cream coloured lid were recorded, the diameter of the lid being 105mm. Six fragments of at least one bottle were noted but were not calculated within MNV for this context as they may have related to vessels calculated elsewhere.

Context 133: Posthole Fill

Fifteen pieces of a penny ink bottle were collected. The bottle appeared to have been completely shattered within the context.

5.3.3 Glassware

A total of 46 pieces of glassware were recovered from six separate contexts, with a minimum number of 20 vessels or items present (Table 5.23). The greatest concentration of glassware was within context 125, which had 12 individual items calculated (60% of the total assemblage).

Table 5.24 provides the minimum number of individual vessels for each product type. Of the 20 vessels or items recorded, 7 of these were alcoholic beverage bottles (35%) with the food products vessels also accounting for 35% of the assemblage.

General household items accounted for 25% of the assemblage, while pharmaceutical products were represented by smaller numbers, with 5%.

Table 5.23 Summary of glassware, Stage 2

Context	NISP	MNV	Context	NISP	MNV
122	14	4	155	3	1
125	23	12	157	1	0
143	1	0	162	4	3

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Table 5.24 Minimum number of individual glass vessels, Stage 2

Product	MNV
Alcohol	(7)
Black Beer	5
Case Gin	1
White Wine / Brandy	1
Food	(7)
Pickle	4
Salad Oil	2
Vinegar	1
Household	(5)
Drinking Glass	1
Stopper	1
Window	3
Pharmaceutical	(1)
Castor Oil	1
Total	20

Context 122: Rubbish Pit Fill

Fourteen pieces of glass representing three individual vessels were collected. The base and partial body of a black beer had a base diameter of 89mm and the base and partial body of a white wine or brandy had a diameter of 74mm. The partial base and body of a vinegar bottle was also recorded. Six fragments of a genie style salad oil bottle were also noted. None of the vessels were embossed.

Context 125: Drain Fill

Twenty-three pieces of glass representing a minimum of 12 vessels were collected. Four black beer bottles were calculated from two complete bases, one three-quarter base and one half base. Two of the bases had a conical kickup, with the remaining two being a domed kickup with mamelon, and a shallow dome kickup with mamelon. None of the bases were embossed. A fragment from a case gin bottle was also recorded.

Seven pieces of aqua glass were identified as originating from at least four pickle bottles. These included the base and partial body of a rectangular pickle, three-quarters of the base of a square pickle, and three-quarters of the base and partial base and body of two round pickle bottles.

A complete George Whybrow stopper was collected. Whybrow established his works c.1825, manufacturing items such as pickles, sauces, salad oil and castor oils, and following his death in 1873 the company was run by relatives until its closure in 1899 (stgite.org.uk). Two fragments from a drinking glass were also recorded.

A single body fragment from a cobalt blue castor oil bottle was noted.

Context 155: Posthole Fill

A fragment of 7mm thick window glass likely originated from a plate glass window, possibly from a large window from the front of a structure.

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Context 162: Posthole Fill

A fragment of 5mm thick window glass likely originated from a plate glass window, possibly from a large window from the front of the store. Also present was a single fragment of regular window glass.

A single fragment from a herringbone style salad oil bottle was also present.

5.3.4 Tobacco Pipes

A single Cutty style clay pipe was recovered from the fill of a drainage ditch (context 125). The pipe consisted of a complete bowl and partial stem (Figure 5.18).

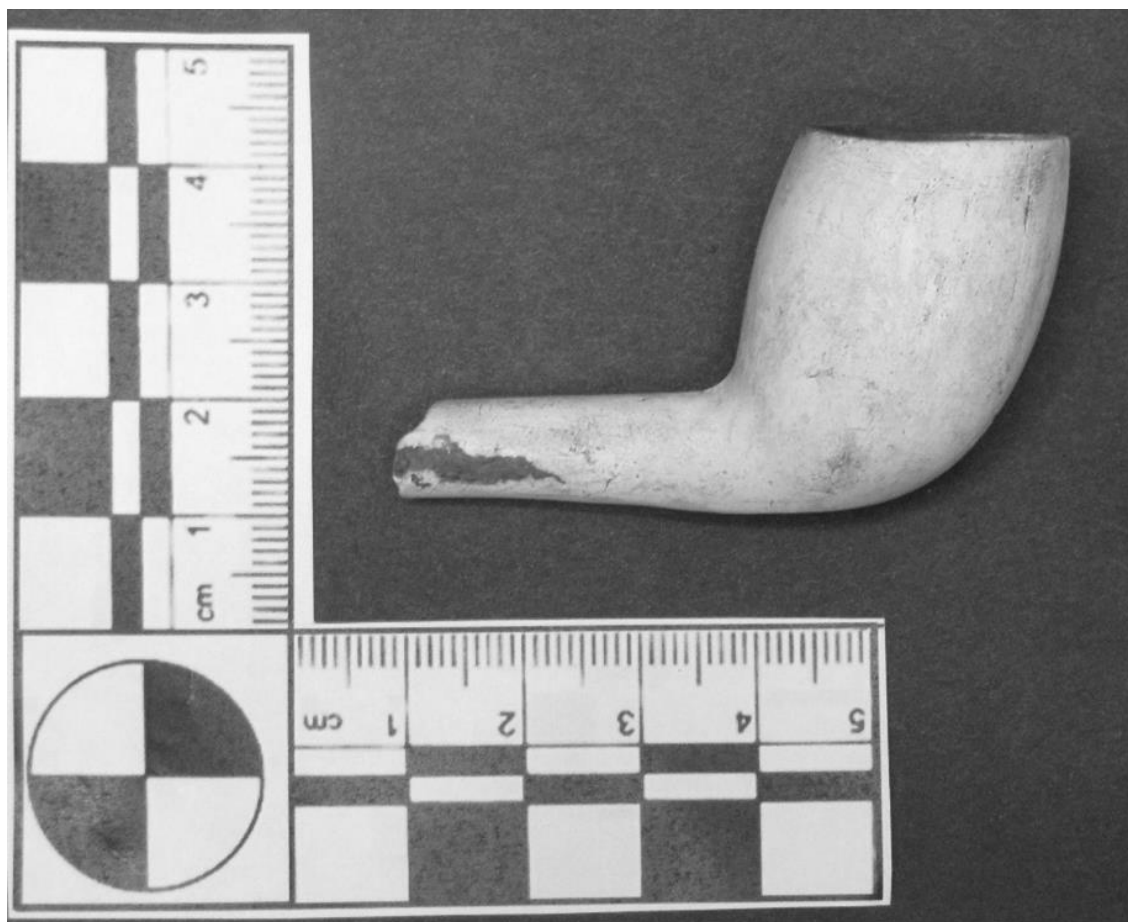


Figure 5.18 Cutty style tobacco pipe retrieved from context 125

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5.4 Stage 3 Artefacts

The bulk of the artefacts came from the Stage 3 excavations, which also included a wide range of ceramics and stoneware from fine tea wares through to more robust objects. Stoneware including a cider jar, crock or flagon, and services related to drainage. Manufacturing marks from the ceramics within this assemblage ranged from 1815-1907.

5.4.1 Ceramic

A total of 1336 fragments of ceramic were collected from 26 contexts during excavations in the Stage 3 mixed residential and commercial area, representing a minimum of 306 vessels (Table 5.25). The largest component of the assemblage was produced from a dump of material in the upper layers to the north (part of context 468), with 478 fragments collected from a minimum of 102 individual vessels.

Table 5.26 details the minimum number of vessels represented, with tableware items accounting for 254 of the 306 items, or 83% of the assemblage. Plates, numbering 35, may have consisted of saucers, side plates, or dinner plates where the size of the plate could not be determined. Two items remained unidentified. Two hundred and eighty-three of the vessels (93%) were Creamware vessels, a common fabric for 19th century ceramic items.

Twenty-five items contained maker's marks, 19 of which were able to be identified and the date range of production estimated (discussed below).

The potential manufacturing date for all of these items spread from 1838 to c.1940, suggesting the material was likely periodically deposited across this extended period, although the clear majority dated to the mid-19th century.

Table 5.25 Summary of ceramics, Stage 3

Context	NISP	MNV	Context	NISP	MNV
203	53	22	330	6	3
223	9	1	347	1	1
227	34	9	360	2	1
241	70	29	381	9	3
242	3	0	406	69	5
245	358	61	422	1	0
247	10	3	434	3	1
251	478	102	460	9	3
258	9	4	480	2	0
260	26	7	537	46	11
272	14	5	545	80	22
300	2	1	547	37	9
314	5	3	Unprovenanced	3	0

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Table 5.26 Vessel form and fabric, Stage 3

Vessel Form	Blueware	Creamware	Earthenware	Semi-Vitreous	Total
Bathroom/Bedroom					(21)
Chamber pot		10			10
Ewer		3			3
Holloways Ointment		3			3
Toothpaste/Ointment		1			1
Washbowl		4			4
Household					(12)
Bell		1			1
Brood Egg		1			1
Candle Holder		2			2
Child's Teaset - Saucer		1			1
Child's Teaset – Teacup		1			1
Doll leg		1			1
Figurine				1	1
Marble		1			1
Mineral Water Marble		1			1
Ornamental Jug		1			1
Vase?		1			1
Kitchenware					(17)
Baking Dish			1		1
Bowl		1			1
Cheese Pot		4	1		5
Container		4	2		6
Kitchen Bowl		1			1
Preserves		3			3
Tableware					(179)
Bowl		6			6
Child's Mug		4			4
Child's Plate		1			1
Dinner Plate		26			26
Dish Lid		4			4
Egg Cup		3			3
Jug	1	8			9
Kitchen Bowl			1		1
Milk Jug		1			1
Mug		1			1
Plate		35			35
Platter		1			1
Saucer		52		2	54
Serving Dish		6			6
Side Plate		15		1	16
Teacup	1	71		4	76
Teapot		1	7		8
Teapot Lid		1			1
Tureen Lid		1			1
Unidentified					(2)
Unidentified		1		1	4
Total	2	283	12	9	306

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Decorative Techniques

Of the 306 vessels recovered from Stage 3 excavations, 269 contained some form of decoration, with 37 being undecorated examples. Table 5.27 summarises the decorative techniques used by vessel fabric type and provides an overall percentage for each technique.

The dominant decorative technique within the assemblage was underglaze transfer printed designs, generally in a single colour. Transfer printed wares comprised 209 vessels or 68.3% of the sample, with a further 0.33% having transfer prints with additional decorative techniques.

The range of transfer print colours is shown in Table 5.28, providing both the MNV for each colour and the percentage of the total sample of transfer printed wares. Analysis indicates that blue print was the most common, with 47.8% of the total sample; however, this increases to 54% when dark blue and flow blue are included. Green transfer printed ceramic at 11.4% and black print at 10.5% were the next most dominant colours represented.

Table 5.27 Decorative techniques by vessel fabric and as a percentage of the Stage 3 ceramic assemblage

Decorative Technique	Blueware	Creamware	Earthenware	Semi-Vitreous	Total	% of Total
Hand painted		34	1	6	41	13.4
Hand painted/Transfer		1			1	0.33
Incised			1		1	0.33
Relief	1	7	3		11	3.59
Relief/hand painted		1			1	0.33
Sprigged		2		1	3	0.98
Sprigged/Relief		2			2	0.65
Transfer		208		1	209	68.3
Undecorated	1	28	7	1	37	12.0
Total	2	283	12	9	306	100

Table 5.28 Transfer print by colour, MNV and percentage of total transfer printed wares

Transfer Colour	MNV	% of total sample
Black	22	10.5
Black/Grey	1	0.48
Blue	89	47.8
Brown	14	6.69
Dark Blue	8	3.82
Dark Brown	2	0.95
Dark Green	1	0.48
Dark Grey	2	0.95
Flow Blue	5	2.39
Gilt	12	5.74
Green	24	11.4
Grey	9	4.30
Grey/Black	1	0.48
Maroon	2	0.95
Plum	3	1.43
Polychrome	2	0.95
Purple	10	4.78
Red	2	0.95
Total	209	100

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Context 203: Rubble Layer

Fifty-three pieces of ceramic were collected from context 203, representing a minimum of 22 individual vessels (Table 5.29), all in a highly fragmented condition. A preserves jar or pot was identified from two pieces of plain white ceramic. Twenty-one of the vessels were related to tableware items with a minimum of seven teacups present. Three saucers were also noted; however, none were of a matching pair. Six of the teacups were decorated with unidentified transfer prints (OSS136, OSS185, OSS202, OSS203, OSS204 and OSS206) while the seventh was decorated with a green Dresden pattern. The saucer fragments were decorated with a green Ionic print, a blue Formosa print, and an unidentified blue print (OSS200).

One child's plate had a floral relief rim with a hand painted black band, the relief moulding bearing the letters I, J and K, indicating the plate border carried the alphabet. Fragments of three dinner plates were recorded, bearing blue print in the Kulat, Rhine and Willow patterns. Fragments from four plates were decorated with unknown transfer prints (OSS137, OSS138, OSS139 and OSS205). At least two serving dishes were present with nine fragments of a blue Asiatic Pheasants print dish and a single fragment of a black print Rhine pattern present. A single fragment of a relief moulded jug was also recorded.

Table 5.29 Vessel form and fabric, context 203

Vessel Form	Creamware	Total
Kitchenware		(1)
Preserves	1	1
Tableware		(21)
Child's Plate	1	1
Dinner Plate	3	3
Jug	1	1
Plate	4	4
Saucer	3	3
Serving Dish	2	2
Teacup	7	7
Total	22	22

Context 223: Demolition Fill Layer

Nine pieces of an earthenware container were collected, a portion of the body decorated using an incising rouletting wheel (Figure 5.19). The interior of the vessel was coated with a yellow glaze. The container may have held either dry food or preserves.



Figure 5.19 Fragments of an incised earthenware container from context 223

Context 227: Demolition Fill Layer

Thirty-four pieces of ceramic were collected from context 227, with 19 fragments possibly related to vessels calculated elsewhere and excluded from MNV. Seven of the vessels were tableware items with four plates of unknown size identified. Three of these plates were decorated with identified patterns: single examples of blue Morea and Willow, and a single example of a blue Shell Edged plate. The fourth plate was decorated with an unidentified blue transfer print (OSS213). A fragment of a bowl was decorated with a grey and black sheet pattern (OSS049). A single fragment of a teacup bore the Coral pattern in a dark blue print, while four fragments of a single saucer were decorated with a previously unrecorded maroon print in the Dagmar pattern (Figure 5.20, left). This saucer included a maker's mark identifying the manufacturer as Hope & Carter, who operated the Fountain Place works in Burslem from 1862 to 1880 (Godden 1991:334).

Two items relating to children were collected. A complete saucer with a diameter of 48mm originated from a child's teaset. Also recovered was a portion of the lower leg of a doll, the

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broken heeled boot painted black with a blue band around the circumference of the leg below the knee (Figure 5.20, right).



Figure 5.20 Fragments of a maroon transfer printed saucer decorated in the Dagmar pattern (left) and the ceramic lower leg of a child's doll (right). Both retrieved from context 227

Context 241: Historic Fill Layer

Seventy pieces of ceramic representing 29 individual vessels were collected from Context 241 (Table 5.30). Fifteen of the fragments possibly related to items recorded elsewhere and were excluded from MNV. Twenty-eight of the vessels were constructed of creamware fabric with a single semi-vitreous side plate present.

Twenty-five of the vessels were tableware items with teacups being the highest contributor, with a minimum of nine examples present, none having matching saucers. Three of the saucers were decorated with identified print patterns: black Dulcamara, blue Fibre and grey Rhine. Five teacups were decorated with unidentified transfer prints (OSS141, OSS144, OSS147, OSS148 and OSS152). One teacup was decorated with a hand painted leaf design (Figure 5.21, left). A single saucer was decorated with the Olive pattern in blue print.

Three bowls were identified from 10 fragments of ceramic. Two pieces related to a bowl decorated with the Bramble pattern, manufactured by W.T. Copeland; Godden (1991:171) indicates that this mark was used 1847-1867 (Figure 5.21, right). Two fragments of a blue Willow pattern bowl and six fragments of a bowl with an unidentified print (OSS151) were also noted. Fragments from two dinner plates were decorated with a dark green Rhine pattern and a blue Bouquet print. The Bouquet dinner plate contained a partial maker's mark 'P.B..' which is likely to relate to Pinder, Bourne; however, it could be ascertained whether this was Pinder, Bourne & Co. (1862-1882) or Pinder, Bourne & Hope (1860-1862). Six plates of unknown size were all decorated with common patterns: grey Rhine (2), blue Asiatic Pheasants (2), blue Willow, and a blue sprigged plate (ICC027). A single side plate was decorated with a polychrome transfer print (OSS149). Two serving dishes were noted, one decorated with a black Udina print and the other with an unknown flow blue print (OSS142). A single fragment of a jug with a black print (OSS153) was also noted.

Small rim fragments from two chamber pots were present, both decorated with unidentified blue transfer prints (OSS145 and OSS146). At least two plain white preserves jars were also present.

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Table 5.30 Vessel form and fabric, context 241

Vessel Form	Creamware	Semi-Vitreous	Total
Bathroom/Bedroom			(2)
Chamber Pot	2		2
Kitchenware			(2)
Preserves	2		2
Tableware			(25)
Bowl	3		3
Dinner Plate	2		2
Jug	1		1
Plate	6		6
Saucer	1		1
Serving Dish	2		2
Side Plate		1	1
Teacup	9		9
Total	28	1	29

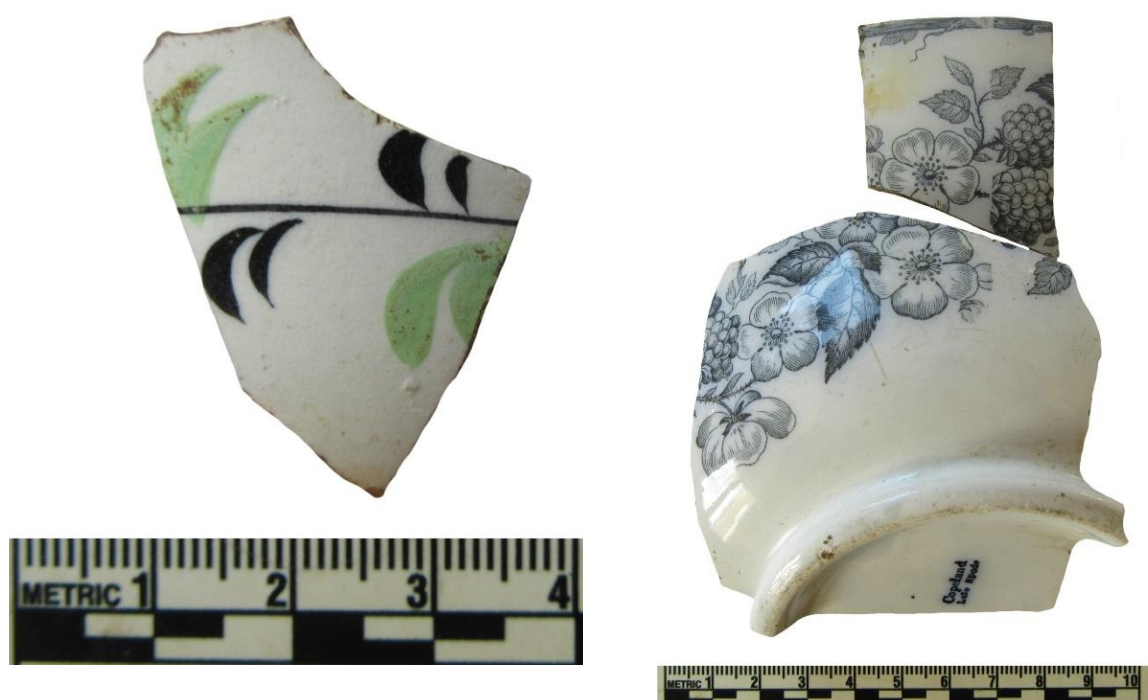


Figure 5.21 Portion of hand painted teacup (OSS150, left) and dark grey printed Bramble pattern bowl manufactured by Copeland 1847-1867 (right)

Context 245: Historic Fill Layer

Three hundred and fifty-eight pieces of ceramic were collected from context 245, representing a minimum of 61 individual vessels (Table 5.31). Seventy-nine fragments were excluded from MNV as they may have related to vessels recorded elsewhere.

Forty-seven of the items related to tableware vessels with teacups, saucers and dinner plates dominating the assemblage. Nine teacups were represented, with three being simple banded vessels, three being gilt Tealeaf, one black Udina pattern, and one being a variation on the traditional Willow pattern (OSS197). Ten saucers were present, three being simple banded items, one having an unidentified blue print (OSS188), five having an unidentified blue print (OSS128,

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Figure 5.22, right) and one having a green Dresden print manufactured by Unwin & Holmes, dating from 1868+ (Godden 1991:631; Figure 5.22, left). Nine dinner plates were calculated from a total of 58 fragments. Twenty-two fragments of at least one plate were decorated with a Leon pattern and manufactured by J. & G. Meakin, dating 1890+ (Figure 5.23, left). Eleven fragments of at least two Leicester pattern plates were manufactured by Burgess & Leigh, and bore the registered design number 362588 indicating manufacture 1900+ (www.thepotteries.org; Figure 5.23, right). Two Asiatic Pheasants patterned plates were present with at least one of these manufactured by Pinder, Bourne & Co., dating their manufacture to 1862-1882. A Rhine patterned plate was manufactured by G.W. Turner & Sons, dating to 1873-1896 (Godden 1991:625). Two blue banded plates were identified, and a single relief mould dinner plate was manufactured by Mellor, Taylor & Co. between 1884 and 1904 (Godden 1991:432). Two plates of unknown size were decorated with the Albion and Chusan prints while a further four were unidentified prints (OSS134, OSS189, OSS194 and OSS196). Eight side plates were recorded with Albion, Chios, Leon, Rhine and Banded patterns noted, along with one unidentified pattern (OSS130). One egg cup with a blue print (OSS099), a relief moulded and a hand painted jug, and fragments of a teapot were also identified.

Bathroom or bedroom were consisted of two washbowls, one decorated with the Kew pattern (Figure 5.24, left) and the other with an unknown print (OSS135), and three chamber pots decorated in the Ionic print, and two unknown prints (OSS172 and OSS187).

General household items consisted of a portion of a plain white candle holder and a large portion of a small ornamental jug hand painted with blue flowers and gilt stems (OSS195, Figure 5.24, right). General kitchenware vessels included at least four plain white containers and three cheese pots.



Figure 5.22 Dresden pattern saucer manufactured by Unwin & Holmes 1868+ (left) and an unidentified pattern (OSS128) found on five individual saucers (right). All recovered from context 245

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Table 5.31 Vessel form and fabric, context 245

Vessel Form	Creamware	Earthenware	Semi-Vitreous	Total
Bathroom/Bedroom				(5)
Chamber Pot	3			3
Washbowl	2			2
Household				(2)
Candle Holder	1			1
Ornamental Jug	1			1
Kitchenware				(7)
Cheese Pot	2	1		3
Container	4			4
Tableware				(47)
Dinner Plate	9			9
Egg Cup	1			1
Jug	2			2
Plate	6			6
Saucer	10			10
Side Plate	8			8
Teacup	6		3	9
Teapot		2		2
Total	55	3	3	61



Figure 5.23 Dinner plates with the Leon pattern manufactured by J. & G. Meakin (left) and Leicester pattern plate manufactured by Burgess & Leigh (right). From context 245



Figure 5.24 Fragments of black Kew patterned washbowl (right) and small ornamental jug (right), recovered from Context 245

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Context 247: Fill of Wall Footing

Ten fragments of ceramic were collected from context 247, with four fragments excluded from MNV. Four fragments of a dinner plate bore the Formosa pattern and was manufactured by Scott, Brothers & Co. of the Southwick Pottery between 1838 and 1854 (Godden 1991:587, Figure 5.25). Other vessels recorded were a teacup with an unidentified print (OSS129) and an egg cup with a blue Willow print.



Figure 5.25 Sherds of a Formosa pattern dinner plate manufactured between 1838 and 1854 from context 247

Context 251: Unknown Feature in Fill

Four hundred and seventy-eight fragments of ceramic were collected from context 251 (Table 5.32) with 76 fragments excluded from MNV. One hundred and two individual vessels were calculated from the remaining fragments. Eighty-eight of these items were tableware vessels with teacups and saucers contributing the largest share. Twenty-five saucers were identified, including a portion of a Dresden patterned saucer manufactured by Pinder, Bourne & Co. in 1862-1882 (Godden 1991:495, Figure 5.26, left). Five Shamrock patterned saucers were also manufactured by the same company (Figure 5.26, right). Three plum coloured Dagmar patterned saucers were manufactured by Hope & Carter, dating 1862-1880 (Godden 1991:334). Other identified prints included Tealeaf, Banded wares, sprigged ware (ICC027), and six unidentified prints (OSS110, OSS120, OSS131, OSS156, OSS157 and OSS166). Twenty-eight teacups were identified including five Shamrock pattern, eight Tealeaf pattern, five Banded wares, one Clyde, one sprigged (ICC027) and one Coral patterned teacup manufactured by Davenport 1820-1860 (Godden, 1991:190). Five other teacups were decorated with unknown prints (OSS120, OSS131 (2), OSS158 and OSS159).

Eight dinner plates were recorded, all bearing identifiable patterns. Four Asiatic Pheasants plates were noted with two manufactured by Charles Hobson & Son in 1873-1875 (Godden 1991:327). The remaining dinner plates were a Rhine patterned plate by unknown maker and a Chios pattern plate by Pinder, Bourne & Co. (Figure 5.27, left). Four plates of unknown size were decorated by Asiatic Pheasants, Scroll, and two unidentified prints (OSS154 and OSS155). Five side plates were noted, one decorated with the Albion print and four with the Asiatic Pheasants print. Of these four plates, two were manufactured by Old Hall Earthenware Company Ltd (1861-1888, Godden 1991:474) and two by Pinder, Bourne & Co. (1862-1882, Godden 1991:495). Other

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tableware items of note included four children's mugs, four jugs, a mug bearing the Field Sports #2 print made by Edge, Malkin & Co. (1873-1903, Godden 1991:230), a large serving dish with the Albion pattern (Figure 5.27, right), and four teapots.

Bathroom and bedroom wares consisted of two Holloway's Ointment pots (Figure 5.28), and fragments from one ewer, one chamber pot (OSS064) and one washbowl (OSS132). General household items included a portion of a brood egg, a candle holder and either a teacup or teapot from a child's teaset. Two kitchen bowls and two cheese pots represented Kitchenware items.



Figure 5.26 Dresden pattern saucer (left) and Shamrock pattern saucer (right) both made by Pinder, Bourne & Co. 1862-1882, retrieved from context 251

Table 5.32 Vessel form and fabric, context 251

Vessel form	Blueware	Creamware	Earthenware	Semi-Vitreous	Total
Bathroom/Bedroom					(5)
Chamber Pot		1			1
Ewer		1			1
Holloways Ointment		2			2
Washbowl		1			1
Household		3			3
Brood Egg		1			1
Candle Holder		1			1
Child's Teaset - Teacup or Teapot		1			1
Kitchenware					(4)
Cheese Pot		2			2
Kitchen Bowl		1	1		2
Tableware					(88)
Bowl		1			1
Child's Mug		4			4
Dinner Plate		8			8
Dish Lid		2			2
Jug	1	3			4
Mug		1			1
Plate		4			4
Saucer		23		2	25
Serving Dish		1			1
Side Plate		5			5
Teacup		27		1	28
Teapot			4		4
Tureen Lid		1			1

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Vessel form	Blueware	Creamware	Earthenware	Semi-Vitreous	Total
Unidentified		1		1	2 (2)
Total	1	92	5	4	102



Figure 5.27 Chios pattern dinner plate by Pinder, Bourne & Co. (left) and Albion serving dish (right), from context 251



Figure 5.28 Two views of the Holloway's Ointment pot from context 251

Context 258: Rubbish Dump

Nine fragments of ceramic representing a minimum of four individual items were collected from context 258. These included a Banded saucer, a Tealeaf teacup, a fragment of a gilt transfer teapot (OSS174), and a plain white side plate.

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Context 260: Well Fill

Seven vessels were identified from 26 fragments of ceramic, including a plain white chamber pot and ewer. Tableware items included a Tealeaf teacup and saucer, a green printed teacup (OSS120), a purple print saucer (OSS121) and a brown print plate (OSS122).

Context 272: Rubbish Pit Fill

Fourteen pieces of ceramic originated from five individual vessels. Bathroom items included the lower body of a toothpaste pot and a fragment of a blue banded chamber pot. Tableware items included an Udina pattern teacup and saucer and a saucer with an unidentified blue print (OSS207).

Context 300: Brick Chimney Base

A ceramic marble with a hairline blue band around the middle of the body was collected.

Context 314: Posthole

Three tableware vessels were identified including a flow blue Formosa patterned plate, a blue Banded teacup and a bowl with an unidentified print (OSS119).

Context 330: Rubbish Pit

Three items were identified within this context. Tableware items included a blue banded plate of unknown size and a saucer with an unknown brown print (OSS190). The lower portion of a plain white bell was also recovered, the handle and clapper no longer extant (Figure 5.29).



Figure 5.29 Lower body of a small bell recovered from context 330

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Context 347: Posthole Fill

A single fragment of a saucer bearing an unidentified blue print was collected (OSS126).

Context 360: Footing Fill

A portion of a Shamrock printed teacup was recovered, but could potentially relate to a teacup recovered elsewhere. A fragment of an earthenware kitchen container was also collected.

Context 381: Fill Layer

Nine pieces of ceramic were collected, with only three contributing to MNV. These consisted of fragments from two plates decorated with an unknown blue print (OSS191) and an unknown black print (OSS192). A fragment of a teacup bore an unknown grey print (OSS193).

Context 406: Posthole Fill

Sixty-nine pieces of ceramic were collected with 63 pieces related to 3 individual saucers bearing an unknown blue print (OSS128). The same pattern was also noted on a teacup fragment. One fragment of a dinner plate was decorated with the Antique pattern in black print.

Context 434: Posthole Fill

Although three fragments of ceramic were collected, only one piece contributed to MNV. This fragment originated from a teacup which bore an unknown dark blue print (OSS127).

Context 460: Posthole Fill

Three individual vessels were calculated from nine fragments of ceramic. Four pieces each of a dinner plate and a side plate were decorated with the blue Willow pattern. A fragment of a teacup was decorated with an unknown blue print (OSS199).

Context 537: Drain Fill

Forty-six pieces of ceramic representing a minimum of 11 individual items were collected (Table 5.33). Kitchenware items included a yellow glazed earthenware baking dish and a Cornishware bowl. Tableware items included four teacups: one printed with the Athens pattern, two unknown prints (OSS128 and OSS210) and one hand painted vessel (OSS215). A single saucer was represented bearing an unknown blue print (OSS005).

Two plates of unknown size were decorated with unknown prints (OSS208 and OSS209). A portion of a dish lid bore an unknown black print (OSS211). A fragment of a teapot lid bore an unknown blue print (OSS212).

Table 5.33 Vessel form and fabric, context 537

Vessel Form	Creamware	Earthenware	Total
Kitchenware	1	1	(2)
Baking Dish		1	1
Bowl	1		1

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Vessel Form	Creamware	Earthenware	Total
Tableware			(9)
Dish Lid	1		1
Plate	2		2
Saucer	1		1
Teacup	4		4
Teapot Lid	1		1
Total	10	1	11

Context 545: Fill Layer

Twenty-two individual vessels were recovered from context 545 (Table 5.34). Bathroom or bedroom ware items included a Holloway's Ointment pot, eight fragments of a brown printed washbowl (OSS133) and one fragment of a blue printed ewer (OSS186).

General household items included a vase with a blue print (OSS177), a fragment of a figurine and the marble of a mineral water bottle.

Sixteen of the vessels related to tableware items with single examples of a dish lid (OSS180), an egg cup (OSS176), a jug (OSS174), a milk jug (OSS178) and a blue Willow patterned serving dish. Two plates of unknown size were noted, one having a blue Willow print and the second bearing a print with a partial pattern name '...ssau' which may have been Nassau.

Single fragments of two saucers were decorated with unknown prints (OSS175 and OSS185). Seven teacups were recovered with one constructed of blueware. The remaining six were decorated with the Rhine pattern and five unknown prints (OSS179, OSS181, OSS182, OSS183 and OSS184).

Table 5.34 Vessel form and fabric, context 545

Vessel Form	Blueware	Creamware	Semi-Vitreous	Total
Bathroom/Bedroom				(3)
Ewer		1		1
Holloways Ointment		1		1
Washbowl		1		1
Household				(3)
Figurine			1	1
Mineral Water Marble		1		1
Vase		1		1
Tableware				(16)
Dish Lid		1		1
Egg Cup		1		1
Jug		1		1
Milk Jug		1		1
Plate		2		2
Saucer		2		2
Serving Dish		1		1
Teacup	1	6		7
Total	1	20	1	22

Context 547: Demolition fill layer in section

Thirty-four pieces of ceramic were recovered from context 547, representing nine individual vessels. Seven pieces of ceramic were reconstructed to form a large portion of a chamber pot

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bearing a green Harvard print (Figure 5.30). A sherd from a second chamber pot also bore a green print but remains unidentified (OSS125).

Seven tableware items were identified including a dinner plate, plate and a platter decorated with the Asiatic Pheasants print. A blue Banded teacup was noted along with a fragment of a saucer with an unknown print (OSS123) and a plate with an unknown print (OSS124). Two fragments of a brown teapot were also collected.



Figure 5.30 Chamber pot decorated with the Harvard pattern, retrieved from context 547

5.4.2 Stoneware

The stoneware assemblage recovered from the Stage 3 excavations was generally moderately fragmented, and where fragmented items could potentially relate between contexts, only one item was counted towards overall MNV (minimum number of vessels). Items were compared across the whole assemblage as fragments from one vessel could be present within multiple contexts. Where this had potentially occurred, the vessel was calculated within one context only.

Seventy-six pieces of stoneware were collected from 15 contexts during the Stage 3 excavations, representing a minimum of 47 individual vessels (Table 5.35). The greatest number of vessels were recorded within context 241, a mid-19th century made ground layer. Twenty-five of the vessels were identified as having contained general household products, seven contained a beverage and five contained alcohol (Table 5.36).

Five items contained a manufacturer's mark identifying four individual manufacturers. These were: Stephen Green (c1820-1858), J. Bourne (1819-1907), Charles Price (c.1820-1906) and Doulton & Watts (1815-1858).

Table 5.35 Summary of stoneware, Stage 3, Onehunga

Context	NISP	MNV	Context	NISP	MNV
203	11	4	330	1	0
227	3	3	468	5	5
241	16	12	478	1	1
242	2	2	537	16	5
251	4	3	545	7	5

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Context	NISP	MNV	Context	NISP	MNV
245	1	1	546	2	2
272	2	0	547	4	3
314	1	1			

Table 5.36 Minimum number of individual stoneware vessels, Stage 3, Onehunga

Product	MNV
Alcohol	(5)
Beer	3
Bottle	1
Cider	1
Beverage	(7)
Ginger Beer	7
Food	(3)
Oyster Jar	3
Household	(25)
Blackening	6
Container	1

Product	MNV
Crock/Flagon	1
Ink	3
Master Ink	2
Penny Ink	12
Services	(2)
Drain	1
Inspection Lid	1
Unidentified	(5)
Bottle	5
Total	47

Context 203: Rubble layer

Four vessels were calculated from material collected from context 203. The partial base and body of a cream coloured bottle likely contained ginger beer. An almost complete cream and tan oyster jar with a base diameter of 84mm was made by Doulton & Watts of the Lambeth Pottery between 1815 and 1858 (Figure 5.31). A portion of a fawn coloured blackening jar and a brown and fawn coloured container were also noted.



Figure 5.31 Oyster jar manufactured by Doulton and Watts, 1815-1858 retrieved from context 203

5. Artefact Analysis

Context 227: Demolition fill layer

The partial base and body of a cream coloured ginger beer was collected along with remains of two penny ink bottles.

Context 241: Historic Fill Layer

Twelve fragments were collected from context 241, each fragment representing a separate vessel. This included a complete ginger beer standing 164mm high with a base diameter of 64mm. A partial blacking bottle was impressed with the mark of J. Bourne. Joseph Bourne produced stoneware from 1819 until 1850 when he entered into partnership with his son, thus becoming J. Bourne & Son, this name remaining until 1907 when the company became a limited liability (potteryhistories.com). Three fragmented ink bottles were noted along with one complete example. A master ink bottle stood 128mm high with a base diameter of 51mm. At least five other brown coloured bottles were present, but their likely contents could not be determined, and they remain unidentified.

Context 242: Rubbish dump fill

A portion of an oyster jar contained the stamp of Stephen Green of the Imperial Potteries in Lambeth. Green operated from these works from c.1820 until 1858 (Godden 1991:289). A complete unmarked blacking jar stood 128mm high with a base diameter of 59mm.

Context 245: Historic Fill Layer

A complete penny ink standing 46mm high with a base diameter of 49mm was collected.

Context 251: Unknown Feature in Fill

Three complete penny ink bottles were collected.

Context 314: Posthole

The partial base and body of a cream coloured beer bottle was collected.

Context 468: Rubbish Dump

The base and partial body of a cream and tan coloured beer bottle was identified. Three complete penny inks were noted and a complete master ink standing 129mm high with a base diameter of 21mm was made by Charles Price of Bristol (Figure 5.32). Price was initially in business with another, however from c.1820 he became a sole trader, the business remaining so until a merger in 1906 (www.mernick.org.uk).

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Figure 5.32 Master ink bottle made by Charles Price c.1820-1906, from context 468

Context 478: Posthole Fill

A complete cream and tan cider jar was made by Charles Price of Bristol c.1820-1906 (Figure 5.33). The base of the cider jar was stamped with a small apple, indicating cider as the likely original contents. The vessel form itself is identical to that of an oyster jar.



Figure 5.33 Complete cider jar made by Charles Price c.1820-1906 with the impressed apple mark on the base (right). Recovered from context 478

5. Artefact Analysis

Context 537: Drain Fill

Sixteen pieces of stoneware relating to five individual vessels was collected. Alcoholic beverage bottles included a grey coloured beer bottle and a tan coloured bottle which may have contained spirits. The rim, neck and shoulder of a brown ginger beer was noted. Seven fragments of an oyster jar were collected along with five pieces of a blacking jar.

Context 545: Fill Layer

Two individual ginger beer bottles were represented along with a partial blacking jar and a complete penny ink bottle. A portion of a cream and tan coloured drain was also collected.

Context 546: Fill Layer

An almost complete penny ink bottle was collected along with a tan coloured drainage inspection lid (Figure 5.34). The lid had a diameter of 144mm and three finger holds were formed into the lid for purchase.



Figure 5.34 Drainage inspection chamber lid from context 546

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5.4.3 Glassware

Material was sorted by context with items within those contexts separated by vessel form and colour to obtain minimum number of vessels present. Items were compared across the whole assemblage as fragments from one vessel could be present within multiple contexts. Where this had potentially occurred, the vessel was calculated within one context only. For this reason, six contexts, while containing glassware, do not contribute directly to overall MNV and are not discussed below.

A total of 562 pieces of glassware were recovered from 25 separate contexts, with a minimum number of 349 vessels or items present (Table 5.37). The greatest concentration of glassware was within contexts 203, 241, 251, and 468 with 75% of the total assemblage coming from these four contexts. Seventy-five vessels were recovered in complete condition with a further 27 being almost complete.

Table 5.38 provides the minimum number of individual vessels for each product type. Of the 349 vessels or items recorded, 140 of these were alcoholic beverage bottles (40% of the assemblage). General household items accounted for 19.5% of the assemblage while food product accounted for 16.5%. Pharmaceutical products accounted for 15.5% of the assemblage while mineral water or soda contributed 5% of the sample and unidentified items contributed 3.5%.

Table 5.37 Summary of glassware, Stage 3

Context	NISP	MNV	Context	NISP	MNI
203	85	49	272	9	2
223	3	2	300	6	5
227	14	10	330	2	1
232	16	7	360	6	5
234	1	1	381	2	1
241	65	43	394	13	9
242	12	5	434	2	1
246	5	1	468	129	88
247	5	2	537	6	2
251	133	84	545	28	18
258	7	3	547	4	1
259	1	1	468/245/241	7	7
260	1	1			

Table 5.38 Minimum number of individual glass vessels, Stage 3

Product	MNV	Product	MNV
Alcohol	(140)	Wine/Champagne	1
Beer	3	Food	(57)
Black Beer	58	Jam	1
Case Gin	30	Milk	1
Schnapps	8	Oil	1
Spirits/Liqueur	2	Olives	2
Unidentified	2	Paste	1
Whisky	18	Pickle	8
White Wine/Brandy	13	Salad Oil	19
Wine	5	Sauce	7

5. Artefact Analysis

Product	MNV
Unidentified	2
Vinegar	4
Worcestershire Sauce	5
Yorkshire Relish	6
Household	(67)
Covered Dish	1
Decanter Stopper	1
Dish	3
Dish Lid	1
Drinking Glass	8
Egg Cup	4
Gum	2
Ink	24
Machine Oil	1
Oil Lamp Chimney	1
Stopper	15
Toy - Marble	2

Product	MNV
Window	3
Wine Glass	1
Pharmaceutical	(54)
Bovril	2
Castor Oil	27
Medicine	18
Perfume/Cologne	4
Sarsaparilla	1
Unidentified	2
Unidentified	(12)
Bottle	9
Bottle/Jar	2
Jar	1
Water	(19)
Mineral Water/Soda	19
Total	349

Context 203: Rubble Layer

Eighty-five pieces of glass representing a minimum of 49 individual vessels were collected (Table 5.39). This included six complete vessels with one vessel in almost complete condition. Alcoholic beverages accounted for 53% of the assemblage with the remaining categories fairly evenly spread. One vessel remained unidentified.

Forty-six pieces of glass representing a minimum of 26 alcoholic beverage bottles were collected. Ten of these vessels were black beer bottles, generally consisting of the base although partial bodies were occasionally noted. The base and partial body of one black beer was embossed 'Cooper & Wood Portobello' (Figure 5.35, left). Cooper & Wood were in partnership from 1859 until 1868 (Toulouse 1971:142). Eleven case gin bottles were noted, all being partial or complete bases. A fragment from an Udolpho Wolfe's Aromatic Schnapps bottle was present, dating no earlier than 1863, and a single whisky was represented by a partial base. A pale green wine bottle base likely contained a white wine or brandy, while wine (red) and wine/champagne were also represented by a partial base.

Eight food product vessels were identified. A complete H. Olson sauce bottle was collected. Olson began full scale manufacture of his tomato sauce in 1870 after producing small amounts from his residence in the two years prior. By 1872 he had garnered such success he ordered 2,400 dozen embossed bottles from England for that year with a further order of 4,800 dozen for the following year, being pint and half pint sizes (*Daily Southern Cross*, 18 June 1872). Olson purchased the used bottles back for one shilling per dozen. The partial base and body of a round pickle was noted. Five salad oil bottles were present with a complete half whirly (Figure 5.35, right), two partial half chevron bottles and two further bottles recorded.

The partial base of a milk bottle was embossed 'Creamery....ge Mfg Co/Chicago/Imperial Measure/2Ideal'. Research indicates this is the Creamery Package Manufacturing Company. The company did not manufacture bottles but was contracted to package the product only. The use of

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Mfg as opposed to Manufacturing suggests the manufacture of the bottle can be dated c.1903-c.1907 (www.sha.org).

Six general household vessels were recorded. A complete bottle was embossed 'The Singer Manufacturing Company//Extra Quality Machine Oil' (Figure 5.35, right). The Singer Manufacturing Company is widely recognised as having manufactured sewing machines. The oil produced by singer was able to be used on a number of items including bicycles and hinges. Isaac Singer and Edward Clark began manufacturing sewing machines in 1851 and it was not until 1863 that the company became known as The Singer Manufacturing Company (www.parks.ca.gov). The partial base and body of a plain round drinking glass was noted and an octagonal ink bottle was recovered in an almost complete condition. One stopper recovered was associated with the H. Olson sauce bottle while a second contained no embossing. A fragment of a plum-coloured fanlight was also collected.

Three pharmaceutical bottles were identified. A complete 2-ounce amber Bovril bottle (Figure 5.35, right) was marked with the registration number 100848, indicating manufacture no earlier than May 1888 (www.great-glass.co.uk). The partial base of a blue aqua bottle was embossed: 'Y G Co.' in a pentagon divided into three parts. Y G Co is the mark used by York Glass Company, founded in 1794, who operated the Fishergate Works (Stockton 1981). A complete clear glass bottle standing 91mm high contained no embossing and was finished with a prescription rim.

Five Hamilton's Patent 'torpedo' bottles were recorded, all represented by bases. The base of an unidentified aqua bottle was embossed 'CW' within a diamond. The manufacturer was not able to be determined.

Table 5.39 Minimum number of individual glass vessels, context 203

Product	MNV
Alcohol	(26)
Black Beer	10
Case Gin	11
Schnapps	1
Whisky	1
White Wine/Brandy	1
Wine	1
Wine/Champagne	1
Food	(8)
Milk	1
Pickle	1
Salad Oil	5
Sauce	1
Household	(6)

Product	MNV
Drinking Glass	1
Ink	1
Machine Oil	1
Stopper	2
Window	1
Pharmaceutical	(3)
Bovril	1
Medicine	2
Unidentified	(1)
Bottle	1
Water	(5)
Mineral Water/Soda	5
Total	49



Figure 5.35 Cooper & Wood black beer bottle base (left) and half whirly salad oil, Bovril, and Singer Machine Oil (right)

Context 223: Demolition Fill Layer

Two vessels contributing to overall MNV from this context. These included the base and partial body of a case gin bottle and the base and partial body of a salad oil.

Context 227: Demolition Fill Layer

Ten vessels were calculated within this collection of material. A single case gin was represented by a partial base and body. Food product vessels consisted of two pickles. General household items included three bottle stoppers, two of which were identified as Lea & Perrins, likely for Worcestershire Sauce, and two toy marbles, one having a rainbow swirl in the cleat, the other being a green swirl. Two partial bases of medicine bottles were noted.

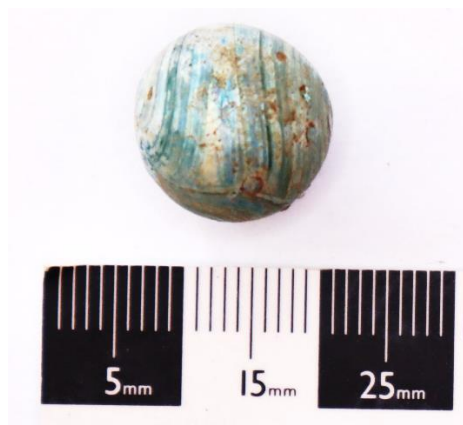


Figure 5.36 Marble from context 227

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Context 232: Rubbish Dump in Fill Layer

Seven vessels were collected from this context. A complete base of a case gin was recorded and a clear glass fragment from an oil lamp chimney was noted. Five cobalt castor oil bottles were recorded with two complete examples recovered and an additional bottle being almost complete (Figure 5.37).



Figure 5.37 Cobalt castor oil bottles

Context 234: Fill Layer

An almost complete pale green white wine or brandy bottle was collected.

Context 241: Historic Fill Layer

Sixty-five pieces of glass representing a minimum of 43 individual vessels were collected from context 241 (Table 5.40). Alcoholic beverages made up almost 75% of the assemblage. Twenty-six black beer bottles were calculated from complete or partial bases. The majority of the bases had a conical kickup with only a small number being a domed kickup. None of the bases were embossed. The base and partial body of a case gin was present. An almost complete Udolpho Wolfe's Aromatic Schnapps bottle stood 197mm high and two complete spirit or liqueur bottles stood 200mm and 208mm respectively (Figure 5.38, left). The base and most of the body of a wine bottle was present.

Four food product bottles were identified including a complete salad oil bottle standing 245mm high (Figure 5.38, right). A second salad oil was noted from a partial base and body. A single pickle bottle was identified from a partial base. The base of one aqua bottle relating to a food product was noted but the likely contents could not be determined.

Three general household vessels were recorded including the base of an octagonal drinking glass, and two complete ink bottles (Figure 5.39, left). Partial bases of two medicine bottles were

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identified. Two Hamilton's Patent 'torpedo bottles' were recovered, one being a base only and the second being an almost complete example, missing the neck and rim (Figure 5.39, right).

Table 5.40 Minimum number of individual glass vessels, context 241

Product	MNV
Alcohol	(32)
Black Beer	26
Case Gin	1
Schnapps	2
Spirits/Liqueur	2
Wine	1
Food	(4)
Pickle	1
Salad Oil	2
Unidentified	1
Household	(3)
Drinking Glass	1
Ink	2
Pharmaceutical	(2)
Medicine	2
Water	(2)
Mineral Water/Soda	2
Total	43



Figure 5.38 Udolpho Wolfe's Aromatic Schnapps and two liqueur bottles (left) and salad oil bottle (right)

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Figure 5.39 Stone and glass inks (left) and partial 'torpedo' bottle (right)

Context 242: Rubbish Dump

Five vessels were recovered from context 242 with alcohol accounting for three of these items. A partial black beer base and two partial case gin bases were noted. The partial base of a salad oil bottle was collected as was the base of a 'torpedo' mineral water or soda bottle embossed '...bart town'. This was not identified, but may have been indicated Hobart Town.

A single circular stemware wine glass base was retrieved and was of yellow uranium glass manufacture. The base was slightly oval in shape, being some 51.62mm on its longest axis by 48.86mm on its shortest and was up to 17.51mm thick where it had snapped at the base of the stem (Figure 5.40).

Uranium glass (also known as Vaseline glass) is glass in which uranium, usually in oxide diuranate form, is added to the glass mix before melting for colouration (Emery 2016). The amount of uranium added during production varied from trace amounts up to about 2% by weight; however, some 19th century pieces were made with up to 25% uranium (Go Go Go~, 2011). The colours of uranium glass range from yellow to yellow green or even avocado but is dependent on the oxidation state and concentration of the metal ions (Emery 2016; Go Go Go~, 2011). Uranium glass became popular in the mid-19th century, with its period of greatest popularity being from the 1880s to the 1920s (Emery 2016).

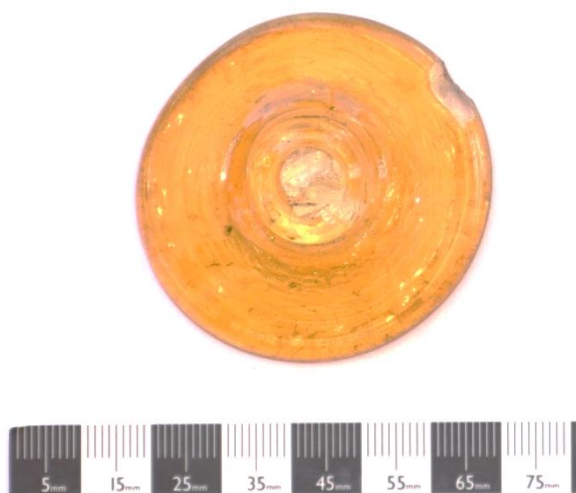


Figure 5.40 Uranium wine glass base from context 242

5. Artefact Analysis

Context 246: Wall Footing

The base and most of the body of a William Handley Codd Patent mineral or soda bottle was collected. The bottle itself was manufactured by William Barnard & Sons of London. Robson (1995) provides dates of 1890-1912 for William Handley's manufactory in Wellington Street; however, newspaper advertising shows the manufactory had been established some time before then with an 1887 advertisement offering for sale a soda machine from 'William Handley, Aerated Water Manufacturer, Wellington Place, Hobson Street' (*Auckland Star*, 15 October 1887:1). One year earlier Handley was known to be producing hop beer from a Hobson Street address (*Auckland Star*, 7 January 1886:3).

Context 247: Fill of Wall Footing

The base and partial body of two black beer bottles were collected. Neither of the bases contained any form of embossing and both bases had a layered conical kickup.

Context 251: Unknown Feature in Fill

One hundred and thirty-three pieces of glassware were collected, representing a minimum of 84 individual vessels (Table 5.41). Household products contributed the greatest number of vessels at 27% of the assemblage followed by alcohol (21%), pharmaceuticals (20%), food (18%), mineral water or soda (8%) and unidentified vessels (5%).

Eighteen alcohol bottles were recorded with only two complete examples present. Three green beer bottles were identified along with one black beer bottle. The bases of two case gin bottles were present along with five coffin flask whisky bottles, two of which were complete examples. The bases or partial bases of six white wine or brandy bottles were noted. The base of a yellow glass bottle was embossed 'Six to one gallon', a phrase typically seen on black beer but the specific contents on this bottle could not be determined.

Fifteen food product bottles were identified. A complete food paste jar was embossed 'Rd No 677035' (Figure 5.41, left) which was registered to W.A. Bailey on 6 July 1920 (www.great-glass.co.uk). The bases of two pickle bottles were recorded along with six salad oil bottles, four of these being half chevron style and one being a column style. The partial rim and neck of a sauce bottle was noted and at least three vinegar bottles were present. An almost complete Lea & Perrin's Worcestershire Sauce bottle was collected, the bottle having been manufactured by ACB Co.

Twenty-three general household items were identified. A complete decanter stopper with a plain round head and ground peg was noted. At least one dish and an unrelated dish lid were present. The base and partial body of a drinking tumbler was present. Four egg cups were recorded, two each in milk glass and two in clear glass. One of the milk glass cups and both of the clear glass had raised nipples around the body. An almost complete example is shown in Figure 5.41 (right). Nine small ink bottles were recovered, five of which were complete examples. Eight of the bottles were octagonal in shape with examples shown in Figure 5.42. Four unembossed bottle stoppers were noted. One piece of 6mm thick plate glass window was collected along with the base of a stemmed wine glass.

Seventeen pharmaceutical bottles were identified with 13 of the bottles being cobalt castor oil, two of which were complete. The base or partial base and bodies of three medicine bottles were present and the rim and neck portion of a perfume or cologne was collected.

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Seven mineral water or soda bottles were identified. The bottles consisted of one Hamilton Patent, three Gledhill's Patent, one Lamont Patent, and two 'stick' bottles. One of these 'stick' bottles was embossed 'J Grey' (John Grey), indicating the bottle was manufactured in 1874-1880. The Lamont bottle was embossed 'Barrett & Co Vauxhall London', likely manufactured in 1883-1907 (breweryhistory.com).

Four further bottles were present but remained unidentified.

Table 5.41 Minimum number of individual glass vessels, context 251

Product	MNV
Alcohol	(18)
Beer	3
Black Beer	1
Case Gin	2
Unidentified	1
Whisky	5
White Wine/Brandy	6
Food	(15)
Paste	1
Pickle	2
Salad Oil	6
Sauce	1
Unidentified	1
Vinegar	3
Worcestershire Sauce	1
Household	(23)
Decanter Stopper	1
Dish	1

Product	MNV
Dish Lid	1
Drinking Glass	1
Egg Cup	4
Ink	9
Stopper	4
Window	1
Wine Glass	1
Pharmaceutical	(17)
Castor Oil	13
Medicine	3
Perfume/Cologne	1
Unidentified	(4)
Bottle	2
Bottle/Jar	1
Jar	1
Water	(7)
Mineral Water/Soda	7
Total	84



Figure 5.41 Food paste jar manufactured c.1920+ (left) and clear glass nipped egg cup (right)



Figure 5.42 Four octagonal inks with shear lip finish



Figure 5.43 John Grey 'stick' bottle (left), Gledhill's Patent (centre), and Barrett & Co. Lamont Patent (right)

Context 258: Rubbish Dump

Three partial bases were collected with vessels identified as an unidentified alcohol, a jam jar and a medicine bottle.

Context 259: Well

A complete coffin flask whisky stood 165mm high and was embossed with the intertwined letters of 'CR' or 'RC'. This monogram was not identified.

Context 260: Well Fill

The base and partial body of an Udolpho Wolfe's Aromatic Schnapps was collected.

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Context 272: Rubbish Pit Fill

The partial base of a wine bottle and an almost complete square ink bottle were collected.

Context 300: Brick Chimney Base

Five vessels were collected from context 300, including three complete items. A complete coffin flask whisky stood 160mm high and was embossed 'Rutard 20' on the base. A complete half whirly salad oil stood 240mm high and a complete plain round ink bottle stood 78mm high. An almost complete Rimmel perfume or cologne bottle was noted and the contents of a bottle or jar base remained unidentified.

Context 330: Rubbish Pit

The partial base of a black beer was recovered.

Context 360: Footing Fill

The bases of four black beer were collected with none containing any form of embossing. The base and partial body of a Goodall, Backhouse & Co. Yorkshire Relish was also recovered.

Context 381: Fill Layer

The unembossed base of a black beer bottle was collected.

Context 394: Fill of Feature 246 (Wall Footing)

Nine vessels were recorded within context 394. Three black beer and two case gin bottles were represented. Food product bottles included two pickles and one sauce bottle. An almost complete ink bottle was also recovered.

Context 434: Posthole Fill

A complete plain aqua stopper was collected.

Context 468: Rubbish Dump

Ninety-nine pieces of glass relating to a minimum of 88 individual glass vessels were collected from context 468 (Table 5.42). Twenty-five of these bottles were alcoholic beverages. Two black beer bases and four case gin bases contributed towards MNV. Two complete and one almost complete schnapps bottles were recorded, two being identified as Udolpho Wolfe's while the third contained no embossing. Ten whisky bottles were present, nine of which were flasks with a single round bottle being present. The partial bases of at least four white wine or brandy bottles were present along with the green base of a wine and a complete amber hock bottle standing 349mm high.

Eighteen food product vessels were recorded including the base of an oil, two complete olive bottles, two partial salad oils, fragments from at least three sauce bottles along with a complete Holbrook & Co. sauce (Figure 5.44), and one vinegar. Three Lea & Perrin's Worcestershire

5. Artefact Analysis

Sauce bottles were present (example in Figure 5.44), two of which were complete. Five Goodall, Backhouse & Co. Yorkshire Relish bottles were recovered, four of which were complete (example in Figure 5.44).

Nineteen household products were identified with five complete and three almost complete examples recovered. The partial lower portion of a milk glass dish (possibly a sugar bowl or candy dish) was press moulded and embossed with the word 'Depose'. Three fragments of an emerald green pressed dish were also noted. Partial or complete bases of three drinking glasses were present, with one being a shot glass size. Two gum jars with external thread finishes were noted. Seven ink bottles were collected, all being complete or almost complete examples. Four stoppers were collected including three plain and one Lea & Perrin's. One fragment of 9mm thick plate glass window was collected.

Seventeen pharmaceutical product vessels were identified. A complete amber 2-ounce Bovril bottle was present. The base or partial bases of seven cobalt castor oil bottles were noted. Six medicine bottles were identified including two Bonnington's Irish Moss, one bottle embossed 'Fellows & Co Chemists, N.B.', one Barry's Tricopherous for the Skin and Hair, and a complete Weston's Wizard Oil. Two complete perfume or cologne bottles were collected, one produced by Roger & Gallet and the other by Rimmel. A complete emerald coloured Dr Townsend's Sarsaparilla bottle stood 240mm high (Figure 5.44, right).

Portions of three mineral water or soda bottles were collected representing three differing Patents; a Codd, a Hamilton's, and a Hogben's. The Codd bottle was an almost complete example, embossed 'A C Scott & Co'. Scott had resided in Nelson for some years before settling in Auckland in 1892, opening an aerated water manufactory in Ponsonby Road in 1892. The business merged with WaiWai and Handley shortly before his death in 1919 (*Auckland Star*, 24 February 1919). The Hogben's Patent bottle was manufactured by Lumb & Co. of Castleford sometime between c.1870s and 1905 (Toulouse 1971:280).

Remains of six bottles, three aqua and three clear glass were not identified.

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Table 5.42 Minimum number of individual glass vessels, context 468

Product	MNV
Alcohol	(25)
Black Beer	2
Case Gin	4
Schnapps	3
Whisky	10
White Wine/Brandy	4
Wine	2
Food	(18)
Oil	1
Olives	2
Salad Oil	2
Sauce	4
Vinegar	1
Worcestershire Sauce	3
Yorkshire Relish	5
Household	(19)
Covered Dish	1
Dish	1
Drinking Glass	3
Gum	2
Ink	7
Stopper	4
Window	1
Pharmaceutical	(17)
Bovril	1
Castor Oil	7
Medicine	6
Perfume/Cologne	2
Sarsaparilla	1
Unidentified	(6)
Bottle	6
Water	(3)
Mineral Water/Soda	3
Total	88



Figure 5.44 Lea & Perrin's Worcestershire sauce, Goodall, Backhouse & Co. Yorkshire Relish bottle, and Holbrook & Co. sauce bottle (left) and Dr Townsend's Sarsaparilla (right)

Context 537: Drain Fill

Two shear lip ink bottles were recovered. One was octagonal in shape whilst the second was square.

Context 545: Fill Layer

Eighteen vessels were collected from context 545 (Table 5.43) with 11 vessels identified as alcoholic beverage bottles. Six black beer bases were present, four having a conical kickup and two having a domed kickup. One complete base and two partial bases with some of the body of case gin bottles were noted. The base and partial body of a schnapps bottle and the base of a pale green white wine or brandy were identified.

Only one food product bottle was present, the base and partial body of a Lea & Perrins Worcestershire Sauce. The base and partial body of a clear drinking tumbler was also collected. Five pharmaceutical bottles were calculated including a castor oil base, one complete unmarked medicine bottle, one partial medicine base, a partial base of an unidentified cobalt bottle which may have contained disinfectant or other pharmaceutical product, and the base of a clear bottle which may have contained either perfume or medicine.

5. Artefact Analysis

Table 5.43 Minimum number of individual glass vessels, context 545

Product	MNV
Alcohol	(11)
Black Beer	6
Case Gin	3
Schnapps	1
White Wine/Brandy	1
Food	(1)
Worcestershire Sauce	1
Household	(1)
Drinking Glass	1
Pharmaceutical	(5)
Castor Oil	1
Medicine	2
Unidentified	2
Total	18

Context 547: Fill layer in section

A complete aqua stopper was collected but did not carry any embossing.

Context 468/245/241: Mixed Fill Layers

Seven vessels were recovered from this mixed zone, all being bases with some of the body intact. Three bottles were alcoholic beverages: one black beer and two case gins. The base and most of the body of a half whirly salad oil was noted. General household items included the base and partial body of an 11-sided tumbler, and a fragment of a pressed glass dish. The base and partial body of a cobalt castor oil was also collected.

5.4.4 Tobacco Pipes

A total of 211 fragments of tobacco pipes consisting of 210 clay pipe fragments and a single bone mouthpiece with attachment, representing a minimum of 59 individual pipes, were recovered from the Stage 3 area (Figure 5.45 - Figure 5.49). The assemblage was in the main highly fragmented, and no complete pipes were present, with the overall assemblage consisting of 37 bowl, 146 stem, and 28 mouthpiece fragments that were collected from 22 contexts (Table 5.44).

Most of the pieces collected were unmarked and undecorated and the assemblage, with the exceptions of a partial terracotta pipe bowl (Figure 5.49 left) and the bone mouthpiece, comprised white clay, much of which had been produced of fine ball clay.

More than half of the assemblage was recovered from just two contexts (537 and 545), the latter being recovered from the fill of a hearth or forge within a mid-19th century smithy and produced over 40% of the total pipe assemblage.

A total of six manufacturers were identified from markings present on 44 bowl or stem fragments retrieved from 11 contexts (Table 5.45). All but one of the identified pipes had been manufactured in Scotland, the majority (81%) being produced in Glasgow, while six (14%) were

5. Artefact Analysis

from Edinburgh and one (produced by John Ford) from London (Table 5.45). Additionally, a Northern Irish pipe produced in Derry (Londonderry) was also present, but a maker's mark was absent (Figure 5.45).

Table 5.44 Summary of tobacco pipe fragments from the Stage 3 excavation area

Context No.	Bowls	Stems	Mouthpieces	NISP	MNI
227	1	14	4	19	5
232	4	17	1	22	5
233		6		6	1
241	1	4	1	6	3
242	1	6	3	10	3
245		1		1	-
247			1	1	1
251	2	3		5	2
263	4	9	1	14	4
270			1	1	-
272		1		1	1
330		1		1	-
333		1		1	-
347		1		1	-
349		2		2	1
396		1		1	-
414	1			1	1
468	1			1	1
537	1	21	5	27	5
545	19	57	11	87	23
547	1			1	1
606	1			1	1
Total	37	146	28	211	59

Table 5.45 Summary of identified clay pipes by manufacturer from Stage 3

Manufacturer	Date Range	Contexts	MNI	% of assemblage
Thomas Davidson & Co., Glasgow	1861-1891	227, 251, 349, 545	6	14.63
John Ford, Stepney, London	1823-1865	537	1	2.44
Duncan McDougall, Glasgow	1846-1891	203, 227, 232, 241, 263, 272, 537, 545	25	60.98
William Murray & Co., Glasgow	1830-1861	263	1	2.44
Thomas White & Co., Edinburgh	1823-1876	233, 545	6	14.63
William White, Glasgow	1805-1891	227, 545	2	4.88
Total			41	100



Figure 5.45 Pipe from context 232



Figure 5.46 Pipe bowl from context 263

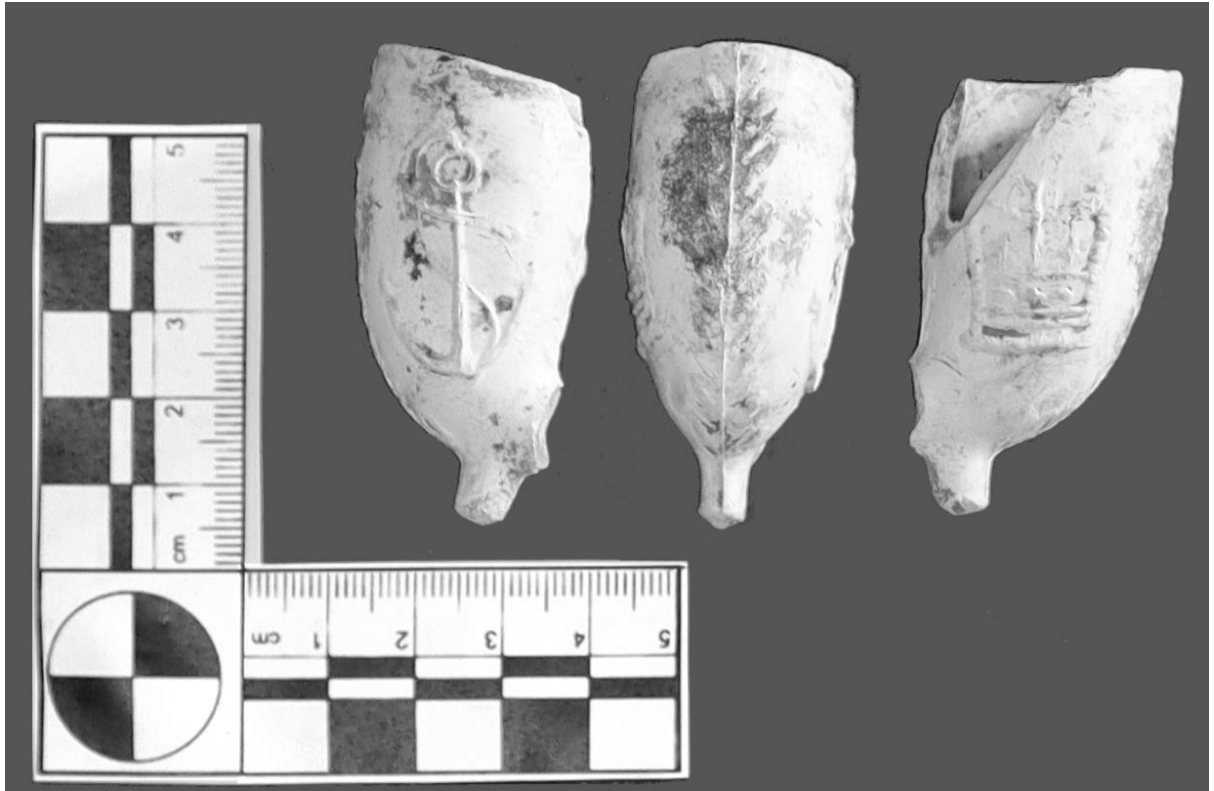


Figure 5.47 Anchor and Crown pipe bowl from context 414

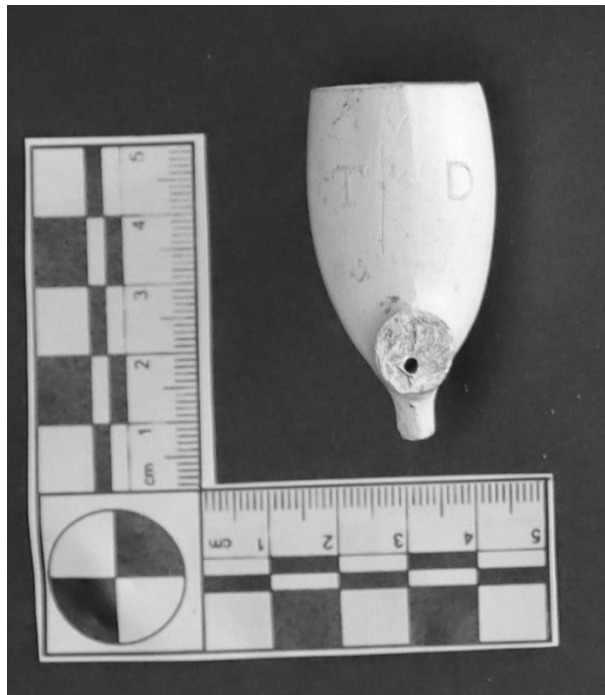


Figure 5.48 TD pipe from context 468



Figure 5.49 Some of the pipe fragments from context 545

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5.5 Metals

5.5.1 Introduction

The cataloguing and analysis of metal artefacts sampled from the site was undertaken by Ben Jones. A summary of items sampled from the contexts is described with additional information in Appendix 2. More detailed analysis of nails and horseshoes was also undertaken.

5.5.2 Methodology of Collection, Sampling, and Analysis

Metal items were not collected from excavated contexts if they were too corroded or deteriorated for analysis. The state of the collection was generally poor, with numerous rusted and corroded items including some of the items presented in the report. Metal was collected from half-sectioned contexts focussing on items within the various fills, and was also sampled to a representative level based on quantitative judgement from general layer or fill contexts. Horseshoes or similar numerous items were noted in the field, measurements taken, and a representative collection sampled.

Items were separated by context, then into the different metal groups, and generally cleaned with a cloth. A damp cloth was used if embossed words could be identified. Diagnostic elements within the contexts were catalogued, noting the context, the type of metal (wrought iron, cast iron, copper, lead, steel, tin and brass), the functional type, the colour, the weight (measured in grams), the object itself (nail, spoon, etc.) and the number of pieces (if the object had fragmented into several pieces). Specific terminology was applied to description of the nails and horseshoes.

The terminology and chronology for nails relied on the work of Middleton (2005, see Table 5.46). She refers to the earliest nails in New Zealand as wrought nails, which were manufactured by hammering the length of a square iron rod to four sides to form a point.

Table 5.46 Nail type based on Middleton's (2005) Bay of Islands chronology.

Nail Type	Characteristic	Date range
Wrought	1. 'wood-like' grain running lengthwise... metal tends to flake off in lengths 2. Four-sided taper	1830s to ~1870
Cut	1. rectangular shape 2. Two-sided taper	1840s to ~1860+
Wire	1. Circular 2. Parallel lined grip	~1870+

The alternative chisel pointed nail was created by hammering on two sides to create a flat end (Middleton 2005:57). Next are cut nails, which commonly have a rectangular shape, a two-sided taper or specific type of cut nail, the sprig with an L-shaped head. The latter was especially popular in New Zealand, where small sprigs were used to hold window frames and large sprigs used in flooring (Middleton 2005:57). Wire nails are the last in the chronology, being the latest in time, and are typically circular due to being made from round wire, and commonly have grip, e.g. four or more parallel horizontal lines at the top of the nail. The wire nail became popular in New Zealand at the same time as in Australia, which was approximately the 1870s. Middleton states that 'wire nails were first imported into Australia in 1853 but did not replace the wrought nail in popular use until about the 1870s (Varman 1987:107)'. Middleton notes that French

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missionaries used wire nails in the Bay of Islands by 1842, but that they only became widespread in New Zealand in the 1870s (Middleton 2005:57).

The terminology of horseshoes relied on common usage for the description of horseshoes and identifying customisation by the farrier. Attributes were noted such as toe caps/lips (a strip of metal as the name denotes that rises vertically and is situated on the top of the toe) and heels/corks (metal bars used to compensate for the horse's gait and/or provide extra grip of clay surfaces). Horseshoes were differentiated based on the shape of the arc, whether it was wider (indicating it was made for a front leg) or narrow (indicating a back leg). Horseshoes were grouped based on size: smaller horses (general riding or cart horses) had a shoe width ranging between 9cm and 11cm, with length ranging between 12cm and 14cm; medium horse sizes had a shoe width ranging between 11cm and 14cm, with length ranging between 14cm and 15cm; while workhorse shoes were identified if they had a width greater than 14cm and/or a length greater than 15cm.

5.5.3 Metal Summary

Three hundred and one metal items were sampled from 32 contexts within the Stone Store Onehunga site (Table 5.47). Most items recovered from contexts 203, 213, 232, 241, 245, 251, 468 and 545.

Table 5.47 Summary of metal assemblage

Context	NISP	MNV	Context	NISP	MNV
Stage 1			Stage 3		
103	5	5	242	5	5
107	18	17	245	13	13
117	6	6	246	2	2
119	1	1	247	4	4
Stage 2			251	27	24
122	3	3	258	2	2
125	7	7	270	1	1
155	1	1	272	1	1
157	1	1	298	3	3
162	1	1	300	1	1
Stage 3			306	1	1
202	1	1	360	1	1
203	44	43	394	2	2
209	1	1	414	1	1
213	21	17	468	9	9
227	4	4	545	23	23
232	23	23	548	1	1
241	128	127			

Most of the metal related to building/construction and equestrian uses, with household/domestic, machinery and tools being the next largest categories (see Table 5.48). Interestingly, clothing/footwear and militaria are also present within the collection. The results primarily show the commercial/industrial history of the site and illustrate the activities of the blacksmiths.

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Table 5.48 Functional types of metal items

Context	Building/ Construction	Household/ Domestic	Clothing/ Footwear	Fixtures/ Fittings	Militaria	Machinery	Equestrian	Tools	Total
103	4	1							5
105	8	1	1		1	2	1	3	17
117	5					1			6
119	1								1
122		1					2		3
125	3	1		2			1		7
155		1							1
157				1					1
202	1								1
203	22	1		1		3	2	14	43
209	1								1
213	7	1				2		7	17
227	1	1	1			1			4
232	19			2		1		1	23
241	12	1				3	112		128
242	2		3						5
245	11	1	1						13
246	1					1			2
247	1	1	1						3
251	5	7	2	1		4		4	23
258						2			2
270		1							1
272	1								1
298	1					1		1	3
300	1								1
306				1					1
360	1								1
394	2								2
414				1					1
468		5					4		9
545	9	2		1	1	4		6	23
546				1					1
548	1								1
Total	120	26	9	11	2	25	122	36	351

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Context 103: Old Topsoil

Items recovered from context 103 included a cut spike (of similar manufacture to a cut nail) with a trapezoid head (ID74), three rusted iron cut nails with trapezoid heads (ID 75-77), and a corroded iron butter knife (ID 78).

Context 105: Fill Layer

About 2326g of offcut metal was collected from context 105. Metal material possibly relating to machine processing/activity included two pieces of hole-punched brass sheets (ID 55), two pieces of cast iron heavy duty metal parts (ID 57 and 58), a green copper square grommet/washer with central hole (ID 72), a T-shaped tool and a chisel (ID 67 and 68, Figure 5.50).

Several nails possibly used in the construction of a building on site were collected (Figure 5.51): an iron wire nail with a trapezoid head (ID 61), a flat headed square cut nail with a four-sided taper (ID 62) and three iron wire nail(s) with trapezoid head(s) (ID 63-65).

Other metal items included a copper buckle from trouser braces marked on the central bar 'BREVETE S.G. D.G/PARIS' (ID 70, Figure 5.52). Brevete means the design contains one or more patents, while SGD G translates to 'Sans garantie du gouvernement' – a disclaimer required by the government of France stating that it did not guarantee enforcement of claimed patent (Jen Low, pers. comm. 2017). There was also a broken unmarked plain copper teaspoon (ID 73).



61 62 63 64 65

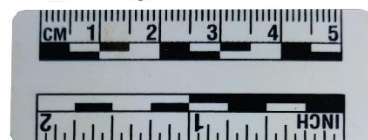


Figure 5.50 Possible chisel/spike sampled from context 105 (ID 68)

Figure 5.51 Several types of nails sampled from context 105 (ID 61-65)

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Figure 5.52 Copper buckle marked 'Brevete S.D.G.D Paris' from context 105 (ID 70)

Context 117: Quarry Area Fill

Several types of nails were collected from this context (Figure 5.53), including: a corroded iron cut sprig nail (ID 39), two circular iron flat head wire nails (ID 40-41), a flat headed cut nail (ID 42) and a copper wire nail with a flat head, and a grip on the top of the shaft (ID 43). A brass canister, bent and in poor condition, was also collected (ID 38).



Figure 5.53 A canister and several nails sampled from context 117 (ID 38-43)

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Context 119: General Pit Fill

A single iron cut nail with a flat head was sampled from this context (ID 60).

Context 122: Rubbish Pit Fill

The metal items collected from this context included a cast iron red/black cast iron pot lid (ID 35), and two horseshoes, one forged for the foreleg of a large workhorse having toe kick and heel caulks (ID 36), the other forged for the hind leg of a cart horse (ID 37).

Context 125: Drain Fill

Six offcut pieces of metal were collected from this context, weighing 1215g. Identifiable metal included: a bent brass metal plate with hole in the centre, suggesting it may have been a piece of an oil lamp (ID 1); an iron spike with a trapezoid head and a rectangular shaft with a two sided taper (ID 44); a rusted lock bolt (ID 45); iron coil/wire (ID 46); a rear horse shoe (47); and an iron handle (48) (Figure 5.54).



Figure 5.54 A large iron handle sampled from context 125 (ID 48)

Context 155: Posthole Fill

A single wire nail with a trapezoid head bent at a 45-degree angle was collected from this context (ID 9).

Context 157: Posthole Fill

A single iron two-pronged pin wire fencing staple was sampled from this context (ID 10).

Context 202: Demolition Fill Layer

A single corroded iron square cut nail with a 4-sided taper and a trapezoid head was sampled from this context (ID 339).

Context 203: Rubble Layer

A variety of items were collected from this context. The front leg shoe of a large workhorse was collected (with heel caulks and a toe cap, ID 221) in tandem with an iron stirrup (ID 264).

Building/construction related items were also sampled such as: rusted and degraded nails (Figure 5.55); a bent (45 degree) iron square cut nail with a 4-sided taper and a flat head (ID 222, Figure 5.56); iron square cut nails with a 4-sided taper and a trapezoid head (ID 223-270, Figure 5.56); a degraded rusted iron square cut nail with a four-sided taper and a rounded head (ID 275); and an iron circular wire nail with trapezoid head and grip on the shaft (ID 265, 316-325). Other building/structure related items included: iron metal bar(s) (ID 224-225); iron square bolts with flat heads (ID 260, 263, 271, 278, 279, 284, 285, 286); an iron door hinge (ID 292); and an iron decorative fence/grate (ID 267, Figure 5.57).

Two clothing related items were also sampled: a plain square iron buckle (ID 226) and a plain round brass belt buckle (ID 258, Figure 5.58). Household items included a copper tap with a slit in the shaft (ID 315, Figure 5.60) and a degraded bent brass lamp burner collar (ID 325).

Metal material possibly related to some machinery process/activity was also sampled. This included: an iron flat bar (possible tool) with a central hole (ID 259); a degraded rusted iron T-shaped tool (ID 261, 290, Figure 5.59); a heavy duty chain (ID 266); and a degraded iron pulley (ID 273).

Various hooks were sampled (Figure 5.61) including: an iron degraded metal hook with a 45 degree handle (ID 281); an iron hook with attached hoop (ID 283); and an iron hook handle for handling cuts of meat or lifting crates (ID 293).

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Figure 5.56 Nails sampled from context 203 (ID222-223)

Figure 5.55 Types of nails sampled from context 203 (ID 316-325)



Figure 5.58 Brass buckle sampled from context 203 (ID258)

Figure 5.57 A piece of decorated metal grate/fence sampled from context 203 (ID 267)



Figure 5.59 T-shaped tool sampled from context 203 (ID 261)



Figure 5.60 Copper tap sampled from context 203 (ID 315)

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Figure 5.61 Types of hooks sampled from context 203 (ID281, 283, and 293)

Context 209: Posthole Fill

A single copper square cut nail with a triangular head and a four-sided taper, slightly bent, was sampled from this context (ID 248, Figure 5.62).



Figure 5.62 Selection of copper nails sampled from several contexts: 209 (ID 248), 246 (ID 249), 394 (ID 251-252) and 241 (ID 253)

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Context 213: Forge Box Fill

Several nails and building related items were sampled from this context (Figure 5.63). This included an iron triangular spike (ID 84), an iron circular wire nail with a grip on the shaft and a trapezoid head (ID 85), an iron circular bolt with round head (ID 86), two wrought iron nails with rounded circular heads (ID 87-89), and a cut iron nail with a rounded head (ID 88).

Other metal items, possibly tools, were an iron file (ID 90), an iron bar, possibly a blank for a horseshoe or other smithed item (ID 91), a heavy duty iron chain (ID 92), iron circular and rectangular bands (ID 93-94), iron looped hooks (ID 95-97, 98-99) and an iron hook rail (ID 96).



Figure 5.63 Bolt, spike and nails sampled from context 213 (ID84-89)

Context 227: Demolition Fill Layer

Three items were collected from this context. This included a degraded brass teaspoon with no identifiable marks (ID 56), a flat head screw (ID 252), and a corroded iron buckle (ID 331).

Context 232: Rubble Fill Layer (203)

Numerous nails and spikes were collected from this context (Figure 5.64). There were five iron rectangular cut nails with trapezoid heads and two-sided taper (ID 12, 13, 15, 16 and 17), three iron rusted rectangular cut nails with flat heads and a two-sided taper (ID 14, 25 and 26), two rusted iron cut spikes with trapezoid heads and a four-sided taper (ID 18, 20, 22, 23 and 24) and two rusted iron rectangular wrought spikes with flat heads and a two sided taper (ID 19 and 21).

Household items were also sampled from this context, including a large iron handle (ID 28), a copper bend doorknob (ID 30), multi-threaded wire (ID 32), and an iron double sided butchery hook (ID 27).



Figure 5.64 Nails sampled from context 232 (ID 12-26)

Context 241: Historic Fill Layer

Several metal items relate to buildings/construction were recovered from this context, including a green copper door handle (Figure 5.65) and two pieces of lead sheet metal. Nails included an iron wrought nail with a flat head (Figure 5.66) and a copper square cut nail with a 4-sided taper with a trapezoid head (ID 253, Figure 5.62). Other building related items were also identified; however, the finer details were lost due to degradation. These were iron straps (ID 102, 104 and 107), a rusted nail (ID 106) and a spike (ID 105). Two iron machinery parts were also identified but were too degraded to identify further details (ID 101 and 103). Numerous types of horseshoes were sampled from this context (see section 5.5.5 and Table 5.50 for a detailed summary). Lastly, a unique item from this context was a green brown brass teapot/kettle spout (Figure 5.67).



Figure 5.65 Doorknob was sampled from context 241 (ID 3)



Figure 5.66 Wrought nail sampled from context 241 (ID 7)



Figure 5.67 Kettle spout from context 241 (ID 4)

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Context 242: Rubbish Dump

Nails sampled from this context included an iron wire nail with a flat head and a grip on the shaft (ID 246), and large iron cut rectangular nail with a two-sided taper with a flat head (ID 247).

Clothing or personal items included in this sample were a copper medal mount with no identification (ID 255, described in the Militaria section), a small copper unmarked bar/clip with screws attached (ID 256) and a very degraded small copper unmarked clip (ID 257).

Context 245: Historic Fill Layer

A single four-holed trouser or shirt button was collected from this context (Figure 5.68).



Figure 5.68 Two views of the trouser or shirt button from context 245 (ID 333)

Context 246: Wall Footing

A single steel grey square cut nail with a 4-sided taper with a flattish head was sampled from this context (ID 249, Figure 5.62). Two smallish pieces of rolled-up lead sheets were also collected (ID 245).

Context 247: Footing Fill

Metal sampled from this context included a copper four-holed button (ID 41), a very degraded and bent burner collar (ID 343) and a copper square cut nail with a four-sided taper and a flat head (342).

Context 251: Unknown Feature in Fill

Eleven unidentified iron items weighing 2712g were sampled. Various tools were sampled from this context, including an iron spade with some of the handle attached (ID 227, Figure 5.69), an iron heavy duty wood saw (ID 230, Figure 5.70), an iron chisel with the end missing (ID 232) and a degraded iron shovel head (ID 236).

Machinery related items included three iron rings/grommets for machinery (ID 228), two tin grey tube cap/spouts (ID 239), a small copper grommet (ID 241), and a large steel washer (ID 242). Two lighting related items were also sampled. This included a light frame with iron casing and a copper inner frame, and a degraded burner collar (ID 231, 235).

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Several building/construction related items were collected, including an iron metal bar with nails attached (ID 229), a circular wire nail with a trapezoid head (ID 244), a degraded rusted spike and a degraded rusted lid (ID 233-234).

Clothing and household related items included two buckles (one copper, the other brass, ID 237, 337), an unmarked plain copper teaspoon (ID 243), a copper decorated scaled snake belt buckle (ID 332, see Militaria, Figure 5.86), a broken brass unmarked plain fork and tablespoon (ID 335-336).



Figure 5.69 Spade sampled from context 251 (ID227)

Figure 5.70 A heavy duty saw sampled from context 251 (ID 230)



Figure 5.71 Light frame sampled from context 251 (ID231)

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Context 258: Rubbish Dump

Metal items sampled from context 258 included an iron rusted wire nail with trapezoid head (ID 327) and two thin grey tin rounded caps (ID 329).

Context 270: Rubbish Pit Fill

A single plain copper bent teaspoon with no identifiable marks was sampled from this context (ID11, Figure 5.72).



Figure 5.72 Teaspoon from context 270 (ID 11)

Context 272: Rubbish Pit Fill

A single rusted square cut nail with a four-sided taper and a flat head was sampled from this context (ID 349).

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Context 298: Brick Chimney Base

Several items were sampled from context 298. This included an iron adjustable hook (ID 312, Figure 5.73), a four-sided heavy-duty bolt (s) (ID 313) and an iron oval ring (ID 314).



Figure 5.73 Adjustable hook sampled from context 298 (ID 312)

Context 300: Brick Chimney Base

A single iron circular wire nail was sampled from context 300 (ID 254).

Context 306: Posthole Fill

A broken brass doorknob was sampled from context 306 (ID 348).

Context 360: Footing Fill

A single rusted iron circular wire nail with a trapezoid head was sampled from context 360 (ID 345).

Context 394: Fill of Feature 246 (Wall Footing)

Two copper wire nails with a flat head and a circular shaft were sampled from context 394 (ID 250-251, Figure 5.62).

Context 414: Drain

A single metal item was sampled from context 414. This was a copper frame with a door lock brass hanger/shutter attached. Wood was attached on the back (ID 79, Figure 5.74).



Figure 5.74 Lock sampled from context 414 (ID 79)

Context 468: Rubbish Dump

Four horseshoes were sampled from this context (see Table 5.50). Two of these were unique due to showing customisation of the horse shoe to allow it more grip when walking on a clay surface: these were an iron, deformed, heavy-duty horseshoe with an offset toe cap (ID 308); and an iron heavy duty horseshoe with large offset metal bar under the toe cap, and high heels installed in the rear (ID 309, Figure 5.75). Other metal items sampled were a copper lamp fixture (ID 350), a copper spindle (ID 351), two copper burner collar(s) (ID 352-353), and a rusted and a much-degraded iron shears/clipper (ID 354).

5. Artefact Analysis



Figure 5.75 Customised horseshoe sampled from context 468 (ID309)

Context 545: Fill Layer

Several building or construction related items were sampled, including a rusted iron spike (ID 8), two copper flat headed square cut nail(s) (ID 50 and 51, Figure 5.78) and iron and copper cut square nails with a flat head and a four-sided taper (ID 302, 303 and 304, Figure 5.76)

Machinery related metal was also sampled, including an iron shovel with some of the handle attached (ID 81), a degraded iron spade (ID 294), degraded rusted tool(s) (ID 295-296), a copper oval rod (ID 297), an iron rectangular rusted degraded machinery part (ID 298), a copper circular tool (ID 300, Figure 5.77), copper sheets (52), metal iron hoops (ID 53), an iron bar with 45 degree spikes on the opposite ends (ID 83) and a lead white tube cap/or a head of a roofing nail (ID 54, Figure 5.78). These heads were often made of lead or galvanised iron and the nail was attached to the head to prevent the nail itself from getting wet, thus rusting (Jen Low, pers. comm. 2017).

Some items relating to a house or household use were also sampled, including a heavily corroded tin box with a match striker on the underside, possibly a Wax Vesta (ID 82), an unmarked plain brass teaspoon (ID 305) and an iron lock with a copper plate engraved 'NO.60/CARTE??TER/PATENTED' (ID 80). This lock is most likely a Carpenter 60 Rim Lock, and the invention of James Carpenter from Willenhall, England, who created a lock with the latch perpendicular instead of horizontal (Evans 2002). The lock was patented in 1830 AND imported to Australia c.1852 (ibid.).



Figure 5.76 Nails sampled from context 545 (ID 302, 303, and 304)



Figure 5.77 Machinery part sampled from context 545 (ID 300)



Figure 5.78 Nails and tube cap sampled from context 545 (ID 50, 51 and 54)



Figure 5.79 Lock sampled from context 545 (ID 80)

5. Artefact Analysis

Context 546: Fill Layer

A unique item related to alcohol consumption was sampled from context 546 – a brass tap for a keg with the letters ‘FIDDIAN’ embossed on the tap (ID 546, Figure 5.80). These taps were made by James Baxell Ltd in Birmingham, England and were advertised as ‘cocks and taps manufactured in brass and gun metal’ (see *Kenya Gazette* 1963). According to ‘Graces guide’ the company was originally founded by William Fiddian and Co. in 1784 and continued by James Baxell operating as a limited company in 1903, and was still advertised in 1963.



Figure 5.80 Tap for keg sampled from context 546 (ID 340)

Context 548: Fill Layer

A single degraded and corroded copper cut nail with a flat head and four-sided taper was sampled from context 548 (ID 301).

5. Artefact Analysis

5.5.4 Nail Typology and Chronology

Fifty-nine nails could be identified across 21 contexts (see Table 5.49). Five wrought nails were sampled from contexts 241, 117 and 203, and were identified by the ‘wood-like’ grain running lengthwise and because when in a rusted or deteriorated state, this metal tends to flake off in lengths (Figure 5.66 and Middleton 2005: 56). Most of the head shapes of wrought nails were flat or rounded, and generally wrought nails were the least well-distributed across the sampled contexts.

Thirty-three cut nails were identified across 15 contexts, the majority of these either having a flat or trapezoid head, with instances of a rounded head. One sprig nail, used specifically for flooring, was identified in context 117 (ID 39, Figure 5.53). Generally, cut nails were the most numerous and dispersed across the sampled contexts. Twenty-one wire cut nails were identified across eight contexts, the majority of these having flat or trapezoid heads, and were not as dispersed as the cut nails.

The majority of the nails sampled were composed of wrought iron (49), with copper as the second largest category (9), with one steel nail. The wrought iron may indicate the presence of timber structures, while the copper alloy nails may have functioned originally as boat fastenings and may indicate the presence of maritime vessels on the site.

Copper was a preferred sheathing and fastening medium for boats, replaced by alloy of copper and zinc (McCarthy 2005: 104). It also may signal re-use of these nails for timber structures.

5.5.5 Horseshoe Type

As Table 5.50 indicates the majority of the horseshoes can be attributed to context 241 with a total of 113 horse shoes sampled, a significant indicator of the presence of a farrier. Most front and back horseshoes for workhorses suggest the large majority of the farrier’s work was tailored towards this type of animal. Interestingly, customisation of a horseshoe is also present in context 241, as Figure 5.75 illustrates a heavy-duty horseshoe tailored to compensate for a horse’s gait.

5.5.6 Slag

A large amount of metal slag was found around the forge bases in the Stage 3 excavation at the northwest corner of the project area, associated with the 1880s smithy. The slag (Figure 5.81) consisted of clumps of iron with occasional remnants of old items that had been trapped in the matrix. Such material is typical of the blacksmith’s workshop.

5. Artefact Analysis

Table 5.49 Types of nails identified in assemblage: W=Wrought, C=Cut, Wi=Wire

	241			155			232			117			119			105			213			203			251			242			272			
	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	Total			
Flat headed	1							3		3	1			1			1					2	4					1		1		17		
Trapezoid		1				1		5									4			1	1	2	4			1		1			21			
Oval																																		
Sprig											1																				1			
Rhomboid																																		
Rounded																			2	1			1								5			
Total	1	1				1		8		3	2			1			1	4	2	1	1	1	5	8			1		1	1		44		
	209			246			394			300			545			548			258			202			247			360						
	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi	W	C	Wi		Total		
Flat headed					1			2						5			1									1					10			
Trapezoid		1										1							1		1							1			5			
Oval																																		
Sprig																																		
Rhomboid																																		
Rounded																																		
Total		1			1			2				1		5			1			1		1			1			1			15			

5. Artefact Analysis

Table 5.50 Horseshoes sampled from contexts 203, 241 and 468

Context 203				
Front	Work horse	Horse	Pony	Total
Shoe				
Toe Cap				
Heel				
Toe cap + Heel	1			1
Total	1			1
Context 241				
Front	Work horse	Horse	Pony	Total
Shoe	0	14	5	19
Toe Cap	3	1		4
Heel	22			22
Toe cap + Heel	15	2		17
Total	41	17	5	62
Back	Work horse	Horse	Pony	Total
Shoe	6	6	5	17
Toe Cap	8	3		11
Heel	9			9
Toe cap + Heel	11	2		13
Total	34	11	5	50
Context 468				
Front	Work horse	Horse	Pony	Total
Shoe		1		1
Toe Cap				
Heel				
Toe cap + Heel	2			2
Total	2	1		3
Back	Work horse	Horse	Pony	Total
Shoe		1		1
Toe Cap				
Heel				
Toe cap + Heel				
Total		1		1



Figure 5.81 Metal slag from the later smithy contexts

5. Artefact Analysis

5.6 Militaria

A small number of artefacts of military origins were recovered across the site. These included various types of armaments from small arms and uniform elements, all suggestive of the mid-late Victorian Period.

5.6.1 Armaments

Several green copper percussion caps were collected in the demolition rubble. One was found in the Stage 1 excavation (Figure 5.82), but they were more common in the demolition fill contexts in the Stage 3 excavation. A musket ball (Figure 5.83) and a shotgun shell (Figure 5.84) were found from various rubbish pits in the Stage 3 area.

The solid brass 10-gauge centrefire shotgun shell (ID32) was found in the pit context [330]. It was engraved with the marks of the Union Metallic Cartridge Company, Bridgeport, Conn. This company was founded in 1867 and the shell is likely to date to the 1870s-1880s (Dave Rudd, pers. comm.)



Figure 5.82 Back and front view of a small percussion cap sampled from context 105 (ID 71)



Figure 5.83 Musket ball from context 247

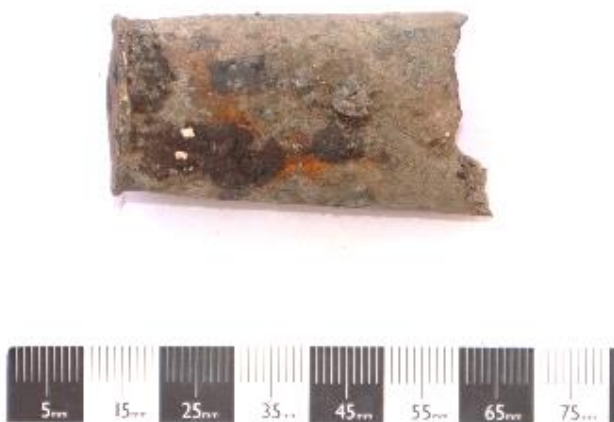


Figure 5.84 Large bore shell casing from context 545

5. Artefact Analysis

A very unusual metal object (ID27, Figure 5.85) was found in context 545 and was identified as a percussion cap dispenser. These varied in size and shape and could be quite ornate. They were typically associated with sporting guns (Dave Rudd, pers. comm.).



Figure 5.85 Possible percussion cap dispenser

5. Artefact Analysis

5.6.2 Clothing

A snake belt buckle was also found (Figure 5.86). These were traditionally worn by the military and police, including British Rifle Regiments from the Napoleonic wars and through into World War 1.²⁷

Buttons included:

- Royal Navy epaulette stud (ID 7, Figure 5.87) from context 397 and perhaps related to Captain James Ninnis (1850s-60s);
- One from the 14th Buckinghamshire Regiment (ID 16, from context 546, Figure 5.88).
- One from the 50th Regiment (ID 19, Figure 5.89, context?), known as the Dirty Half Hundred, from context 545.

Another belt buckle, a tongue from a friction belt was retrieved from context 242 (ID 255, Figure 5.90). On a normal regular army issue example, the tongue would have had the regimental numerals while the ring (front) would have displayed the name of the regiment. However, the example from context 242 is almost certainly militia (David Rudd pers comm).



Figure 5.86 Decorated scaled belt buckle sampled from context 251 (ID 332)

²⁷ See e.g., <https://archaeologyonthefrontier.com/2017/12/19/snake-buckles/> Accessed February 2019

5. Artefact Analysis



Figure 5.87 Royal Navy epaulette stud (ID 7, context 397)



Figure 5.88 14th Regiment button (front and back) (ID 16, context 546)



Figure 5.89 Button from 50th Regiment (ID 19, context 545); front and back



Figure 5.90 The belt tongue from the back of a friction buckle from context 242 (ID 255)

5. Artefact Analysis

5.7 Miscellaneous Items

Several interesting miscellaneous items from the Stage 3 excavations were sampled (Table 5.51).

A white bleached coral branch was sampled from context 468 (rubbish dump), possibly once a token or memento later deposited in this context (Figure 5.91).

Slate pencils were recovered from context 246 (wall footing), possibly used for writing (Figure 5.92). Similarly, three pieces of grey and purple ruled writing slate were sampled from context 251 (unknown feature in fill layer) (Figure 5.93).

Table 5.51 Miscellaneous artefacts from Stage 3 excavation

Context	Clothing/Footwear	Construction	Lighting/Projection	Organic	Writing
203		4			
241		5			
246					4
247	2			1	
251			1		3
468				1	
Total	2	9	1	2	7

Various coloured tiles were sampled as well, with four pieces of white and brown glazed tile sampled from context 203 (demolition fill layer), and five pieces of glazed floor tile from context 241 (fill layer in section). Not much can be said of these items except that they probably related to a bathroom floor or a fireplace surround.

Other items such as beads (Figure 5.94) and a plastic hair comb were also recovered (Figure 5.95).

A bone handle from a large tool was found in context 545 (fill layer) as well as the bone handle of a flatware item collected from context 251 (unknown feature in fill), possibly used once as a butter knife handle, fork or spoon (Figure 5.96).

Two personal and/or clothing related items of bone were also sampled from 247 (wall footing): one was a broken bone polished needle, and the other a four-holed button (Figure 5.97).

Context 251 contained several miscellaneous items such as small shaped tiles (hexagonal and square) and an electrical fixture marked with the words: 'SPERRYN/MADE/IN/ENGLAND/VITREOUS/BRITISH/MAKE' (Figure 5.98).

The latter fixture is possibly dating to the mid-20th century. Sperryn and Co. was located in Moorsom Street, Birmingham. It was founded in 1889 and started to create electric fixtures in 1961 (GGTBIH 2015). Sperryn appeared in New Zealand in 1936 to seek more co-operation concerning Britain brass trade.²⁸

²⁸ *Press*, Volume Lxxii, Issue 21838, 18 July 1936.



Figure 5.91 Coral sampled from context 468



Figure 5.92 Slate pencils sampled from context 246



Figure 5.93 Grey and purple writing slate sampled from 251

5. Artefact Analysis



Figure 5.94 Decorative beads (from left: ID 21 from context 545 (fill layer); white bead from context 606 (brick chimney base); and black bead from context 270 (rubbish pit fill))



Figure 5.95 Plastic hair comb from context 551



Figure 5.96 Bone cutlery handles (top: ID 22 from context 545; bottom cutlery handle from context 251)

5. Artefact Analysis



Figure 5.97 Bone needle (top), and a front and back view of bone 4-hole button (below) from context 247



Figure 5.98 Electrical fixture sampled from context 251

5.8 Lithics

A small collection of lithic artefacts was recovered from the site. These included an argillite adze (Figure 5.99), an obsidian flake (Figure 5.100) and a small number of chert flakes (Figure 5.101).

The adze (ID5) was in poor condition with the blade destroyed. Evidence of polishing was clear particularly on the top of the adze. Significant retouching suggesting that the tool had been repaired on a number of occasions before disposal.



Figure 5.99 Argillite adze (ID 5) recovered from context 227 (soil fill layer)

The obsidian flake showed a clear percussion bulk and some edge flaking and was dark grey in colour (similar to the black glass artefacts described below). The source was not identified.

Some of the chert chunks and flakes suggested some working had been undertaken but most were not identifiable as 'tools'. However, the material is unusual and suggestive of either having been brought on to the site either from the foreshore or further afield.

5. Artefact Analysis



Figure 5.100 Obsidian flake (ID 1) from context 229, possible posthole



Flake from context 537 (drain fill)



ID 29 context 545 (fill layer)



ID 1 context 229 (soil layer)



ID 26 context 545 (fill layer)

Figure 5.101 Chert flakes

5.9 Worked Glass

A collection of worked glass was also identified in the northwest part of the site during the Stage 3 excavations (Table 5.52, and see details found in the Appendices). They were generally associated with the fill (537) from drain feature [536]. The assemblage consisted of a number of reduced bottle base cores, large biface and uniface flakes exhibiting retouch, probably utilised as cutting blades and scrapers, as well as debitage (Figure 5.102–Figure 5.105). It was also notable that the thin walled body portions of the glass bottles were absent as they were probably not easily made into tools.

The range of glass fragments did appear to demonstrate the manufacturing tool reduction strategy (Figure 5.102–Figure 5.104). The dimple round black bottle bases acted as cores from which flakes could be reduced leaving irregular-shaped glass fragments, some of which were then edged to create sharp edges. The ideal form of the flake tools did appear to be the interior of the dimple base as a smooth thumb grip, with the base rim provided a smooth end to safely grip with the remnant bottle wall edge sharpened to provide a cutting edge. This is visible in Figure 5.102 and the flake from fill context 545 (Figure 5.104). Other suitable flakes were also obtained from bottle bases as well, without the obvious thumb hold.

The working on the bases and tops, such as those artefacts from context 548 (fill layer associated with the drain) (Figure 5.105), are suggestive of experimentation rather than finished tools. The tops and the square base do not seem likely candidates for effective tools as they do not seem to lend themselves to the small easily handled flake tools using the dimpled bottle bases.

Worked bottle glass has been found in several archaeological sites in New Zealand (see e.g., Shakles et al. 2017; Horwood 1991:26; Best 2002: 91; Adamson and Bader 2008). The first recorded instance of worked bottle glass found in an archaeological context in New Zealand is from trial excavations at Pa a Te Wera, Huriawa Peninsula, Karitane (Mackay and Trotter 1961 cited in Leach and Hamel 1978: 247). While the bulk of artefacts relating to the site appeared to have been deposited in the pre-European settlement period, a small assemblage of items such as clay tobacco pipe stems, pig bone and an unspecified quantity of ‘worked bottle glass,’ indicate that occupation persisted into the 19th century (Leach and Hamel 1978: 247). While it is possible that the European artefacts (including the bottle glass) were deposited during the early contact period, the establishment of a whaling station there in 1837 could equally have been the source of the material.

The practice is generally associated with Māori experimentation and adaptation of obsidian tool technology to a new but similar material. The number of tools is usually quite small with only a few objects typically identified, and that makes the Onehunga collection more significant.

The experimentation with glass by Māori appears to be relatively brief in most places, usually within the first 20 years or so of contact and rarely beyond the 1860s. However, this has not been specifically examined in New Zealand.

The practice of indigenous communities adopting glass and bottle glass, particularly into tool manufacture, has been recorded in Australia (see e.g., Cooper and Bowdler 1998; Harrison 2003; Gibbs and Harrison 2008; and recently summarised by Martindale and Jurakic 2015), Hawaii (Flexner 2013; Flexner and Morgan 2013), mainland USA (e.g. Porter 2015) and Argentina (e.g. Conte and Romero 2008), to mention a few places. The archaeological evidence suggests that it probably occurred during the early contact periods around the world.

The practice also prompts analysis of the ways in which contact and colonial processes occur in the different places, with the long-standing local tool technologies often swamped completely by the importing of materials and tools, resulting in the rapid disappearance of lithic technologies especially.

5. Artefact Analysis

Martindale and Jurakic (2015: 23) have noted that the use of bottle glass in the manufacture of lithic-like tools is likely to be widespread, but also poorly recognized from colonial contexts around much of the globe. However, the paucity of such assemblages in New Zealand is likely due to the fact that they were only formed on relatively rare site types, i.e. those where contact between Māori and incoming Europeans had taken place. Contact sites pre-dating the main European settlement period of New Zealand in the 1840s are not that common nationwide, and in particular the evidence of short-lived encounters where bottle glass could have been acquired, such as a ship picking up kauri spars, or whalers coming ashore, are difficult to identify in the archaeological record. As more of these sites are encountered over the coming decades, it is undoubted that more worked bottle glass assemblages will come to light.

The analysis of the Onehunga worked glass tools suggests that they were made by Māori as the similarity to obsidian tools is strong. The collection is all from one small area, which suggests a relatively short-lived event and probably undertaken by a few people during a visit. The local Māori hostelry on the neighbouring block is an obvious source of the tool makers and it is possible that they may have also been involved with the works for the construction of the original buildings along the Wharangi Street and had been experimenting with the material at that point.

Table 5.52 Summary of worked glass artefacts

Colour/Bottle Part/Tool type	Contexts			Total
	537	545	548	
Black				
Base				
Core	7		1	8
Flake	2	1		3
Flake tool	3			3
Square Base				
Core			1	1
Top				
Unknown	1		2	3
Wall				
Flake	19			19
Clear				
Top				
Flake	1			1
Total	33	1	4	38



Figure 5.102 Worked glass fragments from context 537 (marked flake showing smooth interior thumb hold)



Figure 5.103 Worked glass fragments from context 537



Figure 5.104 Worked glass flake showing worked edges and use of base for thumb hold (context 545)

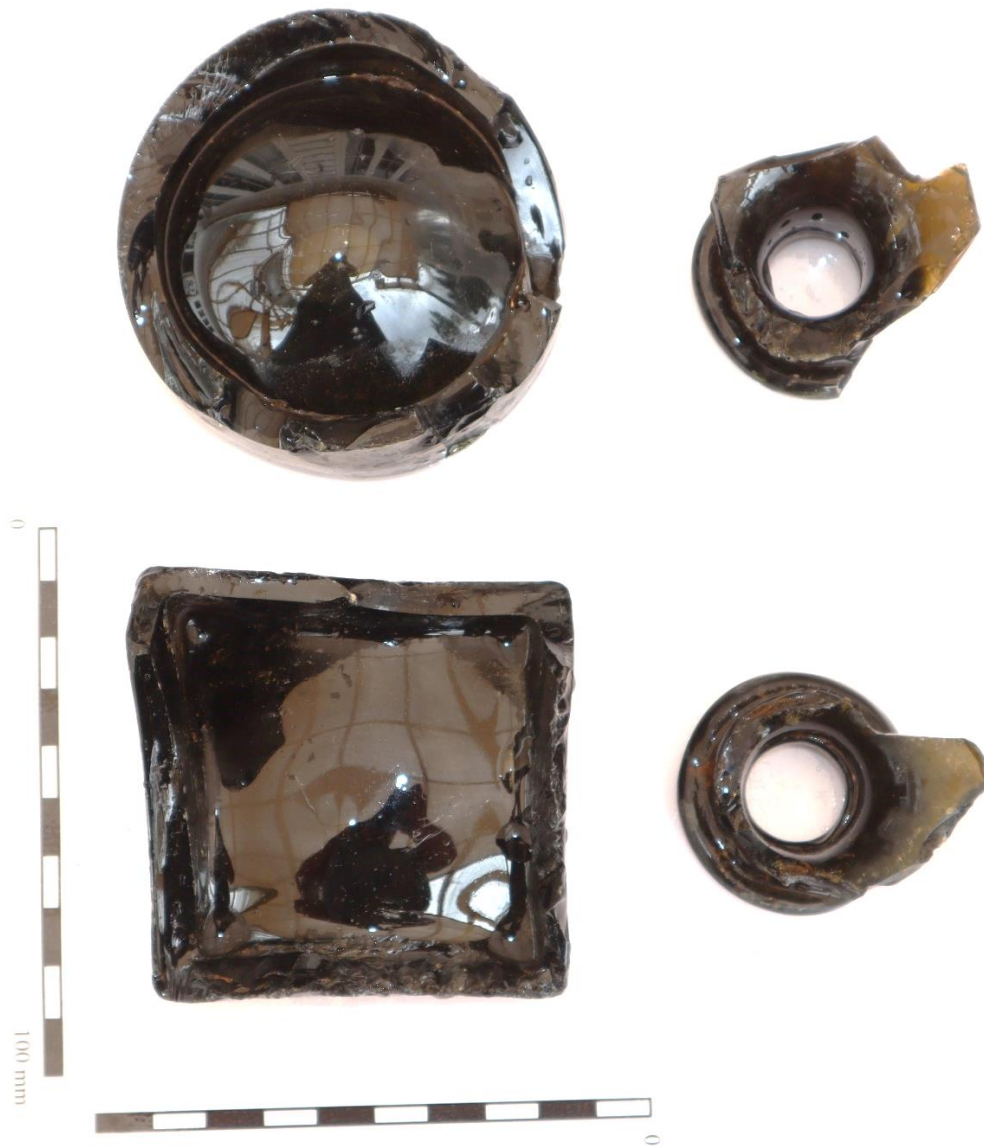


Figure 5.105 Worked glass bases and tops of bottles from context 548

5. Artefact Analysis

5.10 Discussion

The ceramic material from the site was generally highly fragmented with very few near complete vessels recovered. In total, across the three stages, there were 2580 sherds of ceramic recovered with analysis indicating a minimum of 552 vessels being represented, of which 513 were manufactured of Creamware. Approximately 74% of the assemblage was decorated with a transfer print with a range of colours present. Forty-three vessels contained a maker's mark and these were interpreted and dates provided where possible.

Analysis indicates ceramic material within the Stage 1 was manufactured between 1820 and 1870 with a mid-range of c.1850 (see Figure 5.106). These dates would correspond to the operation of the store and commissariat and further suggest that shop breakage and dumping of unwanted items following the closure of the store was likely the leading cause of deposition.

Ceramics recovered during the Stage 2 excavations included three marked vessels, but only one mark could be identified, giving a date of manufacture of 1839-1864.

The ceramic material from the Stage 3 excavations contained both a greater number of manufacturers and a wider spread in potential manufacturing dates. This wider spread is consistent with this area of the site being actively occupied for a much greater length of time.

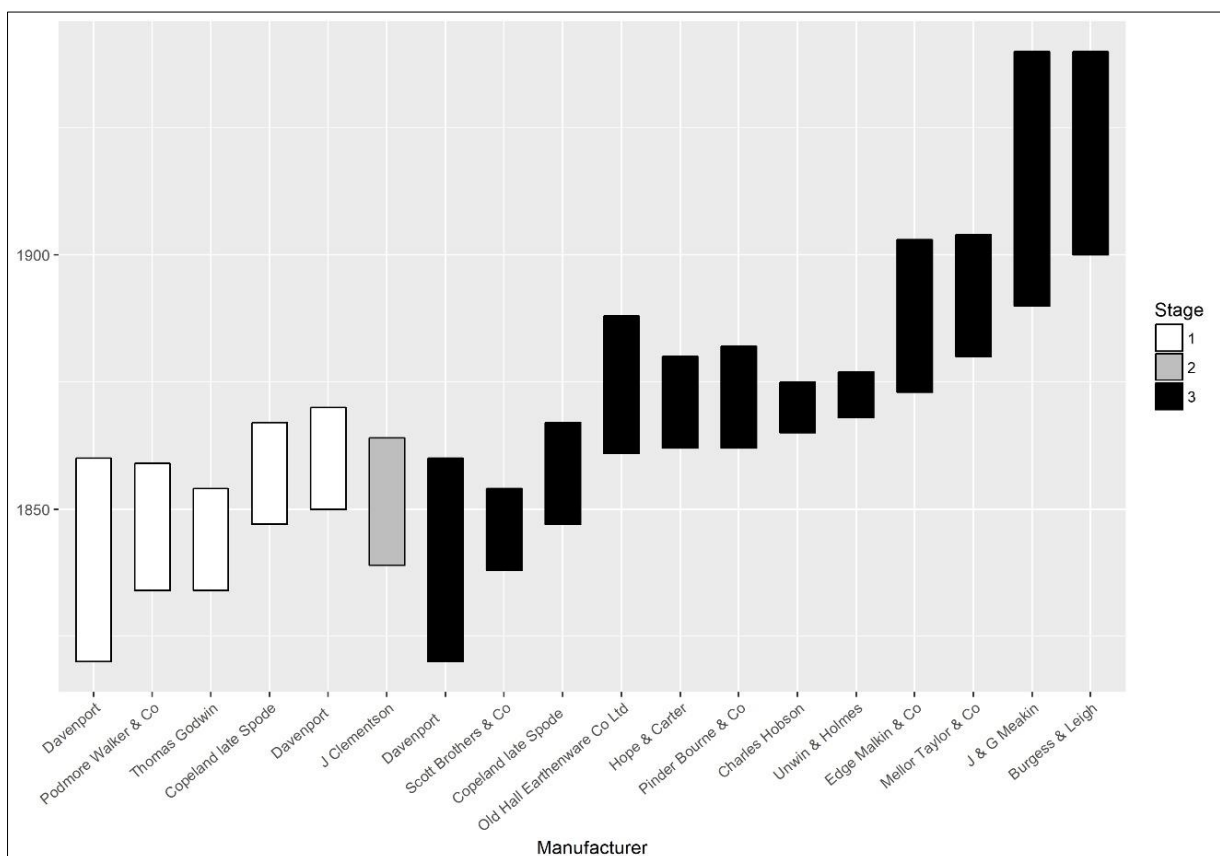


Figure 5.106 Graph showing date ranges of production for identified ceramic manufacturers for each stage of the Onehunga Stone Store excavations

Stoneware was generally in fragmented condition, although a number of complete items were recovered. The Stage 1 assemblage reflected items commonly found on 19th century archaeological sites, including ginger beer bottles, blacking jars, oyster jars, and inks. Two items

5. Artefact Analysis

made by the same pottery were able to be dated between 1843 and 1863. The Stage 2 assemblage contained only three vessels. The Stage 3 assemblage had a slightly wider variety of goods including a cider jar, and a crock or flagon. Marked wares within this assemblage gave a wider potential manufacturing date range of 1815-1907.

It total, 497 individual glass vessels were identified across the three stages of excavation. The Stage 1 excavation contained 127 vessels, with 94.5% of the assemblage originating in context 105, the fill of a quarry pit. Analysis of glassware for this particular context indicates that the quarry pit (repurposed as a dump) appears to have been left open following the closure of the store and used periodically prior to 1900 to dispose of items. Alcoholic beverages made up 57% of the Stage 1 glass assemblage. Stage 2 contained a minimum of 21 individual vessels with similar representation of alcohol, food and household products. The Stage 3 glass analysis resulted in 349 vessels being identified, with only 40% of the assemblage relating to alcoholic beverages. This decrease in alcohol quantities and corresponding increase in food, household, water and pharmaceutical products is consistent with general 19th century residential patterns.

The range of metal items recovered was extensive, with nails sampled across several contexts. The majority of iron nails would have acted as fastenings used in timber structures, where an occasional masonry nail was also noted. Copper nails suggest the re-use of boat nails for slate roofs. Further, the large proportion of nails in some contexts may also have related directly to the smithies, with the large number of forged iron and cut nails.

The large horseshoe collection did suggest that a farrier was on site, with horses brought in for shoeing. But other horseshoes could have been collected for re-use by the smith. Other interesting artefacts included the dateable items such as the Carpenter 60 rim lock dated to 1850+ (Figure 5.79), and personal items such as the buckle from Paris (Figure 5.52), the kettle spout (Figure 5.67), or the snake attachment for a belt (Figure 5.86). The spades, shovels, hooks, and other tools provided a snapshot of what they used in their daily working lives, and the activities being undertaken around Onehunga at the time. Other items from the historic period include a small collection of militaria including uniform elements such as buttons.

The presence of chert, an adze and the worked bottle glass were indicative of Māori use of the foreshore both prior to the arrival of Europeans and probably as the earliest land development by settlers was being undertaken.

6 FAUNAL AND ENVIRONMENTAL ANALYSIS

6.1 Faunal Remains

6.1.1 Introduction

Analysis of faunal material was undertaken by Ellen Cameron. In all, 374 elements were recovered from the site with approximately 20 percent being the remains of a buried dog (*Canis familiaris*). The assemblage was dominated by domestic animals, mainly sheep (*Ovis aries*) and cow (*Bos taurus*), with some pig (*Sus scrofa*). Two cat (*Felis catus*) elements and three leg bones identifiable as chicken (*Gallus gallus*) as well as a single horse (*Equus equus*) metatarsal were also recovered. In general, the large mammal species (apart from the horse) showed evidence of butchering, with evidence of sawing rather than chop marks. Only a small percentage of the bones showed signs of carnivore and rodent gnawing, indicating that they were likely disposed of in areas not easily accessible to scavenging animals. Seven fish elements, five of which were vertebral fragments were recovered. The other two fish elements were both dentaries.

Marine shell was also encountered on the site, mainly as isolated dumps in rubbish pits. Postholes were also found to contain some isolated shell specimens. Samples of the shell encountered during the excavation were retained for general identification purposes, with rock oyster (*Ostrididae*) and cockle (*Austrovenus stutchburyi*) dominating. The features containing the remains were for the most part pits of various sizes but remains from postholes, drainage ditches, construction cuts for walls and made ground (fill) deposits were also present.

6.1.2 Methodology

The bones were collected by hand during the excavation and were cleaned and identified through the reference collections and published resource material. The context of each bone was recorded, and the individual elements were identified to side, percentage of element present and down to the most specific taxonomic level possible. In addition, the presence of burning, gnawing (carnivore and rodent), weathering and butchery marks (both sawing and chopping) were noted. Quantitative information was compiled through identification of the number of identified specimens (NISP) which includes all elements of a species recovered and minimum number of individuals (MNI) based on the specific elements of the species recovered.

6.1.3 Results

During the excavation 356 bones and 18 teeth were recovered, representing a minimum number of 22 animals. The majority of the bones were from mammals (94%) with only 4% representing bird and 2% fish. The general condition of the remains was poor with high levels of breakage and a large percentage (36%) of remains could only be identified as large mammal. These elements consisted mainly of ribs, vertebrae and long bone fragments. Table 6.1 shows the details of elements and species recovered.

The majority of the species identified were domestic food animals, dominated by sheep and cattle with a small number of pig elements. Many of the elements of the above three species had butchery marks, mainly saw marks but also some evidence of chopping and cutting. The cattle remains had the highest percentage of butchery marks at 75% followed by 40% of pig and 30%

of the sheep remains. Unfortunately, due to the high occurrence of breakage and poor condition of the bones it was difficult to determine an accurate account of butchery, as many of the bones had modern breakage on the shafts and these elements may have had butchery marks on their now missing articulations.

Just under 10% of the identified bones showed signs of carnivore gnawing, and rodent gnawing could only be positively identified on 3 elements. Again, the high degree of breakage and poor condition of much of the assemblage made identification of evidence of gnawing difficult to determine and the percentage stated above may well be an underestimate.

Of the remaining species present, elements from two dogs and two cats were identified with the majority being in what appeared to be a burial of a complete dog. Only one rodent skeletal element was identified, and fish bones were also only recovered in small numbers. The bird elements recovered were in generally poor condition and only 3 could be identified to species level (chicken). The fish remains were for the most part vertebral fragments and spines and two dentaries.

The recovery of low numbers of bones from small animals with skeletal features of a delicate nature may not necessarily represent original depositional patterns, as damage from scavengers and other activities in the past are more likely to have destroyed small and fragile elements. This, in combination with the fact that sieving was not conducted during the excavation, would create a bias for collection of larger and more substantial bones. A detailed description of the recovered remains by species is provided below, followed by a discussion of the findings based on the contextual information from the excavation.

Table 6.1 Total amount of faunal material recovered with number of individual species and percentages and minimum number of individuals

Species	NISP	NISP %	MNI
Cattle	58	15.5	5
Sheep	68	18.0	8
Pig	18	4.5	2
Dog	77	20.5	2
Fish	7	2.0	1
Horse	1	>1%	1
Chicken	3	>1%	1
Cat	2	>1%	1
Rodent	1	>1%	1
Unid. Large Mammal	126	34	n/a
Unid. Bird	13	3.5	n/a
Total	374	100%	22

6.1.3.1 Sheep

There were 68 elements able to be identified as sheep (Table 6.2). The majority of the elements represented leg bones, with the bones of the back-leg outnumbering those of the foreleg by three to one. Most of the bones were also from the upper leg, representing prepared cuts of meat, specifically, leg of lamb and shank cuts.

Again, the presence of bones from the lower legs, along with 4 pelvic elements and 10 teeth, would indicate primary as well as secondary butchery on the site. Because of the high breakage on site no vertebrae were able to be positively identified as ovine; however, a number of vertebral fragments were found and based on size and features it is likely that some of these were from

sheep. This would also apply to ribs that could only be identified taxonomically down to large mammal.

Table 6.2 Details of the identified sheep remains

Element	Number	Notes
Tooth	10	All mandibular
Tibia	15	Most broken near proximal end/ 2 sawn at proximal end
Femur	6	Some faint cut marks/ mostly complete-breakage modern
Humerus	7	3 sawn/ 2 cut; 1 no butchery evidence; 1 complete
Ulna	2	Partial elements with modern breakage
Radius	1	Partial shaft only with modern breaks
Scapula	3	2 acetabulum and neck- breakage/ 1 sawn above neck
Metacarpal	1	No butchery marks
Metatarsal	4	No butchery marks
Metapodial	7	All with breaks/ partial (ID based on shape and size)
Calcaneum	5	Most complete/ minor damage/ not butchery marks
Astragalus	1	Complete
Phalange	1	P1
Pelvis	4	1 with saw marks
Axis	1	Partial

6.1.3.2 Cattle

The identified remains consisted of 58 elements (Table 6.3). The majority of the remains were from the forelegs, with 8 radii, 7 ulna, 3 humeri and 3 carpals identified. Only two rear leg elements were identified, a femur and a tarsal. In addition, 8 long bones could only be identified as large mammal.

In total c.55% of the identified elements were long bones. The remaining bones included two elements from the hind leg (one femur and one cubonavicular). As well, a partial pelvic bone (ilium) was identified along with three vertebrae. Eighteen ribs were also identified.

The cattle remains showed evidence of both primary and secondary butchery, i.e. initial work on the carcass and preparation of the cuts of meat. The evidence would suggest that butchering of the carcasses was occurring on site, as two mandibles were identified as well as a maxillary tooth and the lower foreleg bones (ulna and radius) contained saw marks and would most likely represent butchery waste.

Table 6.3 Details of the identified cattle remains

Element	Number	Notes
Tooth	1	Premolar (maxillary)
Femur	1	Cut marks only
Ulna	7 (Includes 1 epiphysis)	Most have saw/ cut marks
Radius	8 (Includes 1 epiphysis)	Most have saw/ cut marks
Humerus	3 (Includes 1 epiphysis)	One sawn/ two no butcher marks
Vertebrae	3	Two sawn in half and one dorsal spine
Sacrum	2	Both pieces sawn
Mandible	2	Some teeth present in both
Pelvis	1	Partial ilium/ sawn

Element	Number	Notes
Tarsals	1	Cubonavicular
Carpals	3	1 Intermediate carpal/ 2 radial carpals
Ribs	18	13 sawn/ remainder broken ends
Long Bones	8	7 mid shaft/ 1 partial epiphysis

6.1.3.3 Pig Remains

Eighteen elements, seven of which were teeth were able to be identified as pig (Table 6.4). The bone elements consisted of front and rear leg bones and one shoulder blade (scapula). The identified remains represented a minimum number of two animals. Based on the very small number of bones identified, it is not possible to determine any patterns of distribution or usage. The presence of the lower leg bones and teeth could indicate the presence of low-end cuts of meat, i.e. trotters and brawn.

Table 6.4 Details of identified pig remains

Element	Number	Notes
Tooth	7	4 canine/ 3 incisors
Humerus	3	2 distal articulation only, 2 with cut marks/1 no cut marks
Tibia	1	Distal articulation/cuts/modern breaks
Scapula	1	Sawn 4-5 cm above articulation
Metacarpal	3	Metacarpal iii/iv/ other not identifiable
Phalange	1	Complete
Metapodial	2	Unfused distal ends

6.1.3.4 Dog and Cat Remains

As noted previously an almost complete skeleton of a medium to large dog was recovered during the excavation from a pit (context 377). The feature also contained the humerus of a much smaller dog (the bone was fused) which would indicate a smaller breed rather than a puppy. As well, a cat mandible was identified in this feature. It is noted that the feature was damaged during the excavation and some material is likely to have been lost. It is also useful to remember that the cat skeletal elements are much smaller than those of a dog and may have been present but not collected. The other cat element was recovered in the upper fill of a pit along with a sheep bone and a bird bone fragment.

6.1.3.5 Fish Remains

Based on the fragile nature and small size it would be expected that hand collection would create a negative bias for the recovery of fish elements. As such, the number of recovered elements probably does not reflect the actual percentage of fish remains disposed of on the site.

6.1.3.6 Bird Remains

The bird elements recovered from the site were for the most part highly fragmented long bones, which could not be identified to species. Three of the elements were able to be confirmed as chicken leg bones; however, again, the small number of elements recovered does not allow for any larger patterns of usage and disposal to be made. A long bone mid shaft fragment was from

a long-legged bird species, based on size, and because of the location of the site on the original shoreline this may have been from a shore wading bird.

6.1.4 Discussion

Over 80% of the faunal remains were collected from eight contexts (Table 6.5): the upper and lower fills (104) and (105) of rubbish pit [106], a made ground layer (241) and underlying buried topsoil (242), the upper and lower fills (537) and (621) of drainage ditch [536] and the dog burial (377). The remainder of bones were located in contexts with 10 or fewer bones present with most having less than 5. The number of bones recovered by context is provided in Table 6.5 and findings from the features are described and discussed below.

Table 6.5 Number of elements by species in excavated contexts

Context	Number of elements										
	Sheep	Cattle	Pig	Horse	Dog	Cat	Bird	Fish	Rodent	LM	Total
Stage 1											
105	21	10	4	-----	-----	----	-----	-----	-----	47	82
Stage 3											
203	2	4	---	-----	-----	----	-----	1	-----	3	10
241	19	27	5	1	-----	----	6	1	1	16	77
242	6	1	---	-----	-----	----	3	-----	-----	1	11
331	1	2	---	-----	-----	----	1	-----	-----	2	6
377	-----	-----	---	-----	76	1	----	-----	-----	----	77
396	3	2	1	-----	-----	----	1	1	-----	16	24
537	3	2	8	-----	-----	----	1	4	1	20	39
545	1	2	---	-----	-----	----	-----	----	-----	6	9
621	1	-----	---	-----	-----	----	-----	----	-----	1	2
Other contexts	11	8	----	-----	-----	1	2		-----	14	36
Total:											374

Context 106: Rubbish Pit

Two fill layers were identified in this feature. The upper layer [104] contained a rock oyster valve and a piece of coral. The lower fill [105] contained 82 faunal remains (22% of the assemblage). The majority of the faunal remains were from sheep with limb bones dominating. A smaller number of bones were able to be identified as cattle (mainly ribs but also one long bone). Almost all of the cattle bones showed signs of butchery with many containing saw marks. Many of the remains from this context were only able to be identified as large mammal and consisted of rib fragments and two vertebrae. Only a small number of the bones showed evidence of carnivore gnawing. The lower fill also contained rock oyster, mussel and a monodont.

Context 203: Rubble Layer

Context [203] contained 10 bones – four cattle (two radii and two ulna), two sheep long bones (a metacarpal and a tibia), two vertebra fragments and one fish dentary.

Context 241: Made Ground Layer (Fill) over Context 242 (Buried Topsoil)

This fill layer, which contained 20% of the faunal remains, was dominated by cattle and sheep remains. The majority of the identifiable bone elements from both species were from the lower forelegs, although a cattle mandible and femur were also recovered along with ribs and long bones, most of which had been sawn through. The sheep remains showed less evidence of butchery, although the breakage levels in these bones was high, which may have reduced the actual percentage of butchery marks. The elements present, along with the butchery marks, would indicate that the remains were associated with primary butchery waste. This layer also contained two shells, a Captain Cooks Turban and a Paua shell.

Context 242 was located under context 241 and contained mainly sheep and chicken remains with one cow tarsal and a large mammal rib, representing approximately 2% of the assemblage. The bone elements from this context contained old breaks and only one showed evidence of butchery and gnawing, a sheep humerus. The other sheep elements consist of lower leg, a scapula, partial pelvic bone and a tooth. The cow element was also from the lower back leg of the animal. Again, this context would appear to represent primary butchery waste, apart from the humerus, which, as it showed evidence of gnawing, may have been given to a dog after human consumption of the meat.

Context 330: Rubbish Pit

The rubbish pit contained two fill layers, an upper fill (331) and lower fill (396), which together represent 8% of the faunal assemblage. The upper fill contained a bird long bone fragment, two cow ribs, both sawn, a sheep metatarsal with cut marks, a vertebra fragment with cut marks from a large mammal and a long bone fragment, also from a large mammal. The lower fill (396) contained a high percentage of fragmented bone, mainly rib and long bone that could only be identified as large mammal, but most of which showed signs of butchery. Butchered remains were also identified from a pig (scapula), cow (rib) and sheep (a femur and a tibia) along with a fish vertebra and mid shaft fragment from a bird.

Context 377: Pit with Dog Burial

This context contained the almost complete remains of a medium to large dog, the femur of a small dog and the mandible of a cat. Based on the remains it is considered most likely that the feature was a burial place for pets. The elements from this feature made up 20% of the faunal assemblage.

The ditch contained an upper fill (537) and lower fill (621) making up 11% of the faunal assemblage. Eight pig elements were recovered from context (537) four of which were teeth with an MNI count of one individual. As well, four fish spines were recovered and a tooth calcaneum and axis of a sheep. A mandible and thoracic vertebra from a cow were also identified. A bird long bone mid shaft fragment was also recovered, as was a pelvic fragment from a small rodent. The lower fill contained a sheep tibia and large mammal long bone fragment. The lower number of bones recovered from the ditch may indicate that cleaning out of the ditch was undertaken, or that heavy rain events tended to wash remains out, and the remains recovered from this context may underestimate the amount of material disposed of in the area, either intentionally into the drain or being washed down into it. Several shells were collected from the upper fill and included rock oyster, cowrie, a small clam and a whelk.

Context 545: Fill layer

Context [545] contained nine elements, the identifiable elements being a cow ulna and humerus and a sheep femur with the remainder being vertebrae, long bone fragments and a mandible fragment.

Remaining Contexts

The remaining contexts contained fewer than 5 bones.

The remaining contexts containing faunal remains contained between 1 and 5 elements and the majority consisted of large mammal, sheep or cattle when identifiable to species – these contexts are: 122, 125, 233, 239, 247, 260, 270, 296, 300, 381, 394, 480, 547 and 551. Apart from sheep cattle and pig, the following bones were identified from these contexts:

- 239 contained a long bone of a bird, as both ends were missing it could not be identified but based on length it would probably have come from a long-legged wading/ shore bird.
- 270 contained a small shaft fragment from a bird.
- 480 contained the mid shaft of a chicken-sized bird.
- 492, the fill of a post hole, contained a cockle shell but no bones and 143 also the fill of a post hole contained rock oyster valve and no bones.
- 551 contained the mid shaft of a chicken-sized bird and the mandible of a cat.
- 621 contained one sheep bone and another large mammal bone.

6.1.5 Summary

The largest amount of butchering evidence was on the cattle vertebrae and ribs. The majority of the vertebrae had been sectioned by cutting, a common practice when splitting a carcass. The bulk of the ribs had both ends chopped, generally indicating rolled roasts with the remainder representing different cuts like rib steaks, standing rib roasts and shortribs. Cuts made on long bones generally signify the carcass being divided into more workable units. Fore and hind limbs that are cut into shanks are possibly used in stews with the upper portion of the hind leg providing topside and rump steaks.

Of the 47 bones showing animal gnawing, 20 of these were chewed by dogs, with the remainder by rats. Vertebrae were the most common bones affected with most gnawing on the processes of the bone. The large amount of dog gnawing on the assemblage most likely explains the disturbance and scattering of the bone. This appears to be a standard assemblage regarding species range and butchering practices. Fish and chicken were used to supplement the diet, while the bird, rat and rabbit were most likely intrusive, and their presence in life probably contributed to the scattering of the assemblage.

6.2 Plant Macrofossil Analysis

By Dr Mark Horrocks

Two soil samples, from pit contexts 333 and 349, were analysed for pollen, phytoliths and starch to provide a record of past vegetation, environments and human activity. Detailed methods of analysis are presented in Appendix 1.

Both pit samples contained high concentrations of microscopic fragments of charcoal, reflecting burning of plant material in the area. The pollen assemblages were dominated by spores of bracken (*Pteridium*) fern and hornworts (*Anthocerotaceae*) (Figure 6.1). These features, coincident with small or negligible amounts of tall tree pollen types, reflect a landscape largely fire-cleared of forest by people.

Bracken is an invasive, indigenous ground fern with widely dispersed spores, common in New Zealand pollen spectra since human settlement and almost always associated with large-scale repeated burning of forest by early Māori. It may form dense stands, averaging 1-2 m tall over extensive areas, and its rhizome was commonly harvested as a starch-rich food by Māori (Best 1902). Hornworts are small inconspicuous plants that colonise freshly disturbed and exposed soils.

Pollen of tutu (*Coriaria*) and puha (*Sonchus*), both invasive, also featured in the samples, providing further evidence for landscape disturbance. Apparent absence of pollen of exotic taxa from the samples, such as pine (*Pinus*) and narrow-leaved plantain (*Plantago lanceolata*), strongly suggest that the pits dated from pre-European or very early European times.

The phytolith assemblages were dominated by tree/shrub and grass phytoliths (Figure 6.2). The tree/shrub phytoliths comprised mostly nikau type and spherical nodular type. Nikau palm is one of the few taxa that can be identified to species level in the New Zealand phytolith flora (Kondo et al. 1994). Spherical nodular phytoliths originate from the woody parts of indigenous trees. Many of the tree/shrub phytoliths could reflect the pre-clearance forest. Phytoliths, being non-organic, can persist in soils for much longer than pollen, due to their greater resistance to decay.

The grass phytoliths in the samples comprised mostly bulliform/elongate types and unusually large amounts of spool type (Figure 6.2). The former types do not possess any subfamily or tribal characteristics. In New Zealand, spool phytoliths are observed in the shoots of genus *Chionochloa* and *Cortaderia* (Kondo et al. 1994). If the sampled pits were post-European contact, however, it is possible that the spool phytoliths were from European-introduced grasses.

Given that phytoliths, unlike pollen grains, are not adapted for dispersal, the large amounts of this phytolith type in the samples suggest that grasses grew, or that grass shoots were placed, in the pits. This could be at odds, however, with the coincident small amounts of grass pollen in the samples (Figure 6.1). One explanation for this apparent discrepancy could be that if grass material was in the pits, it did not reach, or had not reached, the pollen production stage before burial. Other biosilicates found in the samples, in this case fragments of diatoms and sponge spicules, reflect the local coastal environment.

No convincing starch material was found in either of the pit samples.

6. Environmental Analysis

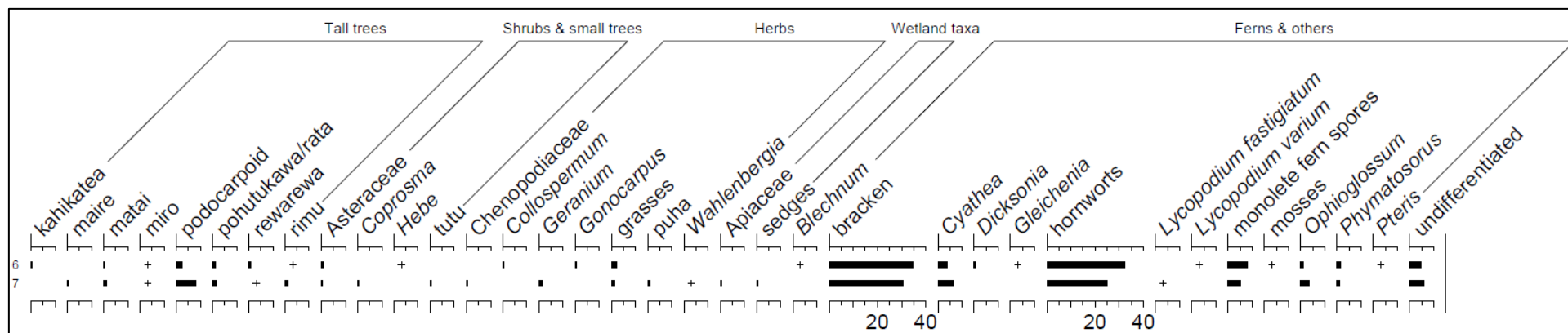


Figure 6.1 Pollen percentage diagram from combined pit fills (contexts 333 and 349)

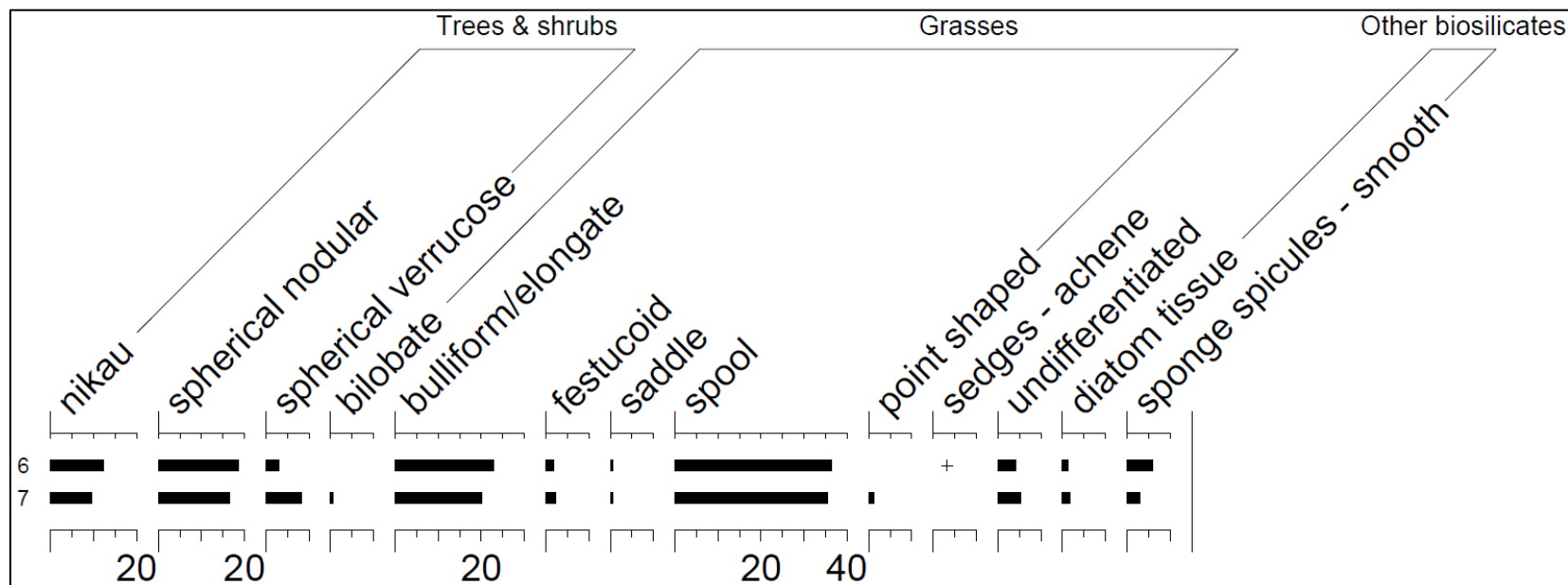


Figure 6.2 Phytolith percentage diagram from combined pit fills (contexts 333 and 349)

7 DISCUSSION AND CONCLUSION

7.1 Summary

The results of the archaeological excavations demonstrate that the site was intensively used during the early European settlement of the area. Archaeology survived in three parts of the project area (Figure 1.4, Figure 7.1). The majority of the project area was devoid of archaeological features – this was where the low-lying lava and bluestone outcrops were located and where the area was prone to inundations from seawater during high tides. This made settlement evidence unlikely but the original proximity of the site to the water prior to land reclamation was important throughout its history.

The Stage 1 excavation behind the Stone Store exposed quarry pits indicating that the bluestone used in the construction of the Stone Store had been obtained from an outcrop immediately to its rear. The quarry pits were then utilised as refuse dumps and infilled with large quantities of 19th century cultural material, the majority of which dated to the mid-19th century. A small number of postholes found in the Stage 1 area are likely to reflect the presence of small outbuildings to the rear of the Stone Store, while a shell path and other features are interpreted as relating to the European pleasure gardens referred to in the historical sources.

The Stage 2 excavation in the south-western part of the site recorded a number of cut features in the form of earthen drains, refuse pits and postholes, likely indicating the presence of a modest domestic dwelling in the area. A relatively large volume of artefacts were retrieved from the drains and refuse pits and were indicative of mid-19th century domestic settlement.

The final stage of excavation (Stage 3) was west of the Stone Store beneath the carpark area. This demonstrated an intensive sequence of European occupation overlying a historic Māori site. The evidence of this Māori occupation was only determined by a few surviving features consisting of the historic period storage pit (330), and some possible related gardening features, for example pit 332 (Figure 4.59). The European phase of the site included a number of phases of domestic settlement in the form of a sequence of building and demolition of houses, and in the west of the site a sequence of industrial, domestic and then industrial structures, with two blacksmithing operations preceding and succeeding evidence of a dwelling or other structure.

The large quantity of metal objects, including dozens of horseshoes as well as metal slag clearly indicated the presence of the blacksmith. Rectangular features with stone bases (some of which were bonded with mortar) were the bases of forge boxes. These features were on two distinct levels and represent two different historically recorded blacksmiths' operations on the site separated by approximately 20 years, with a house occupying the site following the demolition of the first smithy. Additional evidence of the first blacksmith's operation was the presence of the demolished forge chimney consisting of a large volume of firebricks, as well as tap, cinder and combination slag and the surviving base of the original forge box. The second smithy from the later 19th century seems to have been a large-scale operation with no fewer than four forge bases identified at the north-western corner property.

The site has been completely excavated down to natural, culturally sterile, deposits, except for the 2m area along the street frontage where the structural elements (including the scoria footings) were left in situ. All of the postholes were either fully excavated or excavated in half section. The early drain, well and historic period storage pit as well as a beam slot were also completely excavated.

The artefact assemblage from the site ranges from pre-European Māori lithics such as the argillite

adze, chert and obsidian flakes to historic period bottle glass utilised by Māori in the production of cutting tools, through to mid-19th century to early 20th century cultural material. However, there was no indication that the worked glass tools were used and they may have been just the result of experimentation.

Other items of note were the militaria, such as the regimental buttons, military belt buckles, a brass shotgun cartridge and a Royal Navy epauletete stud, which were likely to have been related to the use of the site by the Commissariat during the Waikato Campaign (1863-1864) of the New Zealand Wars. Other unusual artefact finds were the blacksmith's tools, including tongs and punches. Ecofactual material collected from features mainly consisted of animal bone, although some fish bone was also recovered.



Figure 7.1 View of excavation area in 2016, looking north with Stone Store (top right) and Stage 3 excavation in progress along Princes Street

7.2 Discussion and Conclusion

The excavations along Princes Street complement the heritage of the still-standing Stone Store. Onehunga has a long history and the project area is situated near the original foreshore, although it is now separated from the water by buildings, major reclamation and landfill, and a motorway. Despite the importance of Onehunga in the history of early Auckland history, little detailed archaeological work has been undertaken there and the current report represents a significant contribution to its history.

The archaeological assessment of the property (Clough and Yoffe 2009) and research strategy/archaeological management plan (Clough 2011) identified the likely material that might be encountered on the site, in particular material relating particularly to the early European occupants, but also the possibility of evidence of early Māori occupation. The excavation results confirmed the presence of both, although the evidence of the pre-European occupation of the foreshore by Māori was ephemeral, reflecting the taphonomic changes to the project area. The small number of clearly Māori artefacts along with some postholes and pits that may well have predated the European use of the block, do hint at the broader landscape of Onehunga, which

was a major pre-European Māori settlement. The remarkable collection of worked bottle glass from the drain features at the original land surface resembled the obsidian technology that was ubiquitous on pre-European Māori sites. The finds may relate to occupants of the Māori hostelry nearby.

Behind the Stone Store, remnants of the quarrying of the lava flow to make the basalt blocks used to build the Store were found. The use of this local resource would appear obvious, but only a few buildings in Onehunga were made from stone despite a large number of basalt quarries available in central Auckland, which raises a number of questions regarding the cost and choices of building materials being utilised by settlers. It is likely that basalt remained comparatively high in value as a building material, with timber dominating as a cheap preferred material, and this was particularly so from the 1880s onwards, when there was a significant building expansion in Onehunga.

There was little indication of the ‘Pleasure Garden’ behind the Stone Store built by Captain Ninnis, although some landscaping elements including a block of serpentine stone and the shell path were observed during the work.

Questions regarding the likely remains under the carpark prompted the requirement to undertake geophysical survey there. The results clearly showed the difficulty of undertaking this kind of analysis in such urban environments. While some correlation between geophysical anomalies and later excavated structures was possible, the complexity of the activities, including large scale demolition and infill, meant that the palimpsest was poorly described by the data. At the eastern end, some of the original house foundations were observable because there had been little later infill. To the west, the stratigraphy was much more complex, with layering of a range of materials over the earlier foreshore followed by covering of the early smithy (and other likely features) to create a new level that was then built on. The later structures, forges and then demolition and levelling of that material created a churned mixture of rubble, metal debris, rubbish and building remains not reliably distinguishable in the geophysical data, but providing a coherent excavatable story.

The smithies excavated in Onehunga are not the only examples investigated in New Zealand. Hawkins (2003:9ff) describes the investigation of the McGregor’s blacksmith’s shop in Waipu and comments on the need to establish a smithy at most locations during early European settlement. Blacksmiths provided a critical service for earlier colonists and most were required to be able to make a range of items for both colonists and Māori (see e.g., Challis 1993). The items would have included components for repairing ships, horseshoes, small mechanical devices and a range of farm and domestic tools and fittings both in rural (e.g., Hamel 1990; Middleton 2013; Shaw 2014; Watson and Geary Nicol 2009) and urban settings (e.g., Brooks et al. 2010, Cropper and Lewis 2016; Grouden 2011; Hamel 2004). The items recovered along Princes Street certainly fit this overall pattern and, like most excavations of blacksmiths’ premises, produced an extensive artefact assemblage illustrating that.

The large collection of metal objects associated with the smithies was expected and the material included all manner of domestic, agricultural and industrial items. Onehunga during the 1860s-1900s was a small-town servicing nearby farms that were slowly being infilled in response to the expanding Auckland need for housing and the development of local industries servicing the growing colony. The large number of horseshoes recovered demonstrates the importance of horses in the daily life of 19th century settlers and is repeated around the country (see e.g., Phear and Shakles 2011; Watson and Geary Nicol 2009).

Although likely areas for the blacksmiths’ forges were identified, it was not possible to determine much about their original construction. Hyett (2002) notes that in Australia there is variation in

the construction of forges, with some not having chimneys, and variation in the amount of brick used for the base/fire. The remains at Princes Street suggest that the forges were based around a stone base and brick superstructure.

Despite the extent of debris, the smithies themselves were not that large, here probably occupying only the western lot for the workshop itself, both in the earlier smithy and the later Boland smithy. The majority of items produced were therefore quite small and only with the establishment of larger foundries could the larger mechanical metalwork be undertaken (see Bickler et al. 2007 and Macready et al. 2013 for further discussion of the Fraser's Phoenix Foundry in Central Auckland). However, the need to produce the metal objects on a local scale carried on through into the 20th century and evidence of these activities continue to be found throughout Auckland (see e.g., Bickler et al. 2016).

A small collection of military related items related to use of the Stone Store by the Fencibles was also identified. Past and contemporary conflicts were represented by items including buttons and other uniform elements, probably associated with individuals including Captain Ninnis who would have passed through the various establishments.

The 20th century activities on the properties did not fare well as those businesses were demolished by the early 1960s, leaving only some of the foundation walls and base of the bakery oven. A bakery was recorded on the block in the 19th century and later occupants may have continued to use the property for the same purpose as the evidence of a gas-fired oven was identified.

Overall, the results of the excavations encapsulate much of the history of Onehunga foreshore during the 19th and 20th century, showing the evolution of the early township as a small trading hub. Onehunga continued to grow steadily, and the modern borough continues to reflect the mixture of domestic and light industrial activities, a transport hub into and out of south Auckland and a meeting place for a diverse range of peoples.

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DP 19623 (1926)

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SO683 Roll 46 Landonline undated shows Crown Grants.

NZ Map 890 Auckland Public Library 1853 shows Onehunga township, original foreshore.

Map of Eden County undated probably 1920s, showing original foreshore.

1906 map Auckland Public Library NZ Maps 2673

Map of the Harbour of Waitemata, New Zealand, and of the adjacent country shewing the situation of Auckland, the capital of the colony, and also the isthmus which separates the waters of the Frith of Thames on the eastern from those of Manukao [Manukau] on the western coast [cartographic material] from actual measurement with the chain and from a trigonometrical survey, Felton Mathew, Surveyor General, 1841. National Library.

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APPENDICES

APPENDIX 1 – PLANT MICROFOSSIL METHODOLOGY

Pollen Analysis

Pollen analysis includes pollen grains of seed plants and spores of ferns and other plants. It provides insight into past vegetation and environments and in New Zealand allows the differentiation of sediments deposited in pre-settlement, early Māori and European times (McGlone et al. 1993, Hayward et al. 2004). Pollen can also provide evidence for Māori-introduced plants, for example bottle gourd and paper mulberry, and European-introduced crops such as maize (Horrocks 2004, Horrocks et al. 2008).

The samples were prepared for pollen analysis by the standard acetolysis method (Moore et al. 1991). At least 175 pollen grains and spores were counted for each sample and slides were scanned for types not found during the counts. Microscopic fragments of charcoal were also extracted during pollen preparation, providing evidence for fire.

Phytolith Analysis

Phytoliths are particles of silica formed in inflorescences, stems, leaves and roots of many plants (Piperno 2006). Phytolith analysis compliments pollen analysis and, like pollen, can provide evidence for Māori-introduced bottle gourd and paper mulberry (Horrocks 2004). Other types of microscopic biosilicates, notably diatoms, radiolarians and sponge spicules, are extracted along with phytoliths during preparation. Diatoms are unicellular algae and have cell walls composed of silica; radiolarians are a type of amoeboid protozoa with siliceous skeletons; sponges are multi-cellular animals with skeletons often composed of siliceous spicules. Diatoms are found in aquatic and sub-aquatic environments; radiolarians and sponges are exclusively aquatic. Diatoms and sponges are found in both marine and freshwater environments; radiolarians are exclusively of marine origin.

The samples were prepared for phytolith analysis by density separation (Horrocks 2005). At least 160 phytoliths were counted for each sample and slides were scanned for types not found during the counts.

Analysis of starch and other plant material

This analysis includes starch grains and other plant material such as calcium oxalate crystals and xylem (Pearsall 2015). Starch is the main substance of food storage for plants and is mostly found in high concentrations of microscopic grains in underground stems (e.g. tubers, corms), and roots and seeds. The grains are synthesised and stored in amyloplasts, sub-cellular units specialised for this function. Calcium oxalate crystals, comprising raphides which are needle-like and druses which are compound, are found in both the aerial and underground parts of many plant taxa. Xylem is a vascular tissue comprising elongated cells through which most of the water and minerals of a plant are conducted. Starch analysis can provide evidence for Māori-introduced starch crops, such as kumara, taro and yam, and European-introduced crops such as potato (Horrocks et al. 2007, 2008).

A recent advance in this method is the use of Fourier Transform InfraRed spectroscopy to positively identify degraded starch, often uncertain due to loss of distinguishing features, collected from archaeological deposits (Horrocks et al. 2012, 2014; Kahn et al. 2014). Starch and other remains were prepared for analysis by density separation and presence/absence noted (Horrocks 2005).

APPENDIX 2 – METAL ARTEFACTS

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
77	75	103	Nail	Wrought Iron	Building	Red/Orange	1	23	Rusted iron cut nails with trapezoid heads.
78	76	103	Nail	Wrought Iron	Building	Red/Orange	1	23	Rusted iron cut nails with trapezoid heads.
79	77	103	Nail	Wrought Iron	Building	Red/Orange	1	23	Rusted iron cut nails with trapezoid heads.
76	74	103	spike	Wrought Iron	Building	Red/Orange	1	125	Cut spike with a trapezoid head.
80	78	103	Knife	Wrought Iron	Household	Red/Orange	1	60	Rusted iron butter knife.
74	72	105	Gromit	Copper	Building	Green	1	5	Green copper square gromit/washer with central hole.
63	61	105	Nail	Wrought Iron	Building	Red/Orange	1	14	Iron wire nail with trapezoid head.
64	62	105	Nail	Wrought Iron	Building	Red/Orange	1	7	Flat headed square cut nail with a four-sided taper.
65	63	105	Nail	Wrought Iron	Building	Red/Orange	1	6	Iron wire nail with a trapezoid head, the shaft has a grip.
66	64	105	Nail	Wrought Iron	Building	Red/Orange	1	7	Iron wire nail with a trapezoid head, the shaft has a grip.
67	65	105	Nail	Wrought Iron	Building	Red/Orange	1	4	Iron wire nail with a trapezoid head, the shaft has a grip.
57	55	105	Sheet	Brass	Building	Green/brown	2	726	2 pieces of hole punched brass sheets.
71	69	105	spike	Wrought Iron	Building	Red/Orange	1	67	Wire spike with grooves
72	70	105	Buckle	Copper	Clothing and/or personal	Green	1	3	Copper buckle marked "BREVETE S.G. D.G/PARIS"
68	66	105	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	240	Front horseshoe
75	73	105	Teaspoon	Copper	Household	Green	1	10	Unmarked plain copper teaspoon
59	57	105	Part	Cast Iron	Machinery	Red/Orange	1	2075	Cast iron machinery part
60	58	105	Part	Cast Iron	Machinery	Red/Orange	1	366	Cast iron machinery part
73	71	105	Percussion Cap	Copper	Militaria	Green	1	1	Green copper percussion cap.
61	59	105	Hoops	Wrought Iron	Tools	Red/Orange	1	87	Iron red hoop
69	67	105	Tool	Wrought Iron	Tools	Red/Orange	1	133	T-shaped tool
70	68	105	Tool	Wrought Iron	Tools	Red/Orange	1	181	Red rusted chisel
41	39	117	Nail	Wrought Iron	Building	Red/Orange	1	4	Red rusted iron cut sprig nail.
42	40	117	Nail	Wrought Iron	Building	Red/Orange	1	3	Circular wire nail with a grip.
43	41	117	Nail	Wrought Iron	Building	Red/Orange	1	1	Flat head wire nail.
44	42	117	Nail	Copper	Building	Green/brown	1	4	Flat headed cut nail.
45	43	117	Nail	Wrought Iron	Building	Red/Orange	1	4	Copper wire nail with a flat head, the top of the shaft has a grip.

Appendices

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
40	38	117	Canister	Brass	Machinery	Green/brown	1	12	Small bend brass canister
62	60	119	Nail	Wrought Iron	Building	Red/Orange	1	9	Iron cut nail with a flat head
38	36	122	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	751	Front work heavy duty horse shoe with a lip and heels.
39	37	122	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	390	Rear pony horse shoe.
37	35	122	Lid	Cast Iron	Household	Red/Orange	1	779	Cast iron red/black pot lid
51	49	125	Bar	Wrought Iron	Building	Red/Orange	1	170	A iron bar.
50	48	125	handle	Wrought Iron	Building	Red/Orange	1	874	Iron handle
46	44	125	spike	Wrought Iron	Building	Red/Orange	1	61	Iron red spike with a trapezoid head and a rectangular shaft with a two-sided taper.
49	47	125	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	301	Back horse shoe
47	45	125	Lock	Wrought Iron	Fixture and Fittings	Red/Orange	1	117	Rusted lock bolt.
48	46	125	Wire	Wrought Iron	Fixture and Fittings	Red/Orange	1	109	Wire coil
1	1	125	Plate	Brass	Household	Green	1	10	Bend brass metal plate with hole in the centre
11	9	155	Nail	Wrought Iron	Household	Red/Orange	1	5	Bend (45 degree) iron wire nail
12	10	157	Tact	Wrought Iron	Fixture and Fittings	Red/Orange	1	5	1 iron two 2-pronged tact for wood fencing
4	2	162	Unidentified	Wrought Iron	Unidentified	Red/Orange	1	8	Unidentified iron item
342	339	202	Nail	Wrought Iron	Building	Red/Orange	1	24	Rusted iron square cut nail with a 4-sided taper with a trapezoid head
227	224	203	Bar	Wrought Iron	Building	Red/Orange	2	199	2 pieces of thin iron bar(s)
228	225	203	Bar	Wrought Iron	Building	Red/Orange	1	350	Iron bar
263	260	203	Bolt	Wrought Iron	Building	Red/Orange	1	705	Iron square bolt with a flat head
266	263	203	Bolt	Wrought Iron	Building	Red/Orange	1	75	Heavy duty bolt
274	271	203	Bolt	Wrought Iron	Building	Red/Orange	1	330	Iron heavy duty bolt with a flat square head
281	278	203	Bolt	Wrought Iron	Building	Red/Orange	1	163	Iron heavy duty bolt with a flat head
282	279	203	Bolt	Wrought Iron	Building	Red/Orange	1	278	Iron heavy duty bolt with a flat head
287	284	203	Bolt	Wrought Iron	Building	Red/Orange	1	163	Iron metal bolt with rounded head
288	285	203	Bolt	Wrought Iron	Building	Red/Orange	1	219	Iron metal bolt with a square head
289	286	203	Bolt	Wrought Iron	Building	Red/Orange	1	429	Iron heavy duty bolt with a triangular head
271	268	203	Clip	Wrought Iron	Building	Red/Orange	1	154	Iron degraded clip
290	287	203	Frame	Wrought Iron	Building	Red/Orange	1	490	Iron metal frame
291	288	203	Frame	Wrought Iron	Building	Red/Orange	1	81	Iron metal frame
294	291	203	Hoops	Wrought Iron	Building	Red/Orange	1	348	Large metal hoop
225	222	203	Nail	Wrought Iron	Building	Red/Orange	1	44	Bend (45 degree) iron square cut nail with a 4-sided taper and a flat head.
226	223	203	Nail	Wrought Iron	Building	Red/Orange	1	45	Iron square cut nail with a 4-sided taper and a trapezoid head.

Appendices

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
268	265	203	Nail	Wrought Iron	Building	Red/Orange	1	16	Iron circular wire nail with trapezoid head
273	270	203	Nail	Wrought Iron	Building	Red/Orange	1	95	Iron cut nail
278	275	203	Nail	Wrought Iron	Building	Red/Orange	1	62	Degraded rusted iron square cut nail with a four-sided taper and a rounded head.
283	280	203	spike	Wrought Iron	Building	Red/Orange	1	162	Iron bar bent at 45-degree angle with a spike at the end
229	226	203	Buckle	Wrought Iron	Clothing and/or personal	Red/Orange	1	21	Square iron buckle
261	258	203	Buckle	Brass	Clothing and/or personal	Green/brown	1	68	Brass plain belt buckle
224	221	203	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	1042	Reinforced Large Iron Horse Shoe with heel and toe cap
267	264	203	Stirrup	Wrought Iron	Equestrian	Red/Orange	1	63	Iron stirrup
295	292	203	Hinge	Wrought Iron	Fixture and Fittings	Red/Orange	1	156	Iron door hinge
270	267	203	Fence	Wrought Iron	Household	Red/Orange	1	740	Iron decorated fence/grate
272	269	203	Attachment	Wrought Iron	Machinery	Red/Orange	1	22	Iron attachment with inner grooves
276	273	203	Pulley	Wrought Iron	Machinery	Red/Orange	1	336	Iron pulley
277	274	203	ring	Wrought Iron	Machinery	Red/Orange	1	84	Iron degraded circular ring
265	262	203	Chain	Wrought Iron	Tools	Red/Orange	1	54	Iron ring of a chain
269	266	203	Chain	Wrought Iron	Tools	Red/Orange	1	542	Heavy duty chain
284	281	203	Hook	Wrought Iron	Tools	Red/Orange	1	96	Iron degraded metal hook with a 45 degree handle
286	283	203	Hook	Wrought Iron	Tools	Red/Orange	1	205	Iron hook with attached hoop
292	289	203	Hook	Wrought Iron	Tools	Red/Orange	1	71	Iron hook with a straight bar
296	293	203	Hook	Wrought Iron	Tools	Red/Orange	1	389	Iron hook handle
262	259	203	Tool	Wrought Iron	Tools	Red/Orange	1	1508	Iron flat bar (possible tool) with a central hole
264	261	203	Tool	Wrought Iron	Tools	Red/Orange	1	155	Iron T-shaped tool
275	272	203	Tool	Wrought Iron	Tools	Red/Orange	1	75	Iron tool
279	276	203	Tool	Wrought Iron	Tools	Red/Orange	1	129	Iron bar with a loop on one end
280	277	203	Tool	Wrought Iron	Tools	Red/Orange	1	553	Iron bar with a loop on one end
285	282	203	Tool	Wrought Iron	Tools	Red/Orange	1	144	Iron L-shaped tool
293	290	203	Tool	Wrought Iron	Tools	Red/Orange	1	108	T-shaped tool
318	315	203	Tool	Copper	Tools	Green	1	413	Copper tab with a slit in the shaft
251	248	209	Nail	Copper	Building	Green	1	2	Copper square cut nail with a triangle head and a four-sided taper - slightly bent
93	91	213	Bar	Wrought Iron	Building	Red/Orange	1	74	Iron circular bar
88	86	213	Bolt	Wrought Iron	Building	Red/Orange	1	448	Iron circular bolt with round head

Appendices

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
87	85	213	Nail	Wrought Iron	Building	Red/Orange	1	92	Iron circular wire nail with a grip on the shaft and a trapezoid head
89	87	213	Nail	Wrought Iron	Building	Red/Orange	1	84	Wrought iron nail with a rounded circular head
90	88	213	Nail	Wrought Iron	Building	Red/Orange	1	38	Cut iron nail with a rounded head
91	89	213	Nail	Wrought Iron	Building	Red/Orange	1	38	Wrought iron nail with a rounded circular head
86	84	213	spike	Wrought Iron	Building	Red/Orange	1	72	Iron triangular spike
102	100	213	Burner Collar	Brass	Household	Green/brown	1	63	Brass lamp burner collar
95	93	213	Band	Wrought Iron	Machinery	Red/Orange	1	196	Iron red band -rectangular
96	94	213	Band	Wrought Iron	Machinery	Red/Orange	1	72	Iron red band -circular
94	92	213	Chain	Wrought Iron	Tools	Red/Orange	5	245	Heavy duty iron chain
92	90	213	file	Wrought Iron	Tools	Red/Orange	1	183	Iron rusted file
97	95	213	Hook	Wrought Iron	Tools	Red/Orange	1	233	Iron looped hook.
98	96	213	Hook	Wrought Iron	Tools	Red/Orange	1	178	Iron hook rail
99	97	213	Hook	Wrought Iron	Tools	Red/Orange	1	95	Iron looped hook.
100	98	213	Hook	Wrought Iron	Tools	Red/Orange	1	166	Iron hook.
101	99	213	Hook	Wrought Iron	Tools	Red/Orange	1	315	Iron hook.
255	252	227	Washer	Steel	Building	Grey	1	7	Flat headed screw
334	331	227	Buckle	Wrought Iron	Clothing and/or personal	Red/Orange	1	24	Iron rusted buckle
58	56	227	Teaspoon	Brass	Household	Green/brown	1	21	Brass teaspoon - no marks identifiable.
333	330	227	Part	Brass	Machinery	Green/brown	1	14	Brass degraded metal part
36	34	232	Bolt	Wrought Iron	Building	Red/Orange	1	137	Rusted iron bolt
35	33	232	Gromit	Wrought Iron	Building	Red/Orange	1	15	Iron gromit
30	28	232	handle	Wrought Iron	Building	Red/Orange	1	757	Large metal iron handle.
14	12	232	Nail	Wrought Iron	Building	Red/Orange	1	30	Red iron rusted rectangular cut nail with a trapezoid head and a two-sided taper.
15	13	232	Nail	Wrought Iron	Building	Red/Orange	1	9	Red iron rusted rectangular cut nail with a trapezoid head and a two-sided taper.
16	14	232	Nail	Wrought Iron	Building	Red/Orange	1	8	Red iron rusted rectangular cut nail with a flat head and a two-sided taper.
18	16	232	Nail	Wrought Iron	Building	Red/Orange	1	8	Red iron rusted rectangular cut nail with a trapezoid head and a two-sided taper.
19	17	232	Nail	Wrought Iron	Building	Red/Orange	1	10	Red iron rusted rectangular cut nail with a trapezoid head and a two-sided taper.
27	25	232	Nail	Wrought Iron	Building	Red/Orange	1	28	Red rusted rectangular cut nail with a flat head.
28	26	232	Nail	Wrought Iron	Building	Red/Orange	1	6	Red rusted rectangular cut nail with a flat head.

Appendices

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
20	18	232	spike	Wrought Iron	Building	Red/Orange	1	91	Red rusted iron cut spike with a trapezoid head and a four-sided taper.
21	19	232	spike	Wrought Iron	Building	Red/Orange	1	48	Red rusted iron rectangular wrought spike with a flat head and a two sided taper.
22	20	232	spike	Wrought Iron	Building	Red/Orange	1	35	Red rusted iron cut spike with a trapezoid head and a four-sided taper.
23	21	232	spike	Wrought Iron	Building	Red/Orange	1	43	Red rusted iron rectangular wrought spike with a flat head and a two sided taper.
24	22	232	spike	Wrought Iron	Building	Red/Orange	1	44	Red rusted iron cut spike with a trapezoid head and a four-sided taper.
25	23	232	spike	Wrought Iron	Building	Red/Orange	1	39	Red rusted iron cut spike with a trapezoid head and a four-sided taper.
26	24	232	spike	Wrought Iron	Building	Red/Orange	1	64	Red rusted iron cut spike with a trapezoid head and a four-sided taper.
33	31	232	spike	Wrought Iron	Building	Red/Orange	1	68	Red rusted flat headed spike
32	30	232	Doorknob	Copper	Fixture and Fittings	Green	1	47	Copper bend doorknob
34	32	232	Wire	Wrought Iron	Fixture and Fittings	Red/Orange	1	59	Multi-threaded wire
31	29	232	Part	Wrought Iron	Machinery	Red/Orange	1	102	Machinery related iron part
29	27	232	Hook	Wrought Iron	Tools	Red/Orange	1	51	Metal iron double sided butcher hook
104	102	241	Bar	Wrought Iron	Building	Red/Orange	1	74	Iron bar
109	107	241	Bar	Wrought Iron	Building	Red/Orange	1	536	Rusted iron bar
349	346	241	Fixture	Copper	Building	Green	1	76	Copper Fixture/Handle
5	3	241	handle	Copper	Building	Green	1	35	Green copper door handle.
9	7	241	Nail	Wrought Iron	Building	Red/Orange	1	7	Iron wrought nail.
108	106	241	Nail	Wrought Iron	Building	Red/Orange	1	36	Rusted iron nail
256	253	241	Nail	Copper	Building	Green	1	26	Copper square cut nail with a 4 - sided taper with a trapezoid head.
7	5	241	Sheet	Lead	Building	White	2	23	2 pieces of lead sheet metal.
8	6	241	Sheet	Lead	Building	White	1	86	White lead sheet metal bend and fractured.
350	347	241	Sheet	Copper	Building	Green	1	43	Copper sheet
107	105	241	spike	Wrought Iron	Building	Red/Orange	1	304	Iron spike
110	108	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
111	109	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
112	110	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
113	111	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
114	112	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
115	113	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
116	114	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
117	115	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
118	116	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
119	117	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
120	118	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
121	119	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
122	120	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
123	121	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
124	122	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
125	123	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
126	124	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
127	125	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
128	126	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
129	127	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
130	128	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front horseshoe-work horse
131	129	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
134	130	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
135	131	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
136	132	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
137	133	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
138	134	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
139	135	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
140	136	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
141	137	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back horseshoe with heel-work horse
142	138	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
143	139	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
144	140	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
145	141	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
146	142	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
147	143	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
148	144	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe
149	145	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap
150	146	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap
151	147	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
152	149	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
153	150	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
154	151	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
155	152	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
156	153	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
157	154	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
158	155	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
159	156	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap
160	157	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
161	158	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
162	159	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
163	160	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
164	161	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
165	162	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
166	163	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
167	164	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
168	165	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
169	166	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
170	167	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
171	168	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
172	169	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
173	170	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Front workhorse shoe with a toe cap and a heel
174	171	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
175	172	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
176	173	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
177	174	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
178	175	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
179	176	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
180	177	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
181	178	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
182	179	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
183	180	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
184	181	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Back workhorse shoe with a toe cap and a heel
185	182	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
186	183	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
187	184	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
188	185	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
189	186	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
190	187	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
191	188	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
192	189	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
193	190	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
194	191	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
195	192	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
196	193	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
197	194	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
198	195	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front
199	196	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back
200	197	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back
201	198	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back
202	199	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back
203	200	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front with toe cap
204	201	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back with toe cap
205	202	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back with toe cap
206	203	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back with toe cap
207	204	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front with toe cap and heel
208	205	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe front with toe cap and heel
209	206	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back with toe cap and heel
210	207	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Horse shoe back with toe cap and heel
211	208	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Pony horse shoe
212	209	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Pony horse shoe
213	210	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Pony horse shoe
214	211	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1		Pony horse shoe
215	212	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	897	Horse shoe front with heel
216	213	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	538	Horse shoe back
217	214	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	1003	Workhorse shoe front with heel
218	215	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	268	Pony shoe back
219	216	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	849	Workhorse shoe with heel-front
220	217	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	678	Workhorse shoe with heel and toe cap-back
221	218	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	440	Horse shoe - front

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
222	219	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	193	Pony shoe - front
223	220	241	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	521	Horse shoe - back
6	4	241	Kettle spout	Brass	Household	Green/brown	1	107	Green brown brass ear horn - possibly a personal related item
106	104	241	Bar	Wrought Iron	Machinery	Red/Orange	1	234	Iron bar
103	101	241	Part	Wrought Iron	Machinery	Red/Orange	1	166	Cast moulded iron part
105	103	241	Part	Wrought Iron	Machinery	Red/Orange	1	2397	Very rusted iron machinery part.
249	246	242	Nail	Wrought Iron	Building	Red/Orange	1	7	Iron wire nail with a flat head and a grip on the shaft
250	247	242	Nail	Wrought Iron	Building	Red/Orange	1	66	Iron large cut rectangular nail with a two sided taper with a flat head
260	257	242	Attachment	Copper	Clothing and/or personal	Green	1	1	Very small copper degraded clip
259	256	242	Bar	Copper	Clothing and/or personal	Green	1	14	Small copper bar/clip with screw attached
258	255	242	Medal	Copper	Clothing and/or personal	Green	1	15	Copper medal no identification
319	316	245	Nail	Wrought Iron	Building	Red/Orange	1	4	Iron rusted wire nail with a trapezoid head
320	317	245	Nail	Wrought Iron	Building	Red/Orange	1	6	Iron rusted wire nail with a trapezoid head
321	318	245	Nail	Wrought Iron	Building	Red/Orange	1	6	Iron rusted wire nail with a trapezoid head
322	319	245	Nail	Wrought Iron	Building	Red/Orange	1	4	Iron rusted wire nail with a trapezoid head
323	320	245	Nail	Wrought Iron	Building	Red/Orange	1	4	Iron rusted wire nail with a trapezoid head
324	321	245	Nail	Wrought Iron	Building	Red/Orange	1	5	Iron cut square nail with a 4 -sided taper and a flat head
325	322	245	Nail	Wrought Iron	Building	Red/Orange	1	5	Iron rusted wire nail with a flat head
326	323	245	Nail	Wrought Iron	Building	Red/Orange	1	5	Iron rusted wire nail with a flat head
327	324	245	Nail	Wrought Iron	Building	Red/Orange	1	5	Iron rusted wire nail with a flat head
328	325	245	Nail	Wrought Iron	Building	Red/Orange	1	5	Iron rusted wire nail with a flat head
330	327	245	Nail	Wrought Iron	Building	Red/Orange	1	149	Iron rusted wire nail with trapezoid head
336	333	245	Button	Copper	Clothing and/or personal	Green	1	6	Copper 4 piece button
329	326	245	Burner Collar	Brass	Household	Green/brown	1	149	Brass lamp burner collar
252	249	246	Nail	Steel	Building	Grey	1	23	Steel grey square cut nail with a 4-sided taper with a flatish head
248	245	246	Sheet	Lead	Machinery	White	1	144	2 pieces of rolled up lead small sheets
345	342	247	Nail	Copper	Building	Green	1	1	Copper square cut nail with a four-sided taper and a flat head.

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
344	341	247	Button	Copper	Clothing and/or personal	Green	1	1	Copper 4 - piece button
346	343	247	Burner Collar	Brass	Household	Green/brown	1	26	Very degraded and bent burner collar
347	344	247	ring	Copper	Machinery	Green	1	22	Copper flat machinery ring
232	229	251	Bar	Wrought Iron	Building	Red/Orange	1	179	Iron metal bar with nails attached.
235	232	251	Chisel	Wrought Iron	Building	Red/Orange	1	62	Iron chisel with end missing.
244	241	251	Gromit	Copper	Building	Green	1	22	Copper small gromit
247	244	251	Nail	Wrought Iron	Building	Red/Orange	1	8	Circular wire nail with a trapezoid head
236	233	251	spike	Wrought Iron	Building	Red/Orange	1	28	Iron spike
335	332	251	Attachment	Copper	Clothing and/or personal	Green	1	6	Copper decorated scaled wurm attachment
240	237	251	Buckle	Copper	Clothing and/or personal	Green	1	22	Copper buckle
340	337	251	Buckle	Brass	Clothing and/or personal	Green/brown	1	25	Plain brass buckle
234	231	251	Light	Wrought Iron	Fixture and Fittings	Red/Orange	1	1099	Light case with iron casing and a copper inner frame.
238	235	251	Burner Collar	Wrought Iron	Household	Red/Orange	1	310	Iron degraded burner collar
338	335	251	Button	Brass	Household	Green/brown	1	35	Brass broken unmarked plain fork
341	338	251	handle	Wrought Iron	Household	Red/Orange	1	25	Rusted iron handle for a bucket
337	334	251	Lamp	Tin	Household	Grey	1	19	Tin lamp collar with a central hole
237	234	251	Lid	Wrought Iron	Household	Red/Orange	1	407	Iron degraded rusted lid
339	336	251	Tablespoon	Brass	Household	Green/brown	1	39	Brass broken unmarked plain tablespoon
246	243	251	Teaspoon	Copper	Household	Green	1	26	Copper unmarked tea spoon
231	228	251	ring	Wrought Iron	Machinery	Red/Orange	3	70	3 iron rings/gromit for machinery.
243	240	251	Spindle	Tin	Machinery	Grey	1	13	Tin spindle
242	239	251	Tube cap	Tin	Machinery	Grey	2	4	Tin grey tube cap/spouts
245	242	251	Washer	Steel	Machinery	Grey	1	22	Steel large washer
241	238	251	Hoops	Copper	Tools	Green	1	138	Copper machinery attachment with a swing mechanism and a hoop
233	230	251	Saw	Wrought Iron	Tools	Red/Orange	1	337	Iron wood heavy duty saw
239	236	251	shovel	Wrought Iron	Tools	Red/Orange	1	1393	Iron degraded shovel head.
230	227	251	Spade	Wrought Iron	Tools	Red/Orange	1	991	Iron spade with some of the handle attached.
331	328	258	Cap	Tin	Machinery	Grey	1	149	Thin grey tin rounded cap
332	329	258	Cap	Tin	Machinery	Grey	1	149	Thin grey tin rounded cap
13	11	270	Teaspoon	Copper	Household	Green	1	11	Green copper teaspoon - no identifiable marks.

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ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
352	349	272	Nail	Wrought Iron	Building	Red/Orange	1	31	Rusted square cut nail with a four-sided taper and a flat head.
316	313	298	Bolt	Wrought Iron	Building	Red/Orange	1	256	Four-sided heavy duty bolt
317	314	298	Hoops	Wrought Iron	Machinery	Red/Orange	1	34	Iron oval ring
315	312	298	Hook	Wrought Iron	Tools	Red/Orange	1	503	Iron adjustable hook
257	254	300	Nail	Wrought Iron	Building	Red/Orange	1	20	Iron circular masonry wire nail
351	348	306	Doorknob	Brass	Fixture and Fittings	Green/brown	1	56	Brass broken doorknob
348	345	360	Nail	Wrought Iron	Building	Red/Orange	1	16	Rusted iron circular wire nail with a trapezoid head
253	250	394	Nail	Copper	Building	Green	1	3	Copper wire nail with a flat head and a circular shaft
254	251	394	Nail	Copper	Building	Green	1	3	Copper wire nail with a flat head and a circular shaft
81	79	414	Lock	Copper	Fixture and Fittings	Green	1	127	Copper frame with a door lock-brass hanger/shutter attached. Wood attached on the back.
311	308	468	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	843	Iron deformed heavy duty horse shoe with a toe cap in wrong place with very high heels.
312	309	468	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	1008	Iron heavy duty horse shoe with large offset metal bar under toe cap
313	310	468	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	364	Front horse shoe
314	311	468	Horse shoe	Wrought Iron	Equestrian	Red/Orange	1	595	Back horse shoe
355	352	468	Burner Collar	Copper	Household	Green	1	21	Copper burner collar
356	353	468	Burner Collar	Copper	Household	Green	1	65	Copper burner collar
357	354	468	Clipper/Shearer	Wrought Iron	Household	Red/Orange	1	65	Rusted iron shearer/clipper
353	350	468	Fixture	Copper	Household	Green	1	32	Copper lamp fixture
354	351	468	Spindle	Copper	Household	Green	1	16	Copper spindle
52	50	545	Nail	Copper	Building	Green	1	4	Copper flat headed cut nail.
53	51	545	Nail	Copper	Building	Green	1	3	Copper flat headed cut nail.
305	302	545	Nail	Wrought Iron	Building	Red/Orange	1	2	Iron cut square nail with a four-sided taper
306	303	545	Nail	Wrought Iron	Building	Red/Orange	1	2	Iron cut square nail with a four-sided taper
307	304	545	Nail	Copper	Building	Green	1	2	Copper cut square nail with a four-sided taper
54	52	545	Sheet	Copper	Building	Green	1	10	2 pieces of thin copper sheets.
10	8	545	spike	Wrought Iron	Building	Red/Orange	1	89	Red rusted iron spike
85	83	545	spike	Wrought Iron	Building	Red/Orange	1	457	Iron bar with 45 degree spikes on the opposite ends
310	307	545	Strip	Copper	Building	Green	1	22	Copper bent grooved strip
82	80	545	Lock	Wrought Iron	Fixture and Fittings	Red/Orange	1	1354	Iron lock box with copper plate engraved - "NO.80/CARTE??TER/ARFEITEH/PATENTED"
84	82	545	Box	Wrought Iron	Household	Red/Orange	1	52	Heavily rusted tin box with a match striker on the underside.

Appendices

ID	Metal ID	Context	Object	Metal	Type	Colour	Number	Weight (g)	Description
308	305	545	Teaspoon	Brass	Household	Green/brown	1	32	Brass unmarked degraded teaspoon
309	306	545	Bar	Wrought Iron	Machinery	Red/Orange	1	22	Iron moulded bar-slag?
56	54	545	Cap	Lead	Machinery	White	1	18	Lead white tube cap
302	299	545	ring	Copper	Machinery	Green	1	2	Copper ring
300	297	545	Rod	Copper	Machinery	Green	1	268	Copper green rod
301	298	545	Part	Wrought Iron	Militaria	Red/Orange	1	4016	Iron rectangular rusted degraded machinery part
55	53	545	Hoops	Wrought Iron	Tools	Red/Orange	1	126	2 pieces of red iron hoops
83	81	545	shovel	Wrought Iron	Tools	Red/Orange	1	821	Iron shovel with some of the handle attached.
297	294	545	Spade	Wrought Iron	Tools	Red/Orange	1	1668	Very degraded iron spade
298	295	545	Tool	Wrought Iron	Tools	Red/Orange	1	767	Very degraded tool
299	296	545	Tool	Wrought Iron	Tools	Red/Orange	1	268	Very degraded tool
303	300	545	Tool	Copper	Tools	Green	1	49	Copper circular oil stick/tool
343	340	546	Tab	Copper	Fixture and Fittings	Green	1	190	Copper tap for a keg - letters "FIDDIAN" embossed.
304	301	548	Nail	Wrought Iron	Building	Red/Orange	1	7	Very degraded copper cut nail with a flat head and four-sided taper
17	15		Nail	Wrought Iron	Building	Red/Orange	1	10	Red iron rusted rectangular cut nail with a trapezoid head and a two-sided taper.

APPENDIX 3 – CERAMICS

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Purple	Alhambra			Saucer	Tableware	6	1
105	clear	Creamware	White	Handpainted	Red/green/blue	OSS001			Saucer	Tableware	7	1
105	clear	Creamware	White	Transfer	Blue	Albion			Plate	Tableware	4	1
105	clear	Creamware	White	Handpainted	Blue	Shell Edge			Side Plate	Tableware	1	1
105	clear	Creamware	White	Handpainted	Red	Banded			Teacup	Tableware	1	1
105	clear	Creamware	White	Handpainted	Blue	Banded			Side Plate	Tableware	1	1
105	clear	Creamware	White	Handpainted	Blue	Banded			Teacup	Tableware	1	1
105	clear	Creamware	White	Handpainted	Green	Banded			Teacup	Tableware	1	1
105	clear	Creamware	White	Relief/Transfer	Green	OSS002			Child's Plate	Tableware	17	1
105	clear	Creamware	White	Transfer	Brown	Eton College			Dinner Plate	Tableware	41	3
105	clear	Creamware	White	Transfer	Brown	OSS003	Davenport	1850-1870	Dinner Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Black	Forest			Saucer	Tableware	7	1
105	clear	Creamware	White	Transfer	Blue	Forest			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	Forest			Teacup	Tableware	3	1
105	clear	Creamware	White	Transfer	Green	Bramble	Copeland late Spode	1847-1867	Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS005			Saucer	Tableware	10	2
105	clear	Creamware	White	Transfer	Blue	OSS005			Teacup	Tableware	12	2
105	clear	Creamware	White	Transfer	Flow Blue	OSS006			Plate	Tableware	1	1
105	clear	Creamware	White	Sponged	Blue	OSS007			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Purple	Cable			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Black	Ionic			Jug	Tableware	1	1
105	clear	Creamware	White	Transfer	Green	Wicker			Plate	Tableware	36	1
105	clear	Creamware	White	Transfer	Blue	Bouquet			Plate	Tableware	4	1
105	clear	Creamware	White	Transfer	Blue	Wild Rose			Chamber Pot	Bathroom/Bedroom	7	1
105	clear	Creamware	White	Transfer	Blue	Morea			Dinner Plate	Tableware	3	1
105	clear	Creamware	White	Sponged	Blue	OSS008			Chamber Pot	Bathroom/Bedroom	15	1
105	clear	Creamware	White	Transfer	Blue	Windsor			Saucer	Tableware	4	1
105	clear	Creamware	White	Transfer	Blue	Windsor			Teacup	Tableware	8	1
105	clear	Creamware	White	Transfer	Purple	OSS010			Teacup	Tableware	1	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Grey	OSS011			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Grey	OSS012			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS013			Washbowl	Bathroom/Bedroom	21	1
105	clear	Creamware	White	Transfer	Blue	OSS013			Ewer	Bathroom/Bedroom	15	1
105	clear	Creamware	White	Transfer	Blue	OSS013			Saucer	Tableware	2	1
105	clear	Creamware	White	Handpainted	Red/green	Banded			Washbowl	Bathroom/Bedroom	4	1
105	clear	Creamware	White	Transfer	Blue	Missouri			Chamber Pot	Bathroom/Bedroom	6	1
105	clear	Creamware	White	Transfer	Green	OSS014			Child's Mug	Tableware	4	1
105	clear	Creamware	White	Transfer	Green	OSS015			Teacup	Tableware	6	1
105	clear	Creamware	White	Transfer	Blue	OSS016			Chamber Pot	Bathroom/Bedroom	18	1
105	clear	Creamware	White	Handpainted	Brown/blue	Banded			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Red	OSS017			Plate	Tableware	5	1
105	clear	Creamware	White	Transfer	Purple	OSS018			Teacup	Tableware	3	1
105	clear	Creamware	White	Transfer	Purple	OSS019			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS020			Plate	Tableware	3	1
105	clear	Creamware	White	Transfer	Blue	Gem			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS021			Ewer	Bathroom/Bedroom	1	1
105	clear	Creamware	White	Transfer	Black	OSS022			Cup	Tableware	1	1
105	clear	Creamware	White						Chamber Pot	Bathroom/Bedroom	2	1
105	clear	Creamware	White						various	various	44	0
105	clear	Creamware	White						Saucer	Tableware	1	1
105	clear	Creamware	White						Saucer	Tableware	1	1
105	clear	Semi-Vitreous	White						Plate	Tableware	1	1
105	clear	Semi-Vitreous	White	Handpainted	Gilt	Banded			Teacup	Tableware	3	1
105	clear	Creamware	White	Relief/handpainted	Gilt	Banded			Side Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS023			Side Plate	Tableware	5	1
105	clear	Creamware	White	Transfer	Blue	OSS005			Teacup	Tableware	5	1
105	clear	Creamware	White	Transfer	Blue	OSS005			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue				various	various	140	0
105	clear	Creamware	White	Transfer	Blue	Fibre	H.N.A	Unidentifi ed	Saucer	Tableware	6	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Blue	Fibre			Teacup	Tableware	4	1
105	clear	Creamware	White	Transfer	Green	Fibre			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Green	Fibre			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Grey	Fibre			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Grey	Fibre			Ewer	Bathroom/Bedroom	2	1
105	clear	Creamware	White	Transfer	Polychrome	OSS025			Pot Lid	Bathroom/Bedroom	1	1
105	clear	Creamware	White	Transfer	Blue	Rustic			Side Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Purple	Alhambra			Saucer	Tableware	2	0
105	clear	Creamware	White	Transfer	Purple	Alhambra			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Brown	OSS026			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS027			Teacup	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS028			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Black	OSS029			Platter	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS030			Plate	Tableware	6	2
105	clear	Creamware	White	Transfer	Blue	OSS031			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS032			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Black	OSS033			Teacup	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS034			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS035			Soap Dish?	Bathroom/Bedroom	1	1
105	clear	Semi-Vitreous	White						Child's Teaset - Teacup	Household	1	1
105	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	5	0
105	clear	Creamware	White	Transfer	Blue	Rhine			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Brown	Rhine			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Black	Rhine			Plate	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	15	1
105	clear	Creamware	White	Transfer	Grey	Asiatic Pheasants			Plate	Tableware	4	1
105	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Tureen Lid	Tableware	1	1
105	clear	Creamware	White	Transfer	Grey	OSS036			Plate	Tableware	2	1

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Blue	OSS037			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS038			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS039			Bowl	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS040			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS041			Chamber Pot	Bathroom/Bedroom	1	1
105	clear	Creamware	White	Transfer	Blue	OSS042			Plate	Tableware	7	1
105	clear	Creamware	White	Transfer	Blue	OSS043			Saucer	Tableware	6	1
105	clear	Creamware	White	Transfer	Blue	OSS044			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS045			Teacup	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS046			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS047			Teacup	Tableware	3	1
105	clear	Creamware	White	Transfer	Blue	OSS048			Mug	Tableware	5	1
105	clear	Creamware	White	Transfer	Grey/Black	OSS049			Bowl	Tableware	4	1
105	clear	Semi-Vitreous	White	Handpainted/Transfer	Green/red/yellow	OSS050			Chinese Dish	Sauce Tableware	2	1
105	clear	Semi-Vitreous	White	Handpainted	Gilt	Banded			Saucer	Tableware	1	1
105	clear	Semi-Vitreous	White	Handpainted	Gilt	Banded			Egg Cup	Tableware	4	1
105	clear	Creamware	White	Handpainted	Gilt	Banded			Egg Cup	Tableware	2	1
105	clear	Creamware	White	Handpainted	Brown/white/cream	Cornishware			Unidentified	Unidentified	2	1
105	clear	Creamware	White						Candle Holder	Household	1	1
105		Terracotta							Flower Pot	Household	2	1
105		Terracotta							Flower Pot	Household	1	1
105	clear	Creamware	White	Handpainted	Blue/White	Cornishware			Unidentified	Unidentified	1	1
105	Brown	Earthenware	Brown						Teapot	Tableware	1	1
105	Brown	Creamware							Jug	Tableware	1	1
105	clear	Creamware	White						Cheese Pot	Kitchenware	2	1
105	clear	Creamware	White	Relief	Cream/White	OSS051			Jug	Tableware	11	1
105	clear	Creamware	White	Transfer	Black	OSS052			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Black	OSS053			Egg Cup	Tableware	1	1
105	clear	Creamware	White	Transfer	Black	OSS054			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Dark Blue	OSS055			Plate	Tableware	3	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Dark Blue	OSS056	T	Unidentified	Plate	Tableware	4	1
105	clear	Creamware	White	Transfer	Brown	Montilla	Davenport	1820-1860	Toilet Box	Bathroom/Bedroom	2	1
105	clear	Creamware	White	Sprigged	Purple	ICC027			Saucer	Tableware	3	1
105	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Teacup	Tableware	2	1
105	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Saucer	Tableware	1	0
105	clear	Creamware	White	Transfer	Washed Black	OSS057			Teacup	Tableware	2	1
105	clear	Creamware	White	Transfer	Black	OSS058			Teacup	Tableware	1	1
105	clear	Blueware	Blue	Relief		OSS059			Jug	Tableware	6	1
105	clear	Creamware	White	Transfer	Blue	OSS060			Chamber Pot	Bathroom/Bedroom	2	1
105	clear	Creamware	White	Transfer	Dark Grey	OSS061			Dish Lid	Tableware	2	1
105	clear	Creamware	White						Serving Dish	Tableware	1	1
105	clear	Creamware	White	Transfer	Dark Grey/Red	OSS062			Teapot Lid	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS063			Plate	Tableware	3	1
105	clear	Creamware	White	Transfer	Dark Blue	OSS064			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Purple/Yellow/Green	OSS065			Chamber Pot	Bathroom/Bedroom	4	1
105	clear	Creamware	White	Transfer	Purple	OSS066			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS067			Chamber Pot	Bathroom/Bedroom	1	1
105	clear	Creamware	White	Transfer	Blue	OSS068			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS069			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS070			Side Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS071			Plate	Tableware	3	1
105	clear	Creamware	White	Transfer	Green	OSS072			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Green	OSS073			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Green	OSS074			Plate	Tableware	1	1
105	clear	Creamware	White	Transfer	Green	OSS075			Unidentified	Unidentified	1	1
105	clear	Creamware	White	Transfer	Blue	OSS076			Plate	Tableware	1	1
105	clear	Creamware	White	Sponged	Blue	OSS077			Bowl	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	OSS078			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	OSS079			Chamber Pot	Bathroom/Bedroom	1	1
105	clear	Creamware	White	Transfer	Blue	OSS080			Unidentified	Unidentified	7	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
105	clear	Creamware	White	Transfer	Flow Blue	Formosa			Saucer	Tableware	9	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS081			Teacup	Tableware	4	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS082			Teacup	Tableware	18	3
105	clear	Creamware	White	Transfer	Flow Blue	OSS083			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS084			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS085			Saucer	Tableware	1	1
105	clear	Creamware	White	Transfer	Flow Blue	OSS086			Saucer	Tableware	2	1
105	clear	Creamware	White	Transfer	Brown	OSS087			Teacup	Tableware	4	1
105	clear	Creamware	White	Transfer	Blue	OSS088			Mug	Tableware	5	1
105	clear	Creamware	White	Transfer	Blue	OSS089			Serving Dish	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	Willow			Tureen	Tableware	2	1
105	clear	Creamware	White	Transfer	Blue	Willow			Side Plate	Tableware	7	1
105	clear	Creamware	White	Transfer	Blue	Willow			Platter	Tableware	11	1
105	clear	Creamware	White	Transfer	Blue	Willow			Platter	Tableware	9	1
105	clear	Creamware	White	Transfer	Blue	Willow	P W & Co	1834-1859	Platter	Tableware	19	1
105	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish - Vegetable	Tableware	13	1
105	clear	Creamware	White	Transfer	Blue	Willow			Bowl	Tableware	12	2
105	clear	Creamware	White	Transfer	Blue	Willow			Platter	Tableware	5	1
105	clear	Creamware	White	Transfer	Blue	Willow			Platter	Tableware	3	1
105	clear	Creamware	White	Transfer	Blue	Willow			Teacup	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	Willow			Dish Lid	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	Willow			Platter	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	Willow	TG	1834-1854	Platter	Tableware	1	1
105	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	144	10
107	clear	Creamware	White	Transfer	Blue	Bouquet			Plate	Tableware	1	0
107	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
107	clear	Creamware	White	Transfer	Purple	OSS090			Teacup	Tableware	1	1
109	clear	Creamware	White	Transfer	Blue	Willow			Side Plate	Tableware	1	0
109	clear	Creamware	White	Transfer	Flow Blue	OSS086			Saucer	Tableware	1	0
109	clear	Creamware	White	Transfer	Flow Blue	OSS091			Candle Holder	Household	2	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
112	clear	Creamware	White	Transfer	Flow Blue	OSS092			Plate	Tableware	5	1
112	clear	Creamware	White	Transfer	Blue	OSS093			Teacup	Tableware	1	1
112	clear	Creamware	White						Unidentified	Unidentified	2	0
114	clear	Creamware	White	Transfer	Black	OSS094			Saucer	Tableware	1	1
116	clear	Creamware	White	Transfer	Blue	OSS028			Plate	Tableware	1	0
116	clear	Creamware	White	Transfer	Grey	OSS095			Plate	Tableware	1	1
118	clear	Creamware	White	Transfer	Flow Blue	Formosa			Teacup	Tableware	17	1
118	clear	Creamware	White	Transfer	Blue	Willow			Dinner Plate	Tableware	5	1
118	clear	Creamware	White	Transfer	Blue	Willow			Teacup	Tableware	6	1
118	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish	Tableware	36	1
118	clear	Creamware	White	Transfer	Blue	Fiber	illegible		Saucer	Tableware	13	1
118	clear	Creamware	White	Transfer	Flow Blue	OSS096			Saucer	Tableware	1	1
118	clear	Creamware	White	Transfer	Flow Blue	Formosa			Teacup	Tableware	9	0
118	clear	Creamware	White	Transfer	Blue	OSS097			Saucer	Tableware	1	1
118	clear	Creamware	White	Transfer	Blue	OSS098			Plate	Tableware	1	1
118	clear	Creamware	White	Transfer	Blue	OSS099			Egg Cup	Tableware	3	1
120	clear	Creamware	White	Transfer	Black	OSS094			Saucer	Tableware	2	0
120	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
120	clear	Blueware	Blue						Teacup	Tableware	1	1
120	clear	Creamware	White	Transfer	Flow Blue	OSS100			Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Black	Udina			Teacup	Tableware	5	1
125	clear	Creamware	White	Transfer	Black	Udina	J Clementson	1839-1864	Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Blue	British Rivers			Platter	Tableware	11	1
125	clear	Creamware	White	Transfer	Blue	OSS005			Saucer	Tableware	2	1
125	clear	Creamware	White	Transfer	Purple	OSS101			Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Blue	Milanese			Plate	Tableware	7	1
125	clear	Creamware	White	Transfer	Blue	OSS102			Teacup	Tableware	3	1
125	clear	Creamware	White	Transfer	Blue	OSS102			Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Brown	OSS087			Teacup	Tableware	1	0
125	clear	Creamware	White	Transfer	Blue	Albion			Plate	Tableware	1	0

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
125	clear	Creamware	White	Transfer	Blue	Fibre			Bowl	Tableware	1	1
125	clear	Creamware	White	Transfer	Grey	Weed	GW	Unidentified	Teacup	Tableware	1	1
125	clear	Creamware	White	Transfer	Dark Blue	OSS056			Plate	Tableware	1	0
125	clear	Creamware	White	Transfer	Black	OSS052			Plate	Tableware	2	1
125	clear	Creamware	White	Transfer	Green	Forest			Saucer	Tableware	1	0
125	clear	Creamware	White	Sponged	Blue	OSS103			Teacup	Tableware	2	1
125	clear	Semi-Vitreous	White						Saucer	Tableware	1	0
125	clear	Creamware	White	Transfer	Green	OSS104			Plate	Tableware	2	1
125	clear	Creamware	White	Transfer	Blue	OSS105			Plate	Tableware	1	1
125	clear	Creamware	White	Transfer	Black	OSS106			Plate	Tableware	2	1
125	clear	Creamware	White	Transfer	Purple	OSS107	W.../Tren....tery/Bu...e m	Unidentified	Toilet Box	Bathroom/Bedroom	3	1
125	clear	Creamware	White	Transfer	Blue	OSS108			Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	1	0
125	clear	Blueware	Blue						Jug	Tableware	1	0
125	clear	Creamware	Blue						Unidentified	Unidentified	1	0
125	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish	Tableware	5	1
125	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	14	0
125	clear	Creamware	White	Transfer	Flow Blue	OSS109			Teacup	Tableware	5	1
125	clear	Creamware	White	Transfer	Flow Blue	OSS109			Saucer	Tableware	2	1
125	clear	Creamware	White	Transfer	Black	OSS110			Egg Cup	Tableware	2	1
125	clear	Creamware	White	Handpainted	Blue	Cornishware			Mug	Tableware	1	1
164	clear	Creamware	White	Transfer	Black	OSS111			Plate	Tableware	1	1
143	clear	Creamware	White	Transfer	Black	OSS112			Teacup	Tableware	1	1
162	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
157	clear	Creamware	White	Transfer	Flow Blue	OSS113			Plate	Tableware	1	1
155	clear	Creamware	White	Transfer	Blue	Albion			Plate	Tableware	1	0
155	clear	Creamware	White	Transfer	Blue	OSS114			Saucer	Tableware	1	1
125	clear	Creamware	White	Transfer	Blue	OSS102			Teacup	Tableware	1	0
125	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
125	clear	Blueware	Blue						Plate	Tableware	1	1
125	clear	Creamware	White	Transfer	Flow Blue	OSS083			Teacup	Tableware	1	0
104	clear	Creamware	White	handpainted	Blue	Banded			Teacup	Tableware	1	0
104	clear	Semi-Vitreous	White	handpainted	Gilt	Tealeaf			Saucer	Tableware	1	1
104	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	3	0
104	clear	Creamware	White	Sponged	Blue	OSS077			Saucer	Tableware	1	1
104	clear	Creamware	White	Sprigged	Purple	ICC027			Teacup	Tableware	2	0
104	clear	Creamware	White	Transfer	Grey	Rhine			Dinner Plate	Tableware	1	1
104	clear	Creamware	White	Transfer	Blue	OSS108			Saucer	Tableware	1	0
104	clear	Creamware	White	Transfer	Blue	Fibre			Plate	Tableware	1	0
104	clear	Creamware	White	Transfer	Blue	Morea			Plate	Tableware	2	0
104	clear	Creamware	White	Transfer	Green	OSS115			Saucer	Tableware	1	1
104	clear	Creamware	White	Transfer	Green	OSS116			Teacup	Tableware	1	1
104	clear	Creamware	White	Transfer	Purple	OSS117			Chamber Pot	Bathroom/Bedroom	1	1
104	clear	Creamware	White						various	various	11	0
104	clear	Semi-Vitreous	White						various	various	2	0
104		Terracotta							Flower Pot	Household	1	0
103	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	7	0
103	clear	Semi-Vitreous	White	handpainted	Gilt	Banded			Saucer	Tableware	1	0
103	clear	Creamware	White	Transfer	Blue	Forest			Teacup	Tableware	3	0
103	clear	Creamware	White	Transfer	Blue	OSS013			Saucer	Tableware	1	1
103	clear	Creamware	White	Transfer	Purple	OSS018			Teacup	Tableware	2	0
103	clear	Creamware	White	Transfer	Blue	Fibre			Saucer	Tableware	1	0
103	clear	Creamware	White	Transfer	Purple	OSS118			Plate	Tableware	1	1
103	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	1	0
103	clear	Creamware	White						various	various	3	0
103	clear	Semi-Vitreous	White						various	various	1	0
547	clear	Creamware	White	Transfer	Green	Harvard			Chamber Pot	Bathroom/Bedroom	7	1
314	clear	Creamware	White	Transfer	Blue	Willow			Side Plate	Tableware	1	0
314	clear	Creamware	White	Transfer	Flow Blue	Formosa			Plate	Tableware	1	1
314	clear	Creamware	White	handpainted	Blue	Banded			Teacup	Tableware	2	1

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
314	clear	Creamware	White	Transfer	Black/Grey	OSS119			Bowl	Tableware	1	1
260	clear	Creamware	White	Transfer	Green	OSS120			Teacup	Tableware	2	1
260	clear	Creamware	White	Transfer	Purple	OSS121			Saucer	Tableware	1	1
260	clear	Creamware	White	Transfer	Brown	OSS122			Plate	Tableware	1	1
260	clear	Creamware	White	Transfer	Gilt	Tealeaf			Teacup	Tableware	4	1
260	clear	Creamware	White	Transfer	Gilt	Tealeaf			Saucer	Tableware	5	1
260	clear	Creamware	White						Ewer	Bathroom/Bedroom	7	1
547	clear	Creamware	White	Transfer	Green	OSS123			Saucer	Tableware	1	1
547	clear	Creamware	White	Transfer	Dark Blue	OSS124			Plate	Tableware	1	1
547	clear	Creamware	White	Handpainted	Blue	Banded			Teacup	Tableware	1	1
547	clear	Creamware	White	Transfer	Green	OSS125			Chamber Pot	Bathroom/Bedroom	1	1
547	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Platter	Tableware	2	1
547	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	8	1
547	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	9	1
547	brown	Earthenware	Brown						Teapot	Tableware	2	1
547	clear	Creamware	White						Teacup	Tableware	1	0
547	clear	Creamware	White						Saucer	Tableware	1	0
347	clear	Creamware	White	Transfer	Blue	OSS126			Saucer	Tableware	1	1
422	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Saucer	Tableware	1	0
480	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
227	clear	Creamware	White						Child's Teaset - Saucer	Household	1	1
545	clear	Creamware	White	Transfer	Black	Holloway's Ointment			Holloways Ointment	Bathroom/Bedroom	1	1
300	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	1	0
300		Creamware	White	Handpainted	Blue	Banded			Marble	Household	1	1
434	clear	Creamware	White	Transfer	Dark Blue	OSS127			Teacup	Tableware	1	1
434	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
434	clear	Semi-Vitreous	White	handpainted	Gilt	Banded			Teacup	Tableware	1	0

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
406	clear	Creamware	White	Transfer	Black	Antique			Dinner Plate	Tableware	1	1
406	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish	Tableware	1	0
406	clear	Creamware	White	Transfer	Blue	OSS128			Saucer	Tableware	63	3
406	clear	Creamware	White	Transfer	Blue	OSS128			Teacup	Tableware	4	1
247	clear	Creamware	White	Transfer	Flow Blue	Formosa	sb& co	1838-1854	Dinner Plate	Tableware	4	1
247	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
247	clear	Creamware	White	Transfer	Black	OSS129			Teacup	Tableware	1	1
245	clear	Creamware	White	Transfer	Green	Dresden	unwin & holmes	1868+	Saucer	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	Albion			Side Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Grey	Rhine	gwt & sons	1873-1895	Dinner Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Brown	Chios			Side Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	OSS128			Teacup	Tableware	1	0
245	clear	Creamware	White	Transfer	Brown	OSS130			Side Plate	Tableware	2	1
245	clear	Creamware	White	Transfer	Brown	OSS131			Teacup	Tableware	1	0
245	clear	Creamware	White	Transfer	Purple	OSS132			Washbowl	Bathroom/Bedroom	2	0
245	clear	Creamware	White	Transfer	Brown	OSS133			Washbowl	Bathroom/Bedroom	2	0
245	clear	Yellowware	Yellow	Handpainted	White/Blue	Cornishware			Kitchen Bowl	Kitchenware	4	0
245	clear	Creamware	White	Transfer	Dark Blue	OSS134			Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	OSS099			Egg Cup	Tableware	1	1
245	clear	Creamware	White						Container	Kitchenware	1	1
245	mangan ese	Earthenware	Brown						Teapot	Tableware	10	2
245	clear	Creamware	White	Transfer	Black	Kew			Washbowl	Bathroom/Bedroom	13	1
245	clear	Creamware	White	Transfer	Black	OSS135			Washbowl	Bathroom/Bedroom	1	1
203	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Serving Dish	Tableware	9	1
203	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
203	clear	Creamware	White	Transfer	Blue	Kulat			Dinner Plate	Tableware	1	1
203	clear	Creamware	White	Transfer	Brown	OSS136			Teacup	Tableware	2	1
203	clear	Creamware	White	Transfer	Blue	OSS137			Plate	Tableware	1	1
203	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	1	0

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
203	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	1	0
203	clear	Creamware	White	Transfer	Green	Dresden			Teacup	Tableware	1	1
203	clear	Creamware	White	Transfer	Dark Blue	OSS138			Plate	Tableware	1	1
203	clear	Creamware	White	Relief		OSS139			Plate	Tableware	1	1
203	clear	Creamware	White	Relief		OSS140			Jug	Tableware	1	1
203	clear	Creamware	White						Preserves	Kitchenware	2	1
241	brown	Earthenware	Brown						Teapot	Tableware	1	0
241	clear	Creamware	White	Transfer	Dark Green	Rhine			Dinner Plate	Tableware	1	1
241	clear	Creamware	White	Transfer	Grey	Rhine			Side Plate	Tableware	1	0
241	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	1	1
241	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	1	1
241	clear	Creamware	White	Transfer	Grey	Rhine			Teacup	Tableware	1	1
241	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	4	1
241	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	5	1
241	clear	Creamware	White	Transfer	Black	Dulcamara			Teacup	Tableware	1	1
241	clear	Creamware	White	Transfer	Blue	Albion			Plate	Tableware	1	0
241	clear	Creamware	White	Transfer	Blue	Olive			Saucer	Tableware	1	1
241	clear	Creamware	White	Transfer	Dark Grey	Bramble	Copeland late Spode	1847-1867	Bowl	Tableware	2	1
241	clear	Creamware	White	Transfer	Blue	Bouquet	P B..		Dinner Plate	Tableware	1	1
241	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	1	0
241	clear	Creamware	White	Transfer	Blue	Fibre			Teacup	Tableware	1	1
241	clear	Creamware	White	Transfer	Black	Udina			Serving Dish	Tableware	1	1
241	clear	Creamware	White	Transfer	Brown	OSS131			Teacup	Tableware	2	0
241	clear	Creamware	White	Transfer	Brown	OSS131			Saucer	Tableware	1	0
241	clear	Creamware	White	Transfer	Brown	OSS141			Teacup	Tableware	2	1
241	clear	Creamware	White	Transfer	Flow Blue	OSS142			Serving Dish	Tableware	2	1
241	clear	Creamware	White	Transfer	Green	Shamrock			Saucer	Tableware	1	0
241	clear	Creamware	White	Transfer	Blue	OSS144			Teacup	Tableware	1	1
241	clear	Creamware	White						Teacup	Tableware	1	0

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
241	clear	Creamware	White						Teacup	Tableware	1	0
241	clear	Creamware	White						Chamber Pot	Bathroom/Bedroom	1	0
241	clear	Creamware	White	Transfer	Blue	OSS145			Chamber Pot	Bathroom/Bedroom	1	1
241	clear	Creamware	White	Transfer	Blue	OSS146			Chamber Pot	Bathroom/Bedroom	1	1
241	clear	Creamware	White	Transfer	Blue	OSS147			Teacup	Tableware	1	1
241	clear	Creamware	White	Sprigged	Purple	ICC027			Saucer	Tableware	2	0
241	clear	Creamware	White	Sprigged	Blue	ICC027			Plate	Tableware	1	1
241	clear	Creamware	White	Transfer	Blue	OSS148			Teacup	Tableware	1	1
241	clear	Semi-Vitreous	White	Transfer	Polychrome	OSS149			Side Plate	Tableware	1	1
241	clear	Creamware	White	handpainted	Green/black	OSS150			Teacup	Tableware	1	1
241	clear	Creamware							Preserves	Kitchenware	1	1
241	clear	Creamware	White	Transfer	Purple	OSS151			Bowl	Tableware	6	1
241	clear	Creamware	White	Transfer	Dark Blue	OSS152			Teacup	Tableware	1	1
241	clear	Creamware	White	Transfer	Black	OSS153			Jug	Tableware	1	1
241	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	11	1
241	clear	Creamware	White	Transfer	Blue	Willow			Bowl	Tableware	2	1
241	clear	Creamware	White						Preserves	Kitchenware	1	1
251	clear	Creamware	White	Transfer	Black	Chios	Pinder Bourne & Co	1862-1882	Dinner Plate	Tableware	11	1
251	clear	Creamware	White	Transfer	Dark Brown	Chios			Side Plate	Tableware	1	0
251	clear	Creamware	White	Transfer	Blue	Albion	D...(illegible)		Side Plate	Tableware	6	1
251	clear	Creamware	White	Transfer	Blue	Albion			Side Plate	Tableware	1	0
251	clear	Creamware	White	Transfer	Blue	Albion			Serving Dish	Tableware	12	1
251	clear	Creamware	White	Transfer	Blue	Albion			Tureen Lid	Tableware	2	1
251	clear	Creamware	White	Transfer	Blue	Coral	Davenport	1820-1860	Teacup	Tableware	1	1
251	clear	Creamware	White	Transfer	Brown	Field Sports #2	Edge, Malkin & Co	1873-1903	Mug	Tableware	7	1
251	clear	Creamware	White	Transfer	Purple	Dresden	Pinder Bourne & Co	1862-1882	Saucer	Tableware	4	1
251	clear	Creamware	White	Transfer	Purple	OSS132			Washbowl	Bathroom/Bedroom	22	1
251	clear	Creamware	White	Transfer	Purple	Clyde			Teacup	Tableware	3	1
251	clear	Creamware	White	Transfer	Blue	Clyde			Dish Lid	Tableware	2	1
251	clear	Creamware	White	Transfer	Purple	Gothic Scroll			Plate	Tableware	2	1

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
251	clear	Creamware	White	Transfer	Green	OSS120			Teacup	Tableware	4	1
251	clear	Creamware	White	Transfer	Green	OSS120			Saucer	Tableware	3	1
251	clear	Creamware	White	Transfer	Plum	Dagmar	Hope & Carter	1862-1880	Saucer	Tableware	13	3
251	clear	Creamware	White	Transfer	Green	Shamrock	Pinder Bourne & Co	1862-1882	Saucer	Tableware	18	5
251	clear	Creamware	White	Transfer	Green	Shamrock			Teacup	Tableware	29	5
251	clear	Creamware	White	Transfer	Grey	Rhine			Dinner Plate	Tableware	22	3
251	clear	Creamware	White	Handpainted	Brown	Banded			Teacup	Tableware	2	1
251	clear	Creamware	White	Handpainted	Brown	Banded			Saucer	Tableware	7	1
251	clear	Creamware	White	Handpainted	Red	Banded			Saucer	Tableware	1	0
251	clear	Creamware	White	Handpainted	Green	Banded			Teacup	Tableware	4	1
251	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	20	3
251	clear	Creamware	White	Handpainted	Blue	Banded			Teacup	Tableware	11	2
251	clear	Earthenware	White	Handpainted	Blue/White	Cornishware			Kitchen Bowl	Kitchenware	10	1
251	clear	Semi-Vitreous	White	Handpainted	Red/Gilt	Banded			Teacup	Tableware	1	1
251	clear	Creamware	White	Handpainted	Red	Banded			Saucer	Tableware	6	1
251	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Saucer	Tableware	4	1
251	clear	Creamware	White	Sprigged	Purple	ICC027			Teacup	Tableware	4	1
251	clear	Creamware	White	Sprigged/Relief	Purple	OSS154			Plate	Tableware	3	1
251	clear	Creamware	White	Sprigged/Relief	Purple	OSS155			Plate	Tableware	4	1
251	clear	Creamware	White	Sprigged/Relief	Purple				Plate	Tableware	4	0
251	clear	Creamware	White	Transfer	Gilt	Tealeaf			Teacup	Tableware	9	8
251	clear	Creamware	White	Transfer	Gilt	Tealeaf			Saucer	Tableware	1	1
251	clear	Creamware	White	Handpainted	Gilt	Banded			Teacup	Tableware	5	0
251	clear	Creamware	White	Handpainted	Gilt	Banded			Saucer	Tableware	1	0
251	clear	Semi-Vitreous	White	Handpainted	Red	Banded			Saucer	Tableware	3	1
251	clear	Creamware	White	Handpainted	Gilt	Banded			Saucer	Tableware	1	1
251	clear	Creamware	White						Teacup	Tableware	3	1
251	clear	Creamware	White						Teacup	Tableware	1	1
251	clear	Creamware	White						Saucer	Tableware	2	1
251	clear	Creamware	White	Transfer	Blue	OSS143			Candle Holder	Household	1	1
251	clear	Creamware	White	Transfer	Black	Kew			Washbowl	Bathroom/Bedroom	2	0

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
251	clear	Creamware	White	Transfer	Dark Blue	OSS138			Plate	Tableware	1	0
251	clear	Creamware	White	Transfer	Brown	OSS131			Teacup	Tableware	10	2
251	clear	Creamware	White	Transfer	Brown	OSS131			Saucer	Tableware	1	1
251	clear	Creamware	White	Transfer	Dark Blue	OSS110			Saucer	Tableware	1	1
251	clear	Creamware	White	Transfer	Red	OSS156			Saucer	Tableware	12	1
251	clear	Creamware	White	Transfer	Red	OSS157			Saucer	Tableware	5	1
251	clear	Creamware	White	Transfer	Green	OSS158			Teacup	Tableware	3	1
251	clear	Creamware	White	Transfer	Purple	OSS159			Teacup	Tableware	3	1
251	clear	Creamware	White	Transfer	Blue	Willow			Bowl	Tableware	1	0
251	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
251	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish	Tableware	1	0
251	clear	Blueware	Blue	Relief		OSS160			Jug	Tableware	10	1
251	clear	Creamware	White	Relief		OSS161			Jug	Tableware	9	1
251	clear	Creamware	White	Relief		OSS162			Jug	Tableware	2	1
251	clear	Creamware							Brood Egg	Household	1	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	9	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	1	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	9	0
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	C.H.	1865-c1875	Dinner Plate	Tableware	6	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	C.H.	1865-c1875	Dinner Plate	Tableware	3	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	O.H.E.C L	1861-1886	Side Plate	Tableware	2	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	O.H.E.C L	1861-1886	Side Plate	Tableware	1	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	PB & Co	1862-1882	Side Plate	Tableware	1	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	PB & Co	1862-1882	Side Plate	Tableware	1	1

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Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	T...	Undetermined	Plate	Tableware	1	1
251	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	44	0
251	clear	Creamware	White	Transfer	Polychrome	Franklin's Maxims			Child's Mug	Tableware	1	1
251	clear	Creamware	White	Transfer	Green	OSS163			Child's Mug	Tableware	1	1
251	clear	Creamware	White	Transfer	Black	Holloway's Ointment			Holloways Ointment	Bathroom/Bedroom	1	1
251	clear	Creamware	White	Transfer	Black	Holloway's Ointment			Holloways Ointment	Bathroom/Bedroom	2	1
251	clear	Creamware	White	Transfer	Brown	OSS164			Bowl	Tableware	5	1
251	clear	Creamware	White	Transfer	Blue	OSS064			Chamber Pot	Bathroom/Bedroom	1	1
251	clear	Creamware							Child's Teaset - Teacup or Teapot	Household	1	1
251	clear	Creamware	White	Transfer	Blue	OSS165			Dish Lid	Tableware	1	1
251	clear	Creamware	White						Chamber Pot	Bathroom/Bedroom	1	0
251	clear	Creamware	White						Kitchen Bowl	Kitchenware	1	1
251	clear	Creamware	White						Cheese Pot	Kitchenware	2	1
251	clear	Creamware	White						Cheese Pot	Kitchenware	3	1
251	clear	Creamware	White						Ewer	Bathroom/Bedroom	1	1
251	clear	Creamware	White						Child's Mug	Tableware	1	1
251	clear	Creamware	White						Child's Mug	Tableware	1	1
251	clear	Creamware	White	Transfer	Black	OSS166			Saucer	Tableware	2	1
251	clear	Creamware	White	Transfer	Flow Blue	OSS167			Jug	Tableware	8	1
251	clear	Earthenware	Brown	Relief		OSS168			Teapot	Tableware	15	1
251	clear	Earthenware	Brown	Relief		OSS169			Teapot	Tableware	4	1
251	clear	Earthenware	Brown	Relief		OSS170			Teapot	Tableware	7	1
251	clear	Earthenware	Brown						Teapot	Tableware	2	1
251	clear	Creamware	White	Transfer	Dark Grey	OSS171			Unidentified	Unidentified	1	1
251	clear	Semi-Vitreous	White	handpainted	Green/gilt	Banded			Unidentified	Unidentified	1	1
245	clear	Creamware	White	Transfer	Blue	OSS172			Chamber Pot	Bathroom/Bedroom	3	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
245	clear	Creamware	White	Transfer	Blue	Leon			Dinner Plate	Tableware	1	0
545	clear	Creamware	White	Transfer	Blue	Kulat			Plate	Tableware	1	0
545	clear	Creamware	White	Transfer	Blue	Rhine			Teacup	Tableware	1	1
545	clear	Earthenware	Brown						Teapot	Tableware	2	0
545	clear	Creamware	fawn/white	Relief		OSS174			Jug	Tableware	2	1
545	clear	Creamware	White	Transfer	Blue	...ssau			Plate	Tableware	1	1
545	clear	Creamware	White	Transfer	Blue	OSS175			Saucer	Tableware	3	1
545	clear	Creamware	White	Transfer	Blue	Willow			Serving Dish	Tableware	3	1
545	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
545	clear	Creamware	White	Transfer	Brown	OSS133			Washbowl	Bathroom/Bedroom	8	1
545	clear	Creamware	White	Transfer	Blue	OSS176			Egg Cup	Tableware	1	1
545	clear	Creamware	White						Kitchen Bowl	Kitchenware	1	0
545	clear	Creamware	White						various	various	7	0
545	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
545	clear	Creamware	White	Transfer	Grey	Rhine			Plate	Tableware	2	0
545	clear	Creamware	fawn/white	Relief		OSS174			Jug	Tableware	1	0
545	clear	Creamware	White	Handpainted	Blue	Banded			Saucer	Tableware	1	0
545	clear	Creamware	White	Relief		OSS140			Jug	Tableware	3	0
545	clear	Creamware	White	Transfer	Blue	OSS177			Vase?	Household	3	1
545	clear	Creamware	White	Transfer	Blue	OSS178			Milk Jug	Tableware	1	1
545	clear	Blueware	Blue						Teacup	Tableware	1	1
545	clear	Creamware	White	Transfer	Blue	OSS179			Teacup	Tableware	2	1
545	clear	Creamware	White	Transfer	Blue	OSS180			Dish Lid	Tableware	1	1
545	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Teacup	Tableware	1	0
545	clear	Creamware	White	Transfer	Brown	OSS133			Washbowl	Bathroom/Bedroom	3	0
545	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	2	0
545	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	6	1
545	clear	Creamware	White	Transfer	Blue	OSS181			Teacup	Tableware	7	1
545	clear	Creamware	White	Transfer	Blue	OSS182			Teacup	Tableware	2	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
545	clear	Creamware	White	Transfer	Blue	OSS183			Teacup	Tableware	4	1
545	clear	Creamware	White	Transfer	Dark Brown	OSS184			Teacup	Tableware	1	1
545	clear	Creamware	White	Transfer	Maroon	OSS185			Saucer	Tableware	1	1
545	clear	Creamware	White	Transfer	Blue	OSS146			Chamber Pot	Bathroom/Bedroom	1	0
545	clear	Semi-Vitreous	White						Figurine	Household	1	1
242	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	1	0
242	clear	Yellowware	Yellow						Kitchen Bowl	Kitchenware	1	0
242	clear	Creamware	White	Handpainted	Blue				Teacup	Tableware	1	0
545	clear	Creamware	White	Transfer	Blue	OSS186			Ewer	Bathroom/Bedroom	1	1
258	clear	Creamware	White	Handpainted	gilt	Tealeaf			Teacup	Tableware	1	1
258	clear	Creamware	White						Side Plate	Tableware	2	1
258	clear	Creamware	White	Transfer	Brown	OSS131			Saucer	Tableware	1	0
258	clear	Creamware	White	Handpainted	Gilt	Banded			Saucer	Tableware	1	1
258	clear	Creamware	White	Transfer	Blue	Leon			Side Plate	Tableware	3	0
258	clear	Creamware	White	Transfer	Gilt	OSS174			Teapot	Tableware	1	1
260	clear	Creamware	White						Chamber Pot	Bathroom/Bedroom	6	1
245	clear	Creamware	White	Transfer	blue	OSS187			Chamber Pot	Bathroom/Bedroom	62	1
245	clear	Creamware	White	Transfer	Black	Udina			Teacup	Tableware	2	1
245	clear	Creamware	White	Transfer	Flow Blue	Chusan			Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Brown	OSS131			Saucer	Tableware	1	0
245	clear	Creamware	White	relief					Jug	Tableware	6	1
245	clear	Creamware	White	Transfer	Maroon	OSS185			Saucer	Tableware	1	0
245	clear	Creamware	White	Transfer	Blue	OSS188			Saucer	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	OSS189			Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	OSS128			Saucer	Tableware	45	5
360	clear	Creamware	White	Transfer	Green	Shamrock			Teacup	Tableware	1	0
360	brown	Earthenware							Container	kitchenware	1	1
330	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	1	0
330	clear	Creamware	White	handpainted	Blue	Banded			Plate	Tableware	1	1
330	clear	Creamware	White						Plate	Tableware	1	0

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
330	clear	Creamware	White						Teacup	Tableware	1	0
330	clear	Creamware	White						Bell	Household	1	1
330	clear	Creamware	White	Transfer	Brown	OSS190			Saucer	Tableware	1	1
381	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
381	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Plate	Tableware	2	0
381	clear	Creamware	White	handpainted	Blue	Banded			Teacup	Tableware	1	0
381	clear	Creamware	White	Transfer	Blue	OSS128			Teacup	Tableware	1	0
381	clear	Creamware	White	Transfer	Blue	OSS191			Plate	Tableware	1	1
381	clear	Creamware	White	Transfer	Black	OSS192			Plate	Tableware	1	1
381	clear	Creamware	White	Transfer	Grey	OSS193			Teacup	Tableware	1	1
245	clear	Creamware	White	handpainted	Gilt	Tealeaf			Teacup	Tableware	1	1
245	clear	Semi-Vitreous	White	handpainted	Gilt	Tealeaf			Teacup	Tableware	2	2
245	clear	Creamware	White	Transfer	Maroon	Dagmar			Saucer	Tableware	1	0
245	clear	Creamware	White	handpainted	Blue	Banded			Teacup	Tableware	5	2
245	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	2	1
245	clear	Creamware	White	handpainted	Blue	Banded			Dinner Plate	Tableware	3	1
245	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	1	1
245	clear	Creamware	White	handpainted	Blue	Banded			Dinner Plate	Tableware	2	1
245	clear	Creamware	White	handpainted	Blue	Banded			Side Plate	Tableware	1	1
245	clear	Creamware	White	handpainted	Brown	Banded			Saucer	Tableware	4	1
245	clear	Creamware	White	handpainted	Brown	Banded			Teacup	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	Albion			Plate	Tableware	2	1
245	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Dinner Plate	Tableware	3	1
245	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants	Pinder Bourne & Co	1862-1882	Dinner Plate	Tableware	6	1
245	clear	Creamware	White	Transfer	Blue	Asiatic Pheasants			Side Plate	Tableware	4	0
245	clear	Creamware	White	Transfer	Black	Ionic			Chamber Pot	Bathroom/Bedroom	1	1
245	clear	Creamware	White	Transfer	Brown	OSS164			Bowl	Tableware	1	0
245	clear	Creamware	White	Transfer	Green	Leicester	Burgess & Leigh	1900+	Dinner Plate	Tableware	11	2

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
245	clear	Creamware	White	Transfer	Grey	Rhine			Dinner Plate	Tableware	2	0
245	clear	Creamware	White	Transfer	Grey	Rhine			Side Plate	Tableware	5	1
245	clear	Creamware	White	Transfer	Dark Brown	Chios			Side Plate	Tableware	3	1
245	clear	Creamware	White	Transfer	Purple	OSS132			Washbowl	Bathroom/Bedroom	1	0
245	clear	Creamware	White	Transfer	Black	Kew			Washbowl	Bathroom/Bedroom	9	0
245	clear	Creamware	White	handpainted	Pink/Gilt	Banded			Side Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Red	OSS157			Saucer	Tableware	1	0
245	clear	Creamware	White	Transfer	Green	OSS120			Teacup	Tableware	1	0
245	clear	Creamware	White						Brood Egg	Household	2	0
245	clear	Creamware	White	Transfer	Blue	OSS172			Chamber Pot	Bathroom/Bedroom	12	0
245	clear	Creamware	White	Transfer	Blue	Leon	j & g meakin hanley england	c1890+	Dinner Plate	Tableware	22	1
245	clear	Creamware	White	Transfer	Blue	Leon	j & g meakin hanley england	c1890+	Side Plate	Tableware	10	1
245	clear	Blueware	Blue	Relief		OSS160			Jug	Tableware	1	0
245	clear	Creamware	White	Transfer	Dark Blue	OSS134			Plate	Tableware	1	0
245	clear	Creamware	White	Transfer	Black	OSS194			Plate	Tableware	3	1
245	clear	Creamware	White	Handpainted/Transfer	Black/orange/gilt				Jug	Tableware	7	1
245	brown	Earthenware	Brown						Teapot	Tableware	7	0
245	clear	Creamware	White	Transfer	Green	OSS163			Child's Mug	Tableware	1	0
245	clear	Creamware	White	Transfer	Black	Franklin's Maxims			Child's Mug	Tableware	1	0
245	clear	Creamware	White						Candle Holder	Household	1	1
245	clear	Creamware	White	handpainted	Blue/gilt	OSS195			Ornamental Jug	Household	1	1
245	clear	Creamware	White	Transfer	Green	OSS196			Plate	Tableware	1	1
245	clear	Creamware	White	Transfer	Blue	OSS197			Teacup	Tableware	3	1
245	clear	Creamware	White	Relief		OSS198	mellor, taylor & co	1880-1904	Dinner Plate	Tableware	10	1
245	clear	Semi-Vitreous	White	handpainted	Green/gilt	Banded			Teacup	Tableware	4	1
245	clear	Creamware	White						various	various	18	0
245	clear	Semi-Vitreous	White						various	various	3	0
245	clear	Creamware	White						Container	Kitchenware	5	3
245	clear	Creamware	White						Cheese Pot	Kitchenware	1	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
245	clear	Creamware	White						Cheese Pot	Kitchenware	2	1
245	clear	Earthenware	fawn						Cheese Pot	Kitchenware	1	1
251	clear	Creamware	White	handpainted	Blue	Banded			Saucer	Tableware	1	0
251	brown	Earthenware	Brown						Teapot	Tableware	1	0
241	brown	Earthenware	Brown						Teapot	Tableware	2	0
247	clear	Creamware	White	handpainted	Brown	Banded			Saucer	Tableware	1	0
247	clear	Creamware	White	Transfer	Maroon	Dagmar			Saucer	Tableware	1	0
247	clear	Creamware	White						Teacup	Tableware	1	0
247	clear	Creamware	White	Transfer	Blue	Willow			Egg Cup	Tableware	1	1
460	clear	Creamware	White	Transfer	Blue	Willow			Dinner Plate	Tableware	4	1
460	clear	Creamware	White	Transfer	Blue	Willow			Side Plate	Tableware	4	1
460	clear	Creamware	White	Transfer	Blue	OSS199			Teacup	Tableware	1	1
545		Creamware	White						Mineral Water Marble	Household	1	1
203	clear	Creamware	White	Transfer	Blue	Willow			Dinner Plate	Tableware	5	1
203	clear	Creamware	White	Transfer	Black	Rhine			Serving Dish	Tableware	1	1
203	yellow	Earthenware	Yellow						Bakng Dish	Kitchenware	2	0
203	clear	Creamware	White	Transfer	Blue	Rhine			Dinner Plate	Tableware	2	1
203	clear	Creamware	White	Transfer	Green	Ionic			Saucer	Tableware	1	1
203	clear	Creamware	White	Transfer	Blue	Formosa			Saucer	Tableware	1	1
203	clear	Creamware	White	Transfer	Blue	OSS200			Saucer	Tableware	1	1
203	clear	Creamware	White	Relief/handpainted	Black	OSS201			Child's Plate	Tableware	1	1
203	clear	Creamware	White	Transfer	Purple	OSS185			Teacup	Tableware	2	1
203	clear	Creamware	White	Transfer	Black	OSS202			Teacup	Tableware	1	1
203	clear	Creamware	White	Transfer	Black	OSS203			Teacup	Tableware	1	1
203	clear	Creamware	White						Kitchen Bowl	kitchenware	1	0
203	clear	Creamware	White	Transfer	Purple	OSS204			Teacup	Tableware	2	1
203	clear	Creamware	White	Transfer	Brown	OSS205			Plate	Tableware	1	1
203	clear	Creamware	White	Transfer	Purple	OSS206			Teacup	Tableware	1	1
203	clear	Creamware	White	handpainted	Blue	Banded			Plate	Tableware	1	0
203	clear	Creamware	White						various	various	4	0

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
203	clear	Creamware	White	Relief		OSS139			Plate	Tableware	1	0
203	clear	Creamware	White	Transfer	Dark Blue	OSS138			Plate	Tableware	1	0
537	yellow	Earthenware	Yellow						Baking Dish	kitchenware	11	1
272	clear	Creamware	White	Transfer	Black	Udina			Teacup	Tableware	2	1
272	clear	Creamware	White	Transfer	Black	Udina			Saucer	Tableware	3	1
272	clear	Creamware	White						Toothpaste/Ointment	Bathroom/Bedroom	3	1
272	clear	Creamware	White	handpainted	Blue	Banded			Chamber Pot	Bathroom/Bedroom	1	1
272	clear	Creamware	White						various	various	3	0
272	clear	Creamware	White	Transfer	Blue	OSS189			Plate	Tableware	1	0
272	clear	Creamware	White	Transfer	Blue	OSS207			Saucer	Tableware	1	1
537	clear	Creamware	White	Transfer	Blue	Athens			Teacup	Tableware	7	1
537	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	2	0
537	clear	Creamware	White	Transfer	Blue	OSS128			Teacup	Tableware	2	1
537	clear	Creamware	White	Transfer	Blue	OSS128			Saucer	Tableware	3	0
537	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Saucer	Tableware	1	0
537	clear	Creamware	White	Transfer	Grey	Rhine			Dinner Plate	Tableware	2	0
537	clear	Creamware	White	Transfer	Blue	Rhine			Plate	Tableware	1	0
537	clear	Creamware	White	Transfer	Brown	OSS208			Plate	Tableware	1	1
537	clear	Creamware	White	Transfer	Blue	OSS005			Saucer	Tableware	1	1
537	clear	Creamware	White						various	various	5	0
537	clear	Creamware	White	handpainted	fawn/brown	Cornishware			Bowl	Kitchenware	1	1
537	clear	Creamware	White	Transfer	Blue	OSS209			Plate	Tableware	1	1
537	clear	Creamware	White	Transfer	Dark Blue	OSS210			Teacup	Tableware	1	1
537	clear	Creamware	White	Transfer	Blue	OSS146			Chamber Pot	Bathroom/Bedroom	1	0
537	clear	Creamware	White	handpainted	green/blue/black/red	OSS215			Teacup	Tableware	4	1
537	clear	Creamware	White	Transfer	Black	OSS211			Dish Lid	Tableware	1	1
537	clear	Creamware	White	Transfer	Blue	OSS212			Teapot Lid	Tableware	1	1
227	clear	Creamware	White	Transfer	Blue	Willow			Plate	Tableware	3	1
227	clear	Creamware	White	handpainted	Blue	Shell Edge			Plate	Tableware	2	1

Appendices

Context	Glaze	Category	Base Colour	Technique	Pattern Colour	Pattern	Makers Mark	Date	Form	Function	NISP	MNV
227	clear	Creamware	White	Transfer	Maroon	Dagmar	Hope & Carter	1862-1880	Saucer	Tableware	4	1
227	clear	Creamware	White	Transfer	Blue	Morea			Plate	Tableware	1	1
227	clear	Creamware	White						various	various	10	0
227	clear	Creamware	White	Transfer	Blue	OSS213			Plate	Tableware	1	1
227	clear	Creamware	White	Transfer	Grey/Black	OSS049			Bowl	Tableware	1	1
227	clear	Creamware	White	Transfer	Dark Blue	OSS138			Plate	Tableware	1	0
227	clear	Creamware	White	Transfer	Dark Blue	Coral			Teacup	Tableware	1	1
227	clear	Creamware	White	Transfer	Blue	OSS128			Saucer	Tableware	7	0
227	clear	Creamware	White	Transfer	Blue	OSS128			Saucer	Tableware	1	0
227		Creamware	White	handpainted	black/blue				Doll Leg	Household	1	1
unprov	clear	Semi-Vitreous	White	Sprigged	Purple	ICC027			Teacup	Tableware	1	0
unprov	clear	Creamware	White						Plate	Tableware	2	0
223	yellow glass	Earthenware		Incised		OSS214			Container	Kitchenware	9	1
											2580	541

APPENDIX 4 – STONEWARE

Context	Form	Function	Colour	Marks	Height	Base/Width	NISP	MNI	mark	Date	Fragment
112	Bottle	Unidentified	Brown				1	0			
118	Bottle	Unidentified	Brown				1	0			
125	Lid	Household	Cream				2	1	Context		wide mouth 10.5cm
125	Bottle	Unidentified	Brown				3	0			part base/body
125	Blacking	Household	Brown		125	59	1	1			complete
125	Bottle	Unidentified					3	0			
133	Penny Ink	Household					15	1			in pieces
104	Bottle	Unidentified	Cream				1	0			
103	Bottle	Unidentified	Cream				2	0			
314	Beer	Alcohol	Cream				1	1			part base/body
547	Ginger Beer	Beverage	Cream				1	1			body fragment
547	Blacking	Household				67	1	1			base part body
547	Crock/Flagon	Household	Brown				1	1			body fragment
547	Bottle	Unidentified	Cream				1	0			body fragment
242	Oyster Jar	Food	Cream				1	1	stephen green imperial potteries lambeth	c1820- 1858	body fragment
468/245/241	Penny Ink	Household	Speckled		46	49	1	1			
203	Blacking	Household	fawn			68	2	1			
203	Ginger Beer	Beverage	Cream				1	1			part base and body
241	Ink	Household	Brown			45	1	1			part base and body
241	Blacking	Household	Brown				1	0			rim
241	Ink	Household	Cream			65	1	1			base part body
241	Ink	Household	Cream				1	0			rim
241	Ink	Household	Brown			59	1	1			base part body
241	Bottle	Unidentified	Brown			68	1	1			base part body
241	Bottle	Unidentified	Brown			68	1	1			base part body
241	Bottle	Unidentified	Brown			68	1	1			base part body
241	Bottle	Unidentified	Brown			68	1	1			part base and body
241	Ginger Beer	Beverage	tan/cream				1	0			body fragment
241	Ginger Beer	Beverage	Brown				1	0			rim
241	Penny Ink	Household	Brown		45	49	1	1			complete
241	Bottle	Unidentified	Brown			68	1	1			

Appendices

Context	Form	Function	Colour	Marks	Height	Base/Width	NISP	MNI	mark	Date	Fragment
241	Blacking	Household	Brown			65	1	1	vitreou..warran../j. bou../patentees/denby & codnor park pottery/near denby	1819- 1907	
241	Ginger Beer	Beverage			164	64	1	1			complete
251	Penny Ink	Household	Brown		50	45	1	1			complete
545	Penny Ink	Household	Brown		52	48	1	1			complete
545	Bottle	Unidentified	Brown				1	0			body fragment
545	Drain	Services	cream/tan				2	1			
545	Ginger Beer	Beverage	Dark Brown				1	1			
545	Ginger Beer	Beverage	Brown				1	1			
242	Blacking	Household	Brown		128	59	1	1			
546	Inspection Lid	Services	tan				1	1			144 wide, 3 finger holes
330	Bottle	Unidentified	Brown				1	0			fragment
468	Beer	Alcohol	cream/tan			89	1	1			base part body
468	Penny Ink	Household	Brown		52	49	1	1			complete
468	Penny Ink	Household	Brown		51	48	1	1			complete
468	Penny Ink	Household	Brown		55	50	1	1			complete
468	Master Ink	Household	cream		129	21	1	1	price bristol	c1820- 1906	almost complete
251	Bottle	Unidentified	Brown				1	0			
251	Penny Ink	Household	Brown		49	45	1	1			complete
251	Penny Ink	Household	grey/fawn		49	43	1	1			complete
546	Penny Ink	Household	fawn		47	47	1	1			almost complete
241	Master Ink	Household			128	51	1	1			complete
545	Blacking	Household			57		1	1			base part body
203	Blacking	Household	Brown				2	0			part rim
203	Bottle	Unidentified	cream				1	0			body fragment
203	Drain	Services	tan				1	0			
203	Container	Household	brown/fawn				3	1			
203	Oyster Jar	Food	cream/tan			84	1	1	doulton & watts lambeth pottery	1815- 1858	
272	Bottle/Jar	Unidentified	cream/brown				1	0			body fragment
272	Bottle	Unidentified	brown				1	0			body fragment
537	Blacking	Household	brown				5	1			

Appendices

Context	Form	Function	Colour	Marks	Height	Base/Width	NISP	MNI	mark	Date	Fragment
537	Oyster Jar	Food	cream/tan				7	1			
537	Ginger Beer	Beverage	brown				2	1			rim, neck, shoulder
537	Beer	Alcohol	grey			75	1	1			part base and body
537	Bottle	Alcohol	tan				1	1			rim
478	Cider	Alcohol	cream/tan		120	83	1	1	powell bristol	c1820-1906	complete
227	Penny Ink	Household	brown		48		1	1			almost complete
227	Penny Ink	Household	brown				1	1			rim part body
227	Ginger Beer	Beverage	cream				1	1			part base and body
105	Grease/Blacking	Household	brown		170	76	1	1	stiff lambeth K	1843-1863	complete
105	Penny Ink	Household	brown			46	1	1			almost complete
105	Ginger Beer	Beverage	grey/brown			72	7	1			part base, body and rim
105	Ginger Beer	Beverage	grey				1	1			rim, part shoulder
105	Ginger Beer	Beverage	cream				7	1			part base, body, rim
105	Blacking	Household	brown			58	2	1			part base, part rim
105	Blacking	Household	brown				2	0			rim, part shoulder
105	Blacking	Household	brown				2	0			part rim, body fragment
105	Blacking	Household	brown				1	0			part rim
105	Ginger Beer	Beverage	brown				2	1			part base and body
105	Blacking	Household	brown			61	1	1			part base and body
105	Ginger Beer	Beverage	fawn				1	0			part rim
105	Oyster Jar	Household	cream/tan				2	1			rim, part body
105	Ginger Beer	Beverage	fawn				2	1			rim, part body
105	Ginger Beer	Beverage	brown				1	0			part rim, shoulder
105	Oyster Jar	Household	cream/tan				1	1			body fragment
105	Ginger Beer	Beverage	cream				1	0			shoulder
105	Container	Household	cream				4	1			part rim, body fragment
105	Blacking	Household	brown				1	1	sti../london	1843-1863	part base and body
105	Ginger Beer	Beverage	brown/fawn				1	1			part shoulder
105	Beer	Alcohol	cream				1	1			part base and body

Appendices

Context	Form	Function	Colour	Marks	Height	Base/Width	NISP	MNI	mark	Date	Fragment
105	Ginger Beer	Beverage	tan/cream				3	1			part rim, body fragment
105	Unidentified	Unidentified	brown				7	0			body fragment
105	Unidentified	Unidentified	fawn				5	0			body fragment
105	Unidentified	Unidentified	cream				4	0			body fragment
105	Jug	Household	brown				5	1			body fragment
105	Bowl	Household	brown	incised			7	1			body fragment
105	Jar	Household	yellow				1	1			body fragment
105	Container/Planter	Household	brown				1	1			body fragment
							180	70			

APPENDIX 5 – GLASSWARE

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Black Beer			89		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			78		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			75		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			61		part base and body	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					part base	1	1	dark olive green			
105	Alcohol	Black Beer					part base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					body fragments	8	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim/neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			part rim	2	0	dark olive green			
105	Alcohol	Black Beer		collar band			part rim	1	0	dark olive green			
105	Alcohol	Black Beer					part base	1	1	dark olive green			
105	Alcohol	Black Beer					part base	1	1	dark olive green			
105	Alcohol	Case Gin					body fragments	3	0	dark olive green			
105	Household	Window					fragments	2	0	aqua			
105	Alcohol	White Wine/Brandy					part base	1	1	pale green			
105	Household	Drinking Glass					fragments	1	0	clear			
105	Food	Fruit/Jam					part base	1	1	clear			
105	Food	Pickle					body fragments	1	0	aqua			
105	Water	Mineral Water/Soda	hamilton's				part body	1	1	aqua	..ance/..r of/..ttles of/..description/..n street/..n ec	c1860s	roberto france
105	Unidentified	Bottle					body fragments	2	0	aqua			
105	Food	Salad Oil					body fragments	1	0	clear			
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			88		base part body	1	1	dark olive green	p		skewed kickup with mamelon

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical pickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical pickup
105	Alcohol	Black Beer					part base and body	1	1	dark olive green	c		small size
105	Alcohol	Black Beer					1/2 base	1	1	dark olive green			
105	Alcohol	Black Beer			76		2/3 base	1	1	dark olive green			
105	Alcohol	Black Beer					part base	1	0	dark olive green			
105	Alcohol	Black Beer					part base	1	0	dark olive green			
105	Alcohol	Black Beer					body fragments	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim, part neck	1	0	dark olive green			
105	Alcohol	Wine		collar			rim, neck	1	0	olive green			small bottle
105	Food	Salad Oil			45		base part body	1	0	aqua			
105	Food	Salad Oil		collar skirt			rim, neck	1	1	aqua			
105	Food	Salad Oil		collar skirt			rim, neck	1	1	aqua			
105	Food	Salad Oil		collar skirt			rim, neck	2	1	aqua			
105	Food	Salad Oil	half chevron				body fragments	1	0	aqua			
105	Food	Pickle					body fragments	3	0	aqua			
105	Food	Oil					body fragments	1	0	aqua			
105	Food	Pickle			75		part base and body	1	1	aqua			round
105	Household	Window					fragments	1	0	aqua			
105	Household	Window	Privacy				fragments	2	1	aqua			ridged on one side
105	Food	Pickle	collar		60x60	235	complete	1	1	aqua	B & A		
105	Alcohol	Black Beer			75		almost complete	1	1	dark olive green			conical pickup
105	Alcohol	Black Beer			63		almost complete	1	1	dark olive green			shallow dome with mamelon
105	Alcohol	Black Beer			85		base	1	1	dark olive green			conical pickup
105	Alcohol	Black Beer			76		base half body	1	1	dark olive green			conical pickup

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Black Beer			64		base half body	1	1	dark olive green			shallow dome with mamelon
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			78		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			84		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			75		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			84		3/4 base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			77		base part body	1	1	dark olive green			layered dome
105	Alcohol	Black Beer			78		base part body	1	1	dark olive green			skewed kickup
105	Alcohol	Black Beer			65		base part body	1	1	dark olive green			shallow dome with mamelon
105	Alcohol	Black Beer					part base	1	0	dark olive green			
105	Alcohol	Black Beer					part base	1	0	dark olive green			
105	Alcohol	Black Beer					body fragments	5	0	dark olive green			
105	Food	Pickle			60x60		base part body	1	1	aqua			
105	Food	Pickle					rim, neck	1	0	aqua			
105	Food	Salad Oil		cone collar			rim, neck	1	1	aqua			
105	Food	Pickle					part base	1	1	aqua			
105	Food	Preserves					part rim	1	1	aqua			
105	Household	Drinking Glass					part base and body	1	1	clear			
105	Household	Window	Privacy				fragments	1	1	amber			floral on one side
105	Alcohol	Black Beer			77		base part body	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			90		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			86		base	1	1	dark olive green			domed kickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			77		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			79		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			79		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			78		base	1	1	dark olive green			domed kickup

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Black Beer			65		base part body	1	1	dark olive green			shallow dome with mamelon
105	Alcohol	Black Beer			88		2/3 base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer					part base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					part base	1	0	dark olive green			conical kickup
105	Alcohol	Black Beer					body fragments	9	0	dark olive green			
105	Alcohol	Black Beer		collar			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			rim	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim	1	0	dark olive green			
105	Alcohol	Wine					part base	1	1	olive green			
105	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
105	Alcohol	Wine		ring seal			part rim	1	0	olive green			
105	Alcohol	White Wine/Brandy		ring seal			part rim	1	0	pale green			
105	Alcohol	White Wine/Brandy			75		base	1	1	pale green			
105	Household	Drinking Glass					part base and body	1	1	clear			plain
105	Household	Drinking Glass					part base and body	1	1	clear			panelled
105	Household	Window					fragments	2	0	aqua			
105	Alcohol	Unidentified					part base	1	1	green			
105	Food	Salad Oil					part base and body	1	0	aqua			
105	Unidentified	Bottle					body fragments	3	0	aqua			
105	Household	Window	Fanlight				fragments	4	1	emerald			
105	Unidentified	Bottle					part base	1	0	clear			oval?
105	Unidentified	Bottle					body fragments	1	0	blue aqua			
105	Alcohol	Black Beer			86		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			86		base	1	1	dark olive green			conical kickup

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Black Beer			89		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			89		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			75		base	1	1	dark olive green			domed kickup
105	Alcohol	Black Beer			74		base part body	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			66		base part body	1	1	dark olive green			domed kickup
105	Alcohol	Black Beer			62		2/3 base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					neck	1	0	dark olive green			
105	Alcohol	Case Gin			59x59		base	1	1	dark olive green			
105	Alcohol	Case Gin					body fragments	1	0	dark olive green			
105	Alcohol	Schnapps					body fragments	1	1	green			
105	Food	Pickle					part base	1	1	aqua			
105	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
105	Alcohol	Black Beer		collar skirt			rim	1	0	dark olive green			
105	Alcohol	Black Beer		waisted collar			rim	1	0	dark olive green			
105	Alcohol	Black Beer					body fragments	4	0	dark olive green			
105	Alcohol	White Wine/Brandy					part base	2	1	pale green			
105	Alcohol	White Wine/Brandy					body fragments	2	0	pale green			
105	Water	Mineral Water/Soda	hamilton's				body fragments	1	1	aqua			plain
105	Food	Oil	fluted				body fragments	1	0	aqua			
105	Food	Oil			50		base	1	1	aqua			
105	Food	Salad Oil					part rim	1	0	aqua			
105	Food	Oil					part rim	1	0	aqua			
105	Household	Window	Fanlight				fragments	1	1	amethyst			
105	Household	Window	Fanlight				fragments	4	1	emerald			

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Household	Window	Fanlight				fragments	4	1	emerald			
105	Household	Window	Fanlight				fragments	2	1	emerald			
105	Household	Window	Fanlight				fragments	4	1	emerald			
105	Household	Window	Decorative				fragments	1	1	clear			
105	Household	Window	Decorative				fragments	1	1	clear			
105	Alcohol	Black Beer			89		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			90		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			76		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			88		base	1	1	dark olive green			layered conical kickup with circular point
105	Alcohol	Black Beer			77		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					1/2 base	1	0	dark olive green			conical kickup
105	Alcohol	Black Beer					1/2 base	1	0	dark olive green			shallow conical
105	Alcohol	Black Beer					part base	1	0	dark olive green			conical kickup
105	Alcohol	Black Beer					part base	1	0	dark olive green			conical kickup
105	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar band			rim	1	0	dark olive green			
105	Alcohol	Black Beer					body fragments	8	0	dark olive green			
105	Alcohol	Black Beer		collar band			part rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar skirt			part rim	1	0	dark olive green			
105	Pharmaceutical	Castor Oil					part base	1	1	cobalt			
105	Alcohol	White Wine/Brandy			80		base part body	1	1	pale green			
105	Alcohol	White Wine/Brandy			72		base	1	1	pale green			
105	Alcohol	Case Gin		pig snout			part rim	1	0	dark olive green			
105	Alcohol	White Wine/Brandy					body fragments	1	0	pale green			
105	Household	Drinking Glass			65		base	1	1	clear			8-sided
105	Household	Drinking Glass			65		base	1	1	clear			

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Household	Drinking Glass					part base and body	1	1	clear			panelled
105	Food	Salad Oil					rim, neck	1	1	aqua			
105	Food	Salad Oil					rim, neck	1	1	aqua			
105	Household	Drinking Glass					part base	1	1	clear			small diameter base
105	Household	Window	Fanlight				fragments	3	0	emerald			
107	Alcohol	Black Beer					body fragments	1	0	dark olive green			
107	Household	Drinking Glass					body fragments	1	0	clear			
109	Alcohol	Black Beer					body fragments	2	0	dark olive green			
109	Alcohol	Case Gin					body fragments	1	0	dark olive green			
109	Household	Window					fragments	1	0	clear			
114	Alcohol	Black Beer					body fragments	1	0	dark olive green			
118	Household	Drinking Glass					body fragments	1	0	clear			
120	Alcohol	Black Beer					body fragments	2	0	dark olive green			
120	Alcohol	Wine					part base	1	1	olive green			
105	Alcohol	Black Beer					body fragments	26	0	dark olive green			
105	Alcohol	Black Beer		cone collar skirt			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer			80		base part body	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			75		base part body	1	1	dark olive green			shallow dome with mamelon
105	Alcohol	Black Beer			74		base part body	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer			85		base	1	1	dark olive green	richd cooper & co portobello		
105	Alcohol	Black Beer			85		base	1	1	dark olive green			conical kickup
105	Alcohol	Black Beer					part base	2	1	dark olive green			
105	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
105	Alcohol	Black Beer		collar			rim	1	0	dark olive green			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
105	Alcohol	Wine					body fragments	2	0	green			
105	Alcohol	Case Gin					body fragments	3	0	dark olive green			
105	Alcohol	Case Gin			62x62		base	1	1	dark olive green			small square offset pontil mark
105	Food	Salad Oil		collar			rim, neck	1	1	aqua			
105	Food	Salad Oil					base	1	0	aqua	reg lozenge -8 sept 1846 parcel 1		registered by anthony thatcher, yorkshire bottle co, pontefract
105	Household	Window					fragments	5	1	aqua			
105	Water	Mineral Water/Soda					body fragments	1	1	aqua	..rey	1874+	
105	Household	Wine Glass	Stemmed				base part stem	2	1	clear			
105	Household	Drinking Glass					body fragments	2	0	clear			
105	Household	Jar					part rim	1	1	clear			
105	Household	Stopper					peg	1	1	aqua			
105	Food	Salad Oil					part base	1	0	aqua			
105	Food	Salad Oil		collar skirt			part rim, neck	1	1	aqua			large bottle
105	Food	Vinegar			58x48		base	1	1	aqua			diamond cross-sectopn
105	Pharmaceutical	Medicine		pressed			rim, neck	1	0	blue aqua			
105	Pharmaceutical	Medicine	Pill/Powder	pressed	19	51	almost complete	1	1	clear			
105	Household	Vase					body fragments	1	1	clear			plain rim, large nipple body
105	Household	Window	Fanlight				fragments	1	1	mulberry			
105	Food	Coffee			51x51	212	complete	1	1	aqua	symington & co/ess coffee & chicory/edinburgh		
105	Household	Jug?					part handle	1	1	orangey-red/milk			
143	Alcohol	Case Gin					body fragments	1	0	olive green			very small fragment

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
162	Food	Salad Oil	herringbone				body fragments	1	0	aqua			
162	Household	Drinking Glass					body fragments	1	0	clear			
162	Household	Window					fragments	1	0	aqua			
162	Household	Window	plate				fragments	1	1	aqua			5mm thick
157	Unidentified	Bottle					body fragments	1	0	aqua			
155	Household	Window	plate				fragments	1	1	aqua			7mm thick
155	Household	Drinking Glass					body fragments	2	0	clear			
122	Alcohol	Black Beer			89		base part body	1	1	dark olive green			
122	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
122	Alcohol	Black Beer					body fragments	3	0	dark olive green			
122	Alcohol	White Wine/Brandy			74		base part body	1	1	pale green			
122	Food	Salad Oil	genie				part base and body	6	0	aqua			
122	Food	Vinegar					part base and body	2	1	aqua			
125	Alcohol	Black Beer			76		base	1	1	dark olive green			conical kickup
125	Alcohol	Black Beer					3/4 base	1	1	dark olive green			conical kickup
125	Alcohol	Black Beer			63		base	1	1	dark olive green			domed kickup with mamelon
125	Alcohol	Black Beer			74		1/2 base	1	1	dark olive green			shallow dome with mamelon
125	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
125	Alcohol	Black Beer					neck	1	0	dark olive green			
125	Alcohol	Black Beer		collar skirt			rim	2	0	dark olive green			
125	Alcohol	Black Beer					body fragments	2	0	dark olive green			
125	Alcohol	Case Gin					body fragments	1	0	dark olive green			
125	Household	Drinking Glass					body fragments	2	0	clear			
125	Pharmaceutical	Castor Oil					body fragments	1	0	cobalt			

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
125	Food	Pickle			74		part base and body	2	1	aqua			round
125	Food	Pickle					3/4 base	1	1	aqua			round
125	Food	Pickle					3/4 base	1	1	aqua			square
125	Food	Pickle			57x41		base part body	3	1	aqua			rectangular
125	Food	Salad Oil					part rim	1	0	aqua			
125	Household	Stopper					complete	1	1	aqua	george whybrow	1825-1873	
104	Alcohol	Black Beer		collar band			rim	1	0	dark olive green			
104	Alcohol	Black Beer					body fragments	5	0	dark olive green			
104	Pharmaceutical	Castor Oil					body fragments	1	0	cobalt			
104	Household	Window	Fanlight				fragments	1	0	emerald			
104	Pharmaceutical	Medicine					part base	1	1	blue aqua			oval
104	Household	Stopper					complete	1	1	aqua	lea & perrins		
104	Unidentified	Bottle					body fragments	9	0	aqua			
104	Pharmaceutical	Medicine					rim, neck	1	1	clear			
104	Water	Mineral Water/Soda	Codd				rim	1	1	green			
103	Food	Sauce					rim, neck	1	1	aqua			
103	Food	Pickle					part base	1	1	aqua			
103	Alcohol	Wine					part base	1	1	green			
103	Unidentified	Bottle					body fragments	23	0	aqua			
547	Food	Salad Oil					rim, neck	1	0	aqua			
547	Alcohol	White Wine/Brandy					rim, neck	1	0	pale green			
547	Household	Stopper					complete	1	1	aqua			
547	Unidentified	Bottle					body fragments	1	0	aqua			
545	Alcohol	Case Gin			65x64		base	1	1	dark olive green			
545	Alcohol	Case Gin					part base and body	2	1	dark olive green			
545	Alcohol	Case Gin					part base and body	1	1	dark olive green			

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
545	Alcohol	Case Gin		cone collar			rim, neck part body	1	0	dark olive green			
545	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
545	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
545	Alcohol	Schnapps		cone collar			rim, neck	1	0	dark olive green			
545	Alcohol	Schnapps			55x54		base part body	1	1	dark olive green	..ic/...pps		cross on base
545	Alcohol	White Wine/Brandy			73		base	1	1	pale green			
545	Alcohol	Black Beer			85		base	1	1	dark olive green			shallow dome with 3 mamelon in line
545	Alcohol	Black Beer					part base	1	1	dark olive green			shallow dome
545	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
203	Household	Window	Fanlight				fragments	1	1	plum			
434	Household	Stopper					complete	1	1	aqua			plain
434	Alcohol	Case Gin					body fragments	1	0	dark olive green			
468/245/241	Alcohol	Case Gin			64x64		base part body	1	1	dark olive green			
468/245/241	Alcohol	Case Gin			64x65		base part body	1	1	dark olive green			
468/245/241	Alcohol	Black Beer			85		base	1	1	dark olive green			conical kickup
468/245/241	Food	Salad Oil	half whirly		45		base most body	1	1	aqua			
468/245/241	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
468/245/241	Household	Drinking Glass	tumbler		53		base part body	1	1	clear			11-sided
468/245/241	Household	Dish	pressed				base	1	1	clear			
203	Water	Mineral Water/Soda	hamilton's				base	2	1	aqua			
203	Water	Mineral Water/Soda	hamilton's				base	1	1	aqua			
203	Water	Mineral Water/Soda	hamilton's				base	1	1	aqua			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
203	Water	Mineral Water/Soda	hamilton's				base part body	1	1	aqua			
203	Alcohol	Case Gin			57x57		base	1	1	dark olive green			
203	Alcohol	Case Gin			49x49		base	1	1	dark olive green			
203	Alcohol	Case Gin			52x51		base	1	1	dark olive green			
203	Alcohol	Case Gin			58x56		base part body	1	1	dark olive green			
203	Alcohol	Case Gin			49x48		base part body	1	1	dark olive green			
203	Alcohol	Case Gin					3/4 base	1	1	dark olive green			
203	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
203	Alcohol	Case Gin		cone collar			part rim, neck	1	0	dark olive green			
203	Alcohol	Case Gin		cone collar			rim, neck, shoulder	1	0	dark olive green			
203	Alcohol	Schnapps					body fragments	1	1	olive green	...fe's	1863+	
203	Alcohol	Schnapps		cone collar			rim, neck, shoulder	1	0	olive green			
203	Alcohol	Black Beer			73		3/4 base	1	1	dark olive green			conical pickup
203	Alcohol	Black Beer			81		base	1	1	dark olive green			conical pickup
203	Alcohol	Black Beer			75		base part body	1	1	dark olive green			shallow dome with central mamelon
203	Alcohol	Black Beer					part base	1	1	dark olive green			
203	Alcohol	White Wine/Brandy		ring seal			part rim, neck	1	0	pale green			
203	Alcohol	White Wine/Brandy		ring seal			rim	1	0	pale green			
203	Alcohol	White Wine/Brandy					body fragments	1	0	pale green			
203	Food	Salad Oil	half chevron				part base and body	1	1	aqua			
203	Food	Salad Oil	half chevron				base part body	1	1	aqua			
203	Food	Pickle					part base and body	1	1	aqua			round
203	Food	Pickle					body fragments	1	0	aqua			rect-sq

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
203	Unidentified	Bottle					part base	1	0	aqua			
203	Food	Salad Oil	half whirly		44	241	complete	1	1	aqua			
203	Food	Milk					part base	1	1	clear	creamery...ge mfg co/chicago/imperial measure/2ideal	c1903- c1907	
203	Pharmaceutical	Bovril				76	complete	1	1	amber	2oz bovril rd 100848//2oz bovril limited	1888+	
203	Household	Machine Oil			50x24		complete	1	1	aqua	The singer manufacturing company//extra quality machine oil	1851+	
203	Household	Stopper					complete	1	1	aqua	h. olson	1870+	
203	Household	Stopper					complete	1	1	aqua			plain
241	Alcohol	Case Gin			66x65		base part body	1	1	dark olive green			
241	Alcohol	Case Gin					body fragments	1	0	dark olive green			
241	Alcohol	Case Gin		pig snout			rim, neck	1	0	dark olive green			
241	Alcohol	Case Gin		pig snout			rim, neck	1	0	dark olive green			
241	Alcohol	Schnapps					part base and body	1	1	olive green	..lfe's/..m		
241	Water	Mineral Water/Soda	hamilton's				base	1	1	aqua			
241	Water	Mineral Water/Soda	hamilton's				body fragments	2	0	aqua			
241	Alcohol	White Wine/Brandy					rim, neck	1	0	pale green			
241	Household	Drinking Glass			62		base	1	1	clear			8-sided
241	Food	Worcestershire Sauce					rim, neck	1	0	aqua			
241	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
241	Alcohol	Wine					rim, neck	1	0	green			
241	Pharmaceutical	Medicine					part base and body	1	1	clear			
241	Pharmaceutical	Medicine			43x21		base part body	1	1	clear			
241	Food	Salad Oil			37		part base and body	1	1	aqua			
241	Food	Pickle					3/4 base	1	1	aqua			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
241	Food	Sauce			58		base part body	1	0	aqua			
241	Food	Unidentified					part base	1	0	aqua			
241	Food	Unidentified			72		base	1	1	aqua			
241	Food	Salad Oil					rim, neck	1	0	aqua			
241	Food	Unidentified					rim, neck	1	0	aqua			
241	Water	Mineral Water/Soda	hamilton's				almost complete	1	1	aqua			plain
241	Food	Salad Oil			54	245	complete	1	1	aqua			
241	Alcohol	Black Beer			88		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			79		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			84		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			89		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			87		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			77		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			87		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			88		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			87		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			91		base	1	1	dark olive green			high dome
241	Alcohol	Black Beer			89		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			73		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			78		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			77		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer					part base	1	1	dark olive green			
241	Alcohol	Black Beer					part base	1	1	dark olive green			
241	Alcohol	Black Beer			62		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			75		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			92		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			76		base	1	1	dark olive green			dome
241	Alcohol	Black Beer					part base	1	1	dark olive green			
241	Alcohol	Black Beer			64		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			62		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer					part base	1	1	dark olive green			
241	Alcohol	Black Beer			78		base	1	1	dark olive green			conical pontil
241	Alcohol	Black Beer			77		base	1	1	dark olive green			shallow dome with mamelon
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
241	Alcohol	Black Beer		collar skirt				1	0	dark olive green			
105	Alcohol	Black Beer			73		almost complete	1	1	dark olive green			layered conical kickup with circular point
251	Pharmaceutical	Castor Oil			41		almost complete	1	1	cobalt			
251	Pharmaceutical	Castor Oil			42		part base and body	1	1	cobalt			
251	Pharmaceutical	Castor Oil			41		base part body	1	1	cobalt			
251	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
251	Food	Pickle					part rim, neck	1	0	aqua			
251	Food	Salad Oil	half chevron		47		almost complete	1	1	aqua			
251	Alcohol	Whisky	flask		72x42		base part body	1	1	aqua			
251	Alcohol	Case Gin			65x65		base part body	1	1	dark olive green			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Alcohol	Whisky	flask				rim, neck	1	0	aqua			
251	Alcohol	White Wine/Brandy			78		base part body	1	1	pale green			
251	Alcohol	White Wine/Brandy			74		base part body	1	1	pale green			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Pharmaceutical	Castor Oil			41		base part body	1	1	cobalt			
251	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
251	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
251	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
251	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
251	Pharmaceutical	Castor Oil			40		base	1	1	cobalt			
251	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Food	Pickle					rim, neck	1	0	aqua			
251	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
251	Alcohol	White Wine/Brandy			77		base	1	1	pale green			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
251	Alcohol	Case Gin					part base	1	1	dark olive green			
251	Food	Pickle					part rim	1	0	aqua			
251	Food	Salad Oil					rim, neck	1	0	aqua			
251	Food	Worcestershire Sauce					rim, neck shoulder	1	0	aqua	worcestershire sauce		
251	Food	Salad Oil					rim, neck	1	0	aqua			
251	Food	Salad Oil					rim, neck	1	0	aqua			
251	Food	Salad Oil					rim, neck	1	0	aqua			
251	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
251	Pharmaceutical	Castor Oil					rim	1	0	cobalt			
251	Household	Egg Cup					fragments	1	1	milk			
251	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
251	Food	Vinegar	dimple				body fragments	1	0	aqua			
251	Food	Vinegar			63		base part body	1	1	aqua			
251	Food	Vinegar			65		base part body	1	1	aqua			
251	Food	Salad Oil	half chevron		43		3/4 base	1	1	aqua			
251	Food	Salad Oil	column		41		base part body	1	1	aqua			
251	Household	Ink	octagonal		43		base part body	1	1	aqua			
251	Household	Ink	octagonal		43		part base	1	1	aqua			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
251	Alcohol	White Wine/Brandy					body fragments	1	0	pale green			
251	Food	Vinegar					part base and body	1	1	aqua			
251	Household	Window	plate				pane	1	1	clear			140x91x6
251	Food	Pickle			75		base	1	1	aqua			round
251	Food	Sauce					part rim and neck	1	1	aqua			
251	Food	Unidentified					part base and body	1	1	aqua			
251	Food	Salad Oil	half chevron		47		part base and body	1	1	aqua			
251	Alcohol	Whisky	flask				part base and body	1	1	aqua			
251	Pharmaceutical	Medicine					part base and body	1	1	blue aqua	...dden//..on		oval
251	Pharmaceutical	Medicine					part base and body	1	1	blue aqua			oval
251	Food	Pickle					part base	1	1	aqua			
251	Pharmaceutical	Medicine			67x4		base part body	1	1	aqua			
251	Food	Vinegar					rim, neck	1	0	aqua			
251	Food	Vinegar					neck	1	0	aqua			
251	Food	Vinegar					part rim	1	0	aqua			
251	Food	Vinegar					rim	1	0	aqua			
251	Alcohol	Beer			80		base	1	1	green			
251	Alcohol	Beer			75		base part body	1	1	green			
251	Household	Dish Lid	pressed				lid	4	1	clear			
251	Household	Dish	pressed				body fragments	1	1	clear			scalloped edge
251	Alcohol	Beer		collar band			rim, neck	1	0	green			
251	Pharmaceutical	Medicine					rim, neck	1	0	aqua			
251	Pharmaceutical	Perfume/Cologne		prescription			rim, neck	1	1	clear			
251	Unidentified	Bottle/Jar			43		base	1	1	clear			
251	Unidentified	Bottle			50		base part body	1	1	aqua			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
251	Water	Mineral Water/Soda	gledhill				rim, neck, part shoulder	1	1	aqua			
251	Water	Mineral Water/Soda	stick?				rim, neck	1	1	blue aqua			
251	Pharmaceutical	Castor Oil			40	218	complete	1	1	cobalt			
251	Pharmaceutical	Castor Oil			40	228	complete	1	1	cobalt			
251	Alcohol	Whisky	flask		58x30	157	complete	1	1	aqua	RT2 on base		
251	Water	Mineral Water/Soda	gledhill		62		base and body	1	1	aqua			
251	Alcohol	Unidentified			73		base	1	1	yellow	six to one gallon		
251	Food	Paste			35	93	complete	1	1	clear	rd no 677035	1920+	reg to W A Bailey6 july 1920
251	Household	Egg Cup					almost comlete	1	1	clear			nippled
251	Household	Ink	octagonal	shear	42	55	almost comlete	1	1	blue			
251	Household	Ink	octagonal	shear	42	55	complete	1	1	blue aqua			
251	Household	Ink	octagonal	shear	43	57	almost comlete	1	1	aqua			
251	Household	Ink	octagonal	shear	42	56	complete	1	1	aqua			
251	Household	Ink	octagonal	shear	41	57	complete	1	1	aqua			
251	Household	Ink	octagonal	shear	43	54	complete	1	1	aqua			
251	Household	Decanter Stopper					complete	1	1	clear			peg ground
251	Household	Stopper					complete	1	1	aqua			plain
251	Household	Stopper					complete	1	1	aqua			plain
251	Household	Stopper					complete	1	1	clear			nipples around edge
468	Alcohol	Black Beer			89		base	1	1	dark olive green			layered conical kickup
468	Alcohol	Schnapps			55x55	193	complete	1	1	green	udolpho wolfe's aromatic schnapps schiedam		
468	Alcohol	Schnapps			56x56		almost comlete	1	1	green	udolpho wolfe's aromatic schnapps schiedam		
468	Food	Olives			50	152	complete	1	1	aqua		2446	
468	Food	Worcestershire Sauce			50	190	complete	2	1	aqua	lea & perrin's worcestershire sauce//acg co		1850+
468	Food	Yorkshire Relish			47	187	complete	1	1	aqua	goodall, backhouse & co yorkshire relish		

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
468	Pharmaceutical	Medicine		prescription	45x21	125	complete	1	1	aqua	bonnington's irish moss christchurch		
468	Pharmaceutical	Perfume/Cologne		prescription	41	88	complete	1	1	clear	roger & gallet paris		
468	Alcohol	Wine	hock	ring seal	73	349	complete	1	1	amber			
468	Food	Sauce			58	224	complete	1	1	aqua	holbrook & co//p (in circle)		
468	Water	Mineral Water/Soda	codd		59		almost comlete	1	1	aqua	a c scott & co auckland//s		
468	Food	Yorkshire Relish			47	186	complete	1	1	aqua	goodall, backhouse & co yorkshire relish		
468	Food	Olives			49	152	complete	1	1	aqua	2446		
468	Pharmaceutical	Medicine		prescription	46x22	130	complete	1	1	aqua	bonnington's irish moss christchurch		
468	Food	Yorkshire Relish			46	186	complete	1	1	aqua	goodall, backhouse & co yorkshire relish		
468	Pharmaceutical	Medicine			88x55		almost comlete	1	1	aqua	fellows & co chemists N.B		
468	Pharmaceutical	Medicine			52x28		base part body	4	1	aqua	...erous/..skin/..air		barry's tricopherous
468	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
468	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
468	Food	Sauce					rim, neck	1	1	aqua			
468	Household	Ink		prescription	36	87	complete	1	1	aqua	JL on base		
468	Household	Stopper					complete	1	1	aqua			plain
234	Alcohol	White Wine/Brandy			74		almost comlete	1	1	pale green			
232	Alcohol	Case Gin			57x57		base	1	1	dark olive green			
232	Alcohol	Case Gin					body fragments	1	0	dark olive green			
232	Alcohol	White Wine/Brandy					body fragments	2	0	pale green			
232	Household	Oil Lamp Chimney					fragments	1	1	clear			
232	Pharmaceutical	Castor Oil			40	204	complete	1	1	cobalt			
232	Pharmaceutical	Castor Oil			40	215	almost comlete	1	1	cobalt	castor oil hora & co london		
232	Pharmaceutical	Castor Oil			40	207	complete	1	1	cobalt			
232	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
232	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
232	Pharmaceutical	Castor Oil					body fragments	2	0	cobalt			
232	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
232	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
232	Pharmaceutical	Castor Oil					part rim, neck	1	0	cobalt			
232	Pharmaceutical	Castor Oil					rim, part neck	1	0	cobalt			
545	Alcohol	Black Beer			75		base	1	1	dark olive green			layered conical kickup
545	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
545	Household	Drinking Glass	tumbler				body fragments	1	0	clear			
545	Unidentified	Bottle					part base	1	0	aqua			
545	Pharmaceutical	Unidentified			97		base	1	1	cobalt			could be disinfectant or medicine etc
242	Food	Pickle					rim, neck part body	1	0	aqua			
242	Food	Salad Oil					part base	1	1	aqua			
242	Alcohol	Case Gin					3/4 base	1	1	dark olive green			
242	Alcohol	Case Gin					3/4 base	1	1	dark olive green			
242	Alcohol	Case Gin					body fragments	2	0	dark olive green			
242	Alcohol	Black Beer					rim, neck	1	0	dark olive green			
242	Alcohol	Black Beer					part rim, neck	1	0	dark olive green			
242	Alcohol	Black Beer					part base and body	1	1	dark olive green			conical kickup
242	Water	Mineral Water/Soda	hamilton's				body fragments	1	0	aqua	...ge &... /brist.../J. S...		
242	Water	Mineral Water/Soda					body fragments	1	0	aqua			unmarked but may relate to another bottle
242	Water	Mineral Water/Soda					base part body	1	1	aqua	...bart town		
545	Household	Drinking Glass	tumbler		65		part base and body	1	1	clear			
258	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
258	Food	Jam					part base and body	4	1	clear			
258	Pharmaceutical	Medicine					part base and body	1	1	aqua			
258	Alcohol	Unidentified					part base	1	1	green			oval, poss spirits
468	Alcohol	Case Gin			48x46		base part body	2	1	dark olive green			
468	Alcohol	Case Gin					3/4 base	1	1	dark olive green			
468	Alcohol	Case Gin					part base	2	1	dark olive green			
468	Alcohol	Case Gin		cone collar			rim, neck	1	0	dark olive green			
468	Alcohol	White Wine/Brandy					3/4 base	1	1	pale green			
468	Alcohol	White Wine/Brandy					3/4 base	1	1	pale green			
468	Alcohol	White Wine/Brandy					1/2 base	1	1	pale green			
468	Alcohol	Whisky	flask		70x37		base part body	1	1	aqua			
468	Alcohol	Whisky	flask		58x27		base part body	1	1	aqua			
468	Alcohol	Whisky					shoulder	1	0	aqua			
468	Alcohol	Whisky					rim, neck, shoulder	1	0	aqua			
468	Alcohol	Whisky	flask				rim, neck	1	0	aqua			
468	Food	Salad Oil			44		base part body	1	1	aqua			
468	Food	Salad Oil					rim, neck	1	0	aqua			
468	Pharmaceutical	Castor Oil			43		base part body	1	1	cobalt			
468	Pharmaceutical	Castor Oil					rim, neck, part shoulder	1	0	cobalt			
468	Pharmaceutical	Medicine					rim, neck, shoulder	1	0	blue aqua			
468	Unidentified	Bottle			58		base part body	1	1	aqua			
468	Water	Mineral Water/Soda		blob			rim	1	0	aqua			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
360	Alcohol	Black Beer			87		base	1	1	dark olive green			layered conical kickup
360	Alcohol	Black Beer			74		base	1	1	dark olive green			shallow dome with central mamelon
360	Alcohol	Black Beer			60		base	1	1	dark olive green			layered conical kickup
360	Alcohol	Black Beer					1/2 base	1	1	dark olive green			dome
360	Food	Yorkshire Relish			46		base part body	1	1	aqua	goodall, backhouse & co		
360	Unidentified	Bottle					rim, neck	1	0	aqua			molten
330	Alcohol	Black Beer					1/3 base part body	1	1	dark olive green	...mper...		
330	Alcohol	Black Beer					body fragments	1	0	dark olive green			
246	Water	Mineral Water/Soda	codd		62		base most body	5	1	aqua	wm handley auckland (with canon logo)//wm barnard & sons london		
381	Alcohol	Black Beer			85		base	1	1	dark olive green			shallow conical kickup with circular apex
381	Alcohol	White Wine/Brandy		ring seal			rim, part neck	1	0	pale green			
468	Alcohol	Whisky	flask		67x37	199	complete	1	1	aqua			
468	Alcohol	Whisky	flask		59x29	161	complete	1	1	aqua			
468	Alcohol	Whisky	flask		59x29	161	complete	1	1	aqua			
468	Alcohol	Whisky	flask		58x32		base most body	2	2	aqua			
468	Alcohol	Whisky	flask		67x37		base most body	1	1	aqua			
468	Alcohol	Schnapps			57x55	195	complete	1	1	olive green			
468	Food	Worcestershire Sauce			51	189	complete	2	1	aqua	lea & perrin's worcestershire sauce//acb co		1850+
468	Food	Yorkshire Relish			49	184	complete	1	1	aqua	goodall, backhouse & co yorkshire relish//cgb co castleford		
468	Food	Yorkshire Relish			46		base most body	1	1	aqua	goodall, backhouse & co yorkshire relish		
468	Food	Worcestershire Sauce			50		base most body	2	1	aqua	lea & perrin's worcestershire sauce//acb co		1850+

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
468	Pharmaceutical	Sarsaparilla	patent		76x77	240	complete	1	1	emerald	dr townsend's sarsaparilla albany ny		
468	Pharmaceutical	Medicine	patent		43x26	120	complete	1	1	aqua	weston's wizard oil/frank weston/proprietor		
468	Pharmaceutical	Perfume/Cologne			29x30	113	complete	1	1	aqua	rimmel		
468	Pharmaceutical	Bovril			50x37	75	complete	1	1	amber	2oz bovril limited rd no 100848		
468	Unidentified	Bottle			52	164	complete	1	1	clear			could be pharm or household
468	Unidentified	Bottle			42x42	134	complete	1	1	clear	trident mark on base (johnsen & jorgensen c1884+)		
468	Household	ink		shear	42	56	complete	1	1	blue			octagonal
468	Household	Ink		shear	42	56	almost complete	1	1	aqua			octagonal
468	Household	Ink		shear	42	56	complete	1	1	aqua			octagonal
468	Household	Ink			37	86	almost complete	1	1	clear			
468	Household	Ink			36	79	complete	1	1	clear	h m m (separated by large X)		
468	Household	Ink			33	72	almost complete	1	1	clear			
468	Household	Gum		external thread	45	65	almost complete	1	1	clear			
468	Household	Gum		external thread	44	45	complete	1	1	clear			
468	Household	Covered Dish					2/3 complete	1	1	milk	depose		poss sugar bowl or candy dish, rim suggests associated lid (missing)
468	Household	Dish	pressed				fragments	3	1	emerald			
468	Pharmaceutical	Medicine		cone collar			rim, neck	1	0	aqua			
468	Food	Sauce					rim	1	1	aqua			
468	Food	Sauce			52		almost complete	1	1	aqua			
468	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
468	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
468	Food	Salad Oil			43		base part body	1	1	aqua			
468	Water	Mineral Water/Soda	hamilton's				base part body	1	1	aqua			plain

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
468	Food	Vinegar	champions				rim, neck	1	0	aqua			
468	Pharmaceutical	Castor Oil					part base	1	1	cobalt			
468	Household	Window	plate				fragments	1	1	aqua			9mm thick
468	Household	Drinking Glass			60		base part body	1	1	clear			octagonal
468	Alcohol	Whisky	flask				part base and body	1	1	aqua			
468	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
468	Household	Drinking Glass			57		base part body	1	1	clear			10 sided
468	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
468	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
468	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
468	Water	Mineral Water/Soda	hogbens				rim, neck	1	0	aqua			
468	Household	Drinking Glass	shot		44		3/4 base	1	1	clear			
468	Alcohol	Whisky	flask				part base and body	1	0	aqua			
468	Alcohol	Wine					part base	1	1	green			
468	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
468	Alcohol	Case Gin					part base and body	1	1	dark olive green			
468	Alcohol	White Wine/Brandy					3/4 base	1	1	pale green			
468	Pharmaceutical	Castor Oil			40		base most body	1	1	cobalt			
468	Water	Mineral Water/Soda	hogbens		57		base most body	1	1	aqua	lumb & co makers castleford		
468	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
468	Alcohol	White Wine/Brandy		ring seal			rim, neck	1	0	pale green			
468	Pharmaceutical	Medicine			66x45		base part body	1	1	emerald			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
468	Alcohol	Black Beer			90		base	1	1	dark olive green			layered conical kickup
468	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
468	Pharmaceutical	Castor Oil					rim, neck	1	0	cobalt			
468	Food	Vinegar					part base and body	2	1	aqua			
468	Household	Stopper					complete	1	1	aqua			plain
468	Pharmaceutical	Castor Oil					rim, part neck	1	0	cobalt			
468	Pharmaceutical	Medicine					rim, neck, part shoulder	2	0	blue aqua			
468	Household	Oil Lamp Chimney					fragments	1	0	clear			rim, waist
468	Household	Drinking Glass					body fragments	1	0	clear			large dimpled
468	Unidentified	Bottle			90		part base	1	1	aqua			
468	Alcohol	Whisky			72		base part body	1	1	aqua			
468	Unidentified	Bottle			58		base part body	1	1	aqua			
468	Unidentified	Bottle					body fragments	1	0	aqua			
468	Unidentified	Bottle					rim	1	0	aqua			rim similar to sauce but could also be pharm
468	Food	Oil			50		base part body	1	1	aqua			
468	Unidentified	Bottle			42x42	135	base most body	2	1	clear			household, pharm
468	Household	Drinking Glass					part base	1	0	clear			
468	Household	Stopper					complete	1	1	aqua	lea & perrins	1850+	
468	Household	Stopper					complete	1	1	aqua			plain
251	Alcohol	Black Beer			75		base part body	1	1	dark olive green			dome
251	Food	Salad Oil			42		base part body	1	1	aqua			
251	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
251	Pharmaceutical	Castor Oil			40		base	1	1	cobalt			
251	Pharmaceutical	Castor Oil			40		base most body	1	1	cobalt			
251	Household	Drinking Glass	tumbler		51		base part body	1	1	clear			
251	Pharmaceutical	Castor Oil			40		base most body	1	1	cobalt			
251	Pharmaceutical	Castor Oil			40		base part body	1	1	cobalt			
251	Food	Pickle					rim	1	0	aqua			
251	Pharmaceutical	Castor Oil					neck	1	0	cobalt			
251	Alcohol	White Wine/Brandy			74		base part body	1	1	pale green			
251	Alcohol	White Wine/Brandy			73		3/4 base	1	1	pale green			
251	Alcohol	Black Beer		cone collar			rim, neck, part shoulder	1	0	dark olive green			
251	Alcohol	Whisky	flask				body fragments	1	0	aqua			
251	Alcohol	Black Beer					1/2 base	1	0	dark olive green			
251	Food	Sauce			49		base part body	1	0	aqua			
251	Alcohol	White Wine/Brandy					part base	2	1	pale green			
251	Food	Salad Oil					rim, neck	1	0	aqua			
251	Alcohol	Whisky					rim, neck	1	0	aqua			
251	Food	Vinegar					body fragments	2	0	aqua			
251	Food	Sauce					body fragments	1	0	aqua			
251	Food	Salad Oil					rim	1	0	aqua			
251	Household	ink		shear	43	58	complete	1	1	aqua			octagonal
251	Household	Stopper					complete	1	1	aqua			plain
251	Household	Egg Cup					base most body	1	1	milk			nippled
251	Household	Egg Cup					base part body	1	1	clear			nippled
251	Household	Wine Glass					base	1	1	clear			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
251	Alcohol	Whisky	flask		77x40	198	complete	1	1	aqua			
251	Alcohol	Whisky	flask		58x30		almost complete	1	1	aqua			
251	Alcohol	Beer			78		almost complete	1	1	green			
251	Food	Worcestershire Sauce			50	176	almost complete	1	1	aqua	lea & perrin's worcestershire sauce//acb co	1850+	
251	Food	Salad Oil	half chevron		46		almost complete	1	1	aqua			
251	Unidentified	Bottle			32	110	complete	1	1	pale green			miniature. May be food or alcohol
251	Unidentified	Jar		shear	61	57	almost complete	1	1	aqua			could be household or pharm
251	Water	Mineral Water/Soda	hamilton's				almost complete	1	1	aqua			plain
251	Water	Mineral Water/Soda	stick?		55		base most body	1	1	cobalt	j grey/auckland	1874-1880	
251	Water	Mineral Water/Soda	gledhill		59		base part body	1	1	green	...dhill's..tent		
251	Water	Mineral Water/Soda	lamont		48	178	complete	1	1	aqua	barrett & co vauxhall london/lumb & co makers castleford/lamont's patent	1883-1907	
260	Alcohol	Schnapps			55x56		base part body	1	1	olive green	..ho wolfe's/..romatic..napps/..chiedam		
537	Household	ink		shear	42	55	complete	1	1	aqua			octagonal
537	Household	ink		shear	40x40	41	complete	1	1	aqua			square
545	Pharmaceutical	Castor Oil			40		base	1	1	cobalt			
545	Alcohol	Black Beer			74		base part body	1	1	dark olive green			conical kickup
545	Alcohol	Black Beer			90		base	1	1	dark olive green	asymmetrical diamond		conical kickup
545	Alcohol	Black Beer			74		base	1	1	dark olive green			layered conical kickup
545	Alcohol	White Wine/Brandy		ring seal			rim, part neck	1	0	pale green			
545	Pharmaceutical	Unidentified			33		base part body	1	1	clear			could be med or perfumery

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
241	Alcohol	Schnapps			56x56	197	almost complete	1	1	olive green	udolpho wolfe's aromatic schnapps schiedam	1863+	
241	Alcohol	Spirits/Liqueur			77x50	208	complete	1	1	green			
241	Alcohol	Spirits/Liqueur			76x46	200	complete	1	1	green			
241	Alcohol	Wine			69		base most body	1	1	green			
241	Household	ink			57	74	complete	1	1	green aqua			
241	Household	Ink			37	83	complete	1	1	clear			
394	Alcohol	Case Gin			67x66		base part body	1	1	dark olive green			
394	Alcohol	Case Gin			61x61		base part body	1	1	dark olive green			
394	Alcohol	Case Gin		pig snout			rim, neck	1	0	dark olive green			
394	Alcohol	Black Beer			88		3/4 base	1	1	dark olive green			conical kickup
394	Alcohol	Black Beer			76		base part body	1	1	dark olive green			conical kickup
394	Alcohol	Black Beer			94		1/2 base	1	1	dark olive green			
394	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
394	Alcohol	White Wine/Brandy					rim, neck	1	0	pale green			
394	Food	Pickle			61x61		base	1	1	aqua			
394	Food	Pickle					part base and body	1	1	aqua			
394	Household	ink			39		almost complete	1	1	clear			
394	Food	Sauce					rim, neck	1	1	aqua			
394	Unidentified	Bottle					rim, neck	1	0	aqua			
247	Pharmaceutical	Castor Oil					body fragments	1	0	cobalt			
247	Alcohol	Black Beer			64		base part body	1	1	dark olive green			layered conical kickup
247	Alcohol	Black Beer			64		base part body	1	1	dark olive green			layered conical kickup
247	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
247	Food	Pickle					body fragments	1	0	aqua			
259	Alcohol	Whisky	flask		58x31	165	complete	1	1	aqua	CR or RC intertwined		
545	Food	Worcestershire Sauce			51		base part body	1	1	aqua	lea & perrin...//acb co		

Appendices

Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
545	Pharmaceutical	Medicine			40x24	109	complete	1	1	aqua			
545	Pharmaceutical	Medicine					3/4 base	1	1	aqua			
203	Food	Salad Oil			44		base part body	1	1	aqua			
203	Alcohol	Case Gin			67x66		base part body	1	1	dark olive green			
203	Alcohol	Case Gin			47x48		base part body	1	1	dark olive green			
203	Alcohol	Case Gin			57x58		base part body	1	1	dark olive green			
203	Alcohol	Case Gin					part base and body	1	1	dark olive green			
203	Alcohol	Case Gin					part base and body	1	1	dark olive green			
203	Alcohol	Case Gin		cone collar			rim, neck, shoulder	1	0	dark olive green			
203	Alcohol	Case Gin		cone collar			rim, neck, part shoulder	1	0	dark olive green			
203	Alcohol	Case Gin		cone collar			part rim, neck, shoulder	1	0	dark olive green			
203	Alcohol	Schnapps					body fragments	1	0	olive green	..app..		
203	Alcohol	Black Beer			85		base	1	1	dark olive green			dome
203	Alcohol	Black Beer			84		base	1	1	dark olive green			conical kickup
203	Alcohol	Black Beer			73		base part body	1	1	dark olive green			shallow dome with central mamelon
203	Alcohol	Black Beer			88		base part body	1	1	dark olive green			conical kickup
203	Alcohol	Black Beer			75		base	1	1	dark olive green			conical kickup
203	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
203	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
203	Alcohol	Black Beer		collar band			rim, neck	1	0	dark olive green			
203	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
203	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
203	Alcohol	Black Beer		collar skirt			part rim, neck	1	0	dark olive green			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
203	Alcohol	Wine/Champagne		ring seal			rim, neck	1	0	green			
203	Alcohol	White Wine/Brandy					part base	2	1	pale green			
203	Alcohol	Wine/Champagne					part base	1	1	green			
203	Pharmaceutical	Medicine					part base	1	1	blue aqua	ygc co	1794+	york glass co
203	Water	Mineral Water/Soda	hamilton's				part rim, base, body fragments	4	1	aqua			plain
203	Alcohol	Wine					part base	1	1	green			
203	Food	Sauce					rim, neck	1	1	aqua			
203	Food	Salad Oil					3/4 base rim, neck, body frgment	3	1	aqua			
203	Alcohol	whisky		collar skirt			rim	1	0	aqua			not flask
203	Household	Drinking Glass					part base and body	1	1	clear			plain body
203	Alcohol	Whisky			75		3/4 base part body	1	1	aqua			
203	Food	Salad Oil	half chevron				body fragments	1	0	aqua			
203	Food	Salad Oil					part rim	1	0	aqua			
203	Food	Salad Oil					rim, neck	1	0	aqua			
203	Pharmaceutical	Medicine		prescription			rim, neck	1	0	clear			
203	Pharmaceutical	Medicine		prescription			rim, neck	1	0	clear			
203	Unidentified	Bottle			76		3/4 base	1	1	aqua	CW in diamond		
203	Alcohol	Black Beer			87		base part body	1	1	dark olive green	cooper & wood portobello	1859-1868	
203	Pharmaceutical	Medicine			34x17	91	complete	1	1	clear			
203	Household	Ink			38		almost comlete	1	1	aqua			octagonal
203	Water	Mineral Water/Soda					marble	3	0	aqua			17mm, 15mm and 14mm
272	Alcohol	Black Beer					body fragments	5	0	dark olive green			
272	Alcohol	Wine					part base	1	1	green			
272	Alcohol	Case Gin					body fragments	1	0	dark olive green			

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Context	Category	Type	Subtype	Rim Type	Base Size	Height	Piece Type	Pieces	MNI	Colour	Embossing	date range	Comments
272	Pharmaceutical	Castor Oil					body fragments	1	0	cobalt			
272	Household	Ink			31x32		almost complete	1	1	clear			
537	Household	Drinking Glass					body fragments	1	0	clear			
537	Unidentified	Bottle					body fragments	3	0	aqua			
300	Food	Salad Oil	half whirly		42	240	complete	1	1	aqua		1189	
300	Alcohol	Whisky	flask		59x29	160	complete	1	1	aqua	rutard 20 (on base)		
300	Unidentified	Bottle/Jar			76		base	1	1	clear			
300	Alcohol	White Wine/Brandy					body fragments	1	0	pale green			
300	Pharmaceutical	Perfume/Cologne			34x17		almost complete	1	1	clear	rimmel		
300	Household	ink			36	78	complete	1	1	clear			
227	Alcohol	Case Gin					part base and body	2	1	dark olive green			
227	Food	Pickle					part base and body	2	1	aqua			
227	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			
227	Household	Stopper					complete	1	1	aqua	lea & perrins	c1850+	
227	Household	Stopper					complete	1	1	aqua			plain
227	Household	Stopper					top only	1	1	aqua	lea & perrins	c1850+	
227	Pharmaceutical	Medicine					part base and body	1	1	aqua			
227	Pharmaceutical	Medicine			41x25		base part body	1	1	blue aqua	...tts/...e		
227	Food	Pickle			66x40		base most body	1	1	aqua			
227	Alcohol	Black Beer		collar skirt			rim, neck	1	0	dark olive green			with wire
227	Household	Toy - Marble					complete	1	1	rainbow swirl in cleat			
227	Household	Toy - Marble					complete	1	1	green swirl			
223	Alcohol	Case Gin			59x58		base part body	1	1	dark olive green			
223	Food	Salad Oil			44		base part body	1	1	aqua			
223	Alcohol	Black Beer					neck	1	0	dark olive green			

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APPENDIX 6 – PIPES

Stages 1 and 2

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
103	1			1	1	White	Incuse McDOUGALL above GLASGOW in serif within Shield frame facing smoker	Duncan McDougall, Glasgow	1846-1891	Average burnish. Complete bowl.
103		1		1		White				
103	1			1	1	White	Moulded J on (lhs) side of spur and moulded C inverted on rhs.	James Critchfield, London	1828-1894	Part bowl, spur and part stem. Good burnish.
103	1			1		White				Partial bowl fragment.
103		1		1		White				
103		1		1		White				
103			1	1		White				Brown glaze.
104	1			1	1	White	T. D. style			Partial bowl + spur
104		1		1		White	Incuse McDOUGA[LL]	Duncan McDougall, Glasgow	1846-1891	
105	1			1	1	White	Moulded relief of early Locomotive and EDINR (LHS) and Paddle Steamer and T.W. & Co. (RHS) Serif font	Thomas White & Co Edinburgh	1823-1876	Poorly burnished
105	1			1	1	White	Incuse T.D. facing smoker			Bowl + spur
105		1		1	1	White	A. COGHILL (LHS) GLASGOW (RHS) in Serif font	Alexander Coghill, Glasgow	1826-1904	Partial spur
105		1		1		White				Yellow glaze
105		1		1		White	Incuse McDOUGALL (LHS) GLASGOW	Duncan McDougall, Glasgow	1846-1871	
105		1		1		White				Burnt
105		1		1		White	Incuse McDOUGALL (LHS) GLASGOW	Duncan McDougall, Glasgow	1846-1871	
105		1		1	1	White	Incuse McDOUGALL (LHS) GLASGOW (RHS)	Duncan McDougall, Glasgow	1846-1871	
105		1		1		White				Partial spur
105	1			1	1	White	Incuse McDOUGALL above GLASGOW in circular frame facing smoker in serif lettering	Duncan McDougall, Glasgow, Cutty style	1846-1871	Bowl and partial spur. Average burnish.
105	1			1	1	White				Bowl and spur / average burnish
105	1			1	1	White	Incuse CORK above Irish Harp with leaf design below and to the sides	Cutty style		Good burnish. Bowl only.
105		1		1		White				
105		1		1	1	White	Incuse [Mc]DOUGALL and GLASG[OW]	Duncan McDougall, Glasgow	1846-1871	
105		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
105		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	

Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
105		1		1		White				
105		1		1		White				Fine burnish
105		1	1	1		White				Unglazed
105		1		1		White				
105		1		1		White				
105		1		1		White				
105		1		1		White				
105				1		White	Incuse McDOUGALL	Duncan McDougall, Glasgow	1846-71	Other side worn
105	1			1	1	White	Incuse A. [COGHILL] (lhs) and V (rhs)	Alexander Coghill, Glasgow	1826-1904	Partial bowl and spur. Good burnish
105	1			1	1	White	Incuse T.D. facing smoker			T. D. Bowl + spur/ Poor burnish
105	1			1		White		Plain		
105	1			1	1	White		Plain - Cutty style		Half bowl + stem
105	1			1		White				Partial bowl fragment. Average burnish
105		1		1		White				
105		1		1		White				
105		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
105		1		1		White				
105		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
105		1		1	1	White	Incuse [McDou]GALL (lhs) and BURNS CUTTY (rhs). Sans Serif font.	Duncan McDougall, Glasgow	1846-1891	Burns Cutty
105		1		1		White				
105		1		1		White				
105			1	1		White				Unglazed
105		1		1		White				
105		1		1		White				
105		1		1		White				Yellow glaze.
105		1		1		White				
105	1			1	1	White	Incuse B[A]LME above St George Cross within shield frame above LONDON. Sans Serif Font. Facing smoker	Paul Balme, Mile End Road, London	1840 -1856 Likely c. 1840	Poorly burnished
105	2			2	1	White	Incuse BA[LM]E above M[ILE] [EN]D	William Balme, Mile End Road, London	1856 -1861	Bowl and Spur in two fragments average burnish
109		1		1		White				
109		1		1	1	White	Incuse A. COGHILL and GLASGOW	Alexander Coghill, Glasgow	1826-1904	4.9 cm
125		1		1	1	White				Whole bowl and partial stem; Wiped finish marks.

Appendices

Stage 3

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
203		1		1	1	White	Incuse McDOUGAL[L] and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
227			1	1		White				Partial mouthpiece yellow glaze
227		1		1		White				Stem + partial spur
227		1		1		White				
227		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
227		1		1		White				
227		1		1		White				Very fine clay
227			1	1		White				Moulded nipple
227			1	1		White				Flattened oval + yellow glaze
227		1		1	1	White	Incuse McDOUGALL and GLASGO[W]	Duncan McDougall, Glasgow	1846-1871	
227		1		1		White				
227	1			1	1	White	Incuse T.D. in serif font facing smoker. Serif 'W' on stem before break. William White	William White, Glasgow	1805-1891	T.D. Good burnish.
227		1		1		White				
227			1	1		White				Rounded end. Yellow glaze
227		1		1		White				
227		1		1		White				
227		1		1		White				Partial yellow glaze
227		1		1	1	White	Incuse McDOUGALL and GLASGO[W]	Duncan McDougall, Glasgow	1846-1871	
227		1		1	1	White	Incuse [DAV]IDSON GLAS[GOW] in serif within scrollwork of raised relief dots	Thomas Davidson, Glasgow	1861-1891	Oval in plan
227		1		1		White				
232	1			1	1	White	Moulded relief decoration of open left hand – palm facing out (Red Hand of Ulster) (lhs) and cross hatched/latticed heart (rhs) with incuse Derry in serif on stem.	Irish, Londonderry - unknown	c. 1860's	Complete, bowl, spur and stem with deep grooves from teeth at cut end. Heavily Smoked. Average burnish. Very thick.
232		1		1		White				
232		1		1		White				
232		1		1		White				
232		1		1		White				
232		1		1		White				
232		1		1		White				Fine ball clay
232		1		1		White				Fine ball clay
232		1		1		White				Fine ball clay
232		1		1		White				Fine ball clay
232		1		1		White				Fine ball clay

Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
232		1		1		White				Fine ball clay
232		1		1		White				Fine ball clay
232	1			1	1	White				Partial bowl fragment.
232	1			1	1	White				Partial bowl fragment.
232	1			1	1	White				Partial bowl fragment.
232		1		1	1	White	Incuse McDOUGALL and GLASGO[W]	Duncan McDougall, Glasgow	1846-1871	Partial stem. Good burnish.
232		1		1		White	Incuse [McDOU]GALL	Duncan McDougall, Glasgow	1846-1871	Partial stem. Good burnish.
232		1		1		White	Incuse McDOU[GALL] and GLASGOW	Duncan McDougall, Glasgow	1846-1871	Partial stem. Good burnish.
232		1		1		White	Incuse McDOU[GALL] and [GLA]SGOW	Duncan McDougall, Glasgow	1846-1871	Partial stem. Good burnish.
232			1	1		White				Diamond nipple mouthpiece. Poor burnish.
233		1		1		White				
233		1		1	1	White		Thomas White & Co Edinburgh	1823-1876	Partial Stem.
233		1		1		White				Stem and partial spur
233		1		1		White				
233		1		1		White	Incuse repeating squares spiralling around stem with moulded circles within spiralling.			Partial Stem.
241		1		1		White				
241		1		1		White	Incuse [GLASG]OW	Unknown		
241		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
241		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	Long stem / fine burnish
241			1	1		White				Rounded nipple end, yellow glaze
241	1			1	1	White	Cutty style	Plain		Complete bowl. Good burnish
242		1		1		White				
242		1		1		White				Partial glaze (yellow)
242		1		1		White				
242			1	1	1	White				Cut end – yellow glaze
242			1	1	1	White				Cut end – yellow glaze
242			1	1		White				Cut end. Yellow glaze
242	1			1	1	White	T. D. style			Complete bowl with spur. Smoked.
242		1		1		White				
242		1		1		White				
242		1		1		White				
245		1		1		White				
247			1	1	1	White	BONE			Bone. Diamond nipple mouthpiece with tenon

Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
										attachment for fitting to composite pipe.
251	1			1	1	White	Incuse DAVIDSON (LHS) and GLASGOW (RHS) in serif font. Style mark incuse no. 5			Partial bowl with complete spur and partial stem. Smoked.
251	1			1	1	White	T. D. in moulded relief			T. D.. Bowl with spur
251		1		1		White				
251		1		1		White	Incuse [DAV]IDSON GLAS[GOW]	Thomas Davidson, Glasgow	1861-1891	
251		1		1		White				
263	1			1	1	White	Incuse sans serif MURRAY (lhs) [G]LASGOW (rhs) with relief moulded triangular ribbed leaves	William Murray & Co, Glasgow	1830-1861	Bowl, spur and stem (snapped). Average burnish. Smoked.
263		1		1		White				
263		1		1		White				
263		1		1		White				
263		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	
263		1		1		White				
263		1		1		White				
263		1		1		White				
263		1		1		White				
263		1		1		White				
263			1	1		White				Red wax finish
263	1			1		White				Half bowl - large
263	1			1	1	White	Incuse T.D. in serif font facing smoker.			T. D.. Poor burnish
263	1			1	1	White	Incuse T.D. in serif font facing smoker.			T. D.. Poor burnish
270			1	1		White				Diamond nipple mouthpiece. Yellow glaze.
272		1		1	1	White	Incuse McDOUGALL and GLASGOW	Duncan McDougall, Glasgow	1846-1871	Long Stem
330		1		1		White				
333		1		1		White				
347		1		1		White				
349		1		1		White				
349		1		1	1	White	Incuse [DAVIDS]ON GLA[SGOW] in serif font	Thomas Davidson, Glasgow	1861-1891	Most likely Davidson
396		1		1		White				
414	1			1	1	White	Moulded relief fouled anchor (lhs) and Royal Crown (rhs) with moulded relief leaf design running along the front and rear facing seams			Crown & Anchor pub? Royal Navy?
468	1			1	1	White	Moulded T. D. in serif font facing smoker. Moulded 'V' mark on left side of spur			T. D.. Fine burnish
537			1	1		White				Cut. Red wax finish
537			1	1		White				Cut. Yellow glazed

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Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
545		1		1	1	White	Incuse THO. WHITE & Co. (lhs) EDINBURGH (rhs). Serif.	Thomas White & Co Edinburgh	1823-1876	Fine burnish.
545	1			1	1	White	Incuse TH[O. WHITE & Co.] (lhs) [EDINBURG]H (rhs). Serif.	Thomas White & Co Edinburgh	1823-1876	Fine burnish. Partial bowl and spur. Smoked.
545	1			1	1	White	Moulded milled rim. Moulded G on lhs of spur and C on right.	?????? Smoked		Discoloured burning slag attached.
545		1		1		White	Incuse THO. WHITE & Co. (lhs) EDINBURGH (rhs). Serif.	Thomas White & Co Edinburgh	1823-1876	Good burnish.
545		1		1		White	Incuse DAVIDS[ON] GLASGOW in serif	Thomas Davidson, Glasgow	1861-1891	Good burnish.
545		1		1		White	Incuse McDOUGALL and GLASGO[W] Serif	Duncan McDougall, Glasgow	1846-1871	
545		1		1		White				
545		1		1		White				
545		1		1		White				
545		1		1		White				
545		1		1		White	Incuse McDOUGALL and GLASGOW Serif	Duncan McDougall, Glasgow	1846-1891	Solder/slag attached.
545		1		1		White	Incuse McDOUG[ALL] and [GLA]SGOW	Duncan McDougall, Glasgow	1846-1891	Solder/slag attached.
545		1		1		White	Incuse McDOUGALL and GLASGOW Sans-Serif	Duncan McDougall, Glasgow	1846-1891	Oval cross section
545		1		1		White				Diamond cross section
545			1	1		White				Cut round end. Yellow glaze
545			1	1		White				Diamond nipple
545		1		1		White				
545		1		1		White				Round cut end
545		1		1		White				Round cut end
545		1		1	1	White	Incuse THO. WHITE & Co. (lhs) EDINBURGH (rhs). Serif.	Thomas White & Co Edinburgh	1823-1876	Good burnish.
545		1		1		White	Incuse DAVIDSON GLASG[OW] in serif	Thomas Davidson, Glasgow	1861-1891	Average burnish, small amount of yellow glaze
545	1			1	1	White	Cutty style pipe.	Plain		Complete bowl. Average burnish. Smoked.
545	1			1	1	White		Plain		Half bowl (large pipe) with spur. Average burnish. Smoked.
545	1			1	1	White		Plain		Half bowl (small pipe). Average burnish. Smoked.
545	1			1	1	White	Cutty style pipe.	Plain		Complete bowl. Average burnish. Smoked.
545	1			1	1	White		Plain		Partial bowl and spur. Good burnish. Smoked.
545		1		1		White				
545		1		1		White				

Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
545		1		1		White				
545			1	1		White				Cut.
545		1		1		White	Incuse McDOUGALL and GLASGOW Serif	Duncan McDougall, Glasgow	1846-1891	Solder like substance stuck to it.
545		1		1		White				
545		1		1		White				
545		1		1		White				
545		1		1		White	Incuse McDOUGALL and GLASGO[W] Serif	Duncan McDougall, Glasgow	1846-1891	
545		1		1		White				
545		1		1		White				
545	1			1	1	White		Plain		T. D. Style. Complete bowl and spur. Smoked Solder/slag attached.
545		1		1		White	Incuse GLASGOW in Sans-serif font	Mark not legible		
545		1		1		White	Incuse DAVIDSON GLASGOW in serif	Thomas Davidson, Glasgow	1861-1891	Solder/iron slag stuck to stem.
545		1		1		White	Incuse McDOU[GALL] and [GLAS]GOW Serif	Duncan McDougall, Glasgow	1846-1891	
545	1			1	1	White		Plain		T. D. Style. Half bowl fragment.
545			1	1		White				Diamond nipple.
545			1	1		White	Incuse DAVIDSO[N] GLASGOW	Thomas Davidson, Glasgow	1861-1891	
545			1	1		White				
545		1		1	1	White	Incuse Ya[chter] (rhs) and B[altic] (lhs.) Each preceded with three-pronged symbol in relief head of trident?			Baltic Yachter
545		1		1		White	Incuse & Co.	Unknown		
545			1	1		White				Diamond nipple.
545			1	1		White				Cut end. Yellow glaze.
545			1	1		White				Cut end. Red glaze.
545		1		1		White				
545		1		1		White				
545		1		1		White	Incuse M in serif	Unknown		
545		1		1		White				
545		1		1		White				
545		1		1		White	Incuse McDOUGALL and [G]LASGOW Serif	Duncan McDougall, Glasgow	1846-1891	
545		1		1		White				
545		1		1	1	White	Incuse [THO. WHIT]E & Co. EDI[NBURGH] in Serif.	Thomas White & Co Edinburgh	1823-1876	
545		1		1		White				
545		1		1		White	Incuse [M]cDOUGALL and GLASG[OW] IN SERIF	Duncan McDougall, Glasgow	1846-1891	
545		1		1		White				
545		1		1		White	Incuse Co.	Unknown.		

Appendices

Context	Bowl	Stem	Mouthpiece	NISP	MNI	Colour	Decoration/Stamp	Maker	Date Range	Comments
545		1		1		White	Incuse GLASG[OW] in serif	Unknown.		
545		1		1		White				
545		1		1		White				
545		1		1		White	Incuse [McD]OUGALL and GLASG[OW] IN SERIF	Duncan McDougall, Glasgow	1846-1891	
545		1		1		White				
545		1		1		White				Includes
545	1			1		White				Partial bowl. Small frag. Don't Count.
545			1	1		White				Cut end. Yellow glaze.
545			1	1		White				Cut end. Yellow glaze.
545		1		1		White				Red glaze
545	1			1		White				Small frag. Don't Count.
545	1			1	1	White	Moulded milled pattern.			Count.
545		1		1		White				
545		1		1		White				
545		1		1	1	White	Incuse GLASGO[W] Makers mark not discernible.	Unknown.		
545	1			1	1	White	Moulded relief ribbed beaded fluting pattern with a plain space separating a split fluted pattern running around the bowl above.			Complete bowl and spur. Smoked.
545	1			1	1	White	Incuse WHITE'S above RIFLE above PIPE framed within a shield.	William White?		Burnt with solder and slag attached.
545	1			1	1	Terracotta	Moulded ribbed fluting			Partial bowl, smoked.
547	1			1	1	White	Plain	Cutty style		Complete bowl + part stem. Poor burnish
606	1			1	1	White	Plain	Cutty style		Complete bowl. Good burnish.

APPENDIX 7 – WORKED GLASS

ID	Context	Colour	Bottle part	Function
1	537	Black	Wall	Flake
2	537	Black	Base	Core
3	537	Black	Wall	Flake
4	537	Black	Wall	Flake
5	537	Black	Wall	Flake
6	537	Black	Wall	Flake
7	537	Black	Wall	Flake
8	537	Black	Base	Flake tool
9	537	Clear	Top	Flake
10	537	Black	Wall	Flake
11	537	Black	Wall	Flake
12	537	Black	Wall	Flake
13	537	Black	Base	Flake
14	537	Black	Base	Flake tool
15	537	Black	Base	Flake tool
16	537	Black	Base	Core
17	537	Black	Wall	Flake
18	537	Black	Wall	Flake
19	537	Black	Wall	Flake

ID	Context	Colour	Bottle part	Function
20	537	Black	Base	Core
21	537	Black	Base	Flake
22	537	Black	Top	Unknown
23	537	Black	Base	Core
24	537	Black	Base	Core
25	537	Black	Base	Core
26	537	Black	Wall	Flake
27	537	Black	Wall	Flake
28	537	Black	Wall	Flake
29	537	Black	Wall	Flake
30	537	Black	Wall	Flake
31	537	Black	Wall	Flake
32	537	Black	Wall	Flake
33	537	Black	Base	Core
34	545	Black	Base	Flake
35	548	Black	Base	Core
36	548	Black	Square Base	Core
37	548	Black	Top	Unknown
38	548	Black	Top	Unknown

APPENDIX 8 – SMALL FINDS REGISTER

Number	Description	Context
1	Struck flake from sample 1	229
2	Copper rose-head nail	209
3	Metacarpal bone (non-human) in fill above (203)	202
4	Buckle possible related to horses	203
5	Broken re-worked adze	227
6	Clay pipe with red hand	232
7	Royal Navy epaulette or collar stud	397
8	Copper alloy 1862 Halfpenny coin	227
9	Copper alloy trade token 1858 - Professor Holloway's Ointment	242
10	Copper Alloy 1875 Halfpenny coin	227
11	Snake belt buckle	468
12	Copper alloy coin Penny 1852	545
13	Copper alloy coin Halfpenny 1852	545
14	Hallensteins copper alloy button	202
15	Hallensteins copper alloy button	202
16	Copper alloy button 14th Buckinghamshire Regiment	546
17	Button - two piece poor condition probably military	545
18	Glass flake looking like obsidian tool	545
19	Button - 50th Regiment	545
20	Bone comb, fine tooth, broken	545
21	Stone probably from jewellery	545
22	Bone handle knife	545
23	Regimental button in poor condition possibly pewter	545
24	Perforated piece of ceramic	545
25	Coin - large copper	545
26	Chert piece possibly struck	545
27	Decorate copper circular object with flower design (percussion cap dispenser)	545
28	Copper alloy belt strap	545
29	Chert core	545
30	Copper alloy Halfpenny	203
31	Mouth harp - copper allow	540
32	Brass shotgun cartridge from (397) or pit [330]	330
33	Complete stoneware half pint cider bottle. Powell Bristol	
34	Piece of hollow copper rod tube with organic covering	396
35	Bone pin/needed with turned end	247