Artefacts and Community Transformations

The Material Culture of Nineteenth Century North Dunedin

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Abstract

Large quantities of artefacts have been recovered from development-based archaeological investigations in North Dunedin during the last decade. There has been no attempt, however, to draw this material together and develop a picture of the neighbourhood as a whole. This area, as with the rest of Dunedin, experienced major economic and social transformations during the second half of the nineteenth century as a result of colonisation, the gold rush of the 1860s, economic depression once this boom was over and the process of industrialisation in the 1880s and 1890s. The aim of this thesis was to discover whether these transformations are visible in the material culture record and if the artefacts can add to our understanding of these processes and how they affected the people living in North Dunedin at this time. This analysis of the nineteenth century North Dunedin community was conducted without the highly contextual household information that usually forms the basis of community studies, instead using the evidence gathered from the material culture itself. The artefacts from one primary study site (234-242 George Street) were analysed directly while the material from the rest of the study area sites was evaluated through data presented in excavation reports. Evidence relating to the massive influx of wealth and people that came with the gold rush, the hardship faced by many businesses after this gold ran out and the social and economic effect of industrialisation were all able to be identified in the material culture, as was the development of a distinct North Dunedin identity. Comparisons were then made between the North Dunedin findings and other colonial communities that have been studied in a similar way, which revealed that parallel processes were affecting many British colonial cities at the end of the nineteenth century, but the ways in which they were handled was often unique and contributed to each city’s character. These results not only demonstrate the possibilities of less context driven community studies but also highlight the potential of development-based archaeological investigations and reports as invaluable academic resources.
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CHAPTER 1: Introduction

The primary aim of this thesis is to develop an understanding of the development and transformation of the community occupying the neighbourhood of North Dunedin, New Zealand, during the second half of the nineteenth century as revealed through the material record recovered by archaeological investigations there. When Dunedin was founded in 1848 the area was initially viewed as undesirable for settlement due to the presence of an extensive swamp and tidal inlet, but during the ensuing 50 years it developed into first a residential area, then a mixed residential-industrial-commercial zone, before emerging in the 20th century as the hub of the city’s central business district. While this broad pattern of change has been well documented (Forrest 1990), little is known of the actual people that occupied this neighbourhood and how it (and they) may have responded to the transformations taking place around it. Late 20th and early 21st century developments in North Dunedin have given rise to a series of archaeological investigations which have yielded substantial assemblages of artefacts relating to a diverse range of residential, commercial and industrial contexts. To date there has been no attempt to bring this data together to assess what it can reveal about the neighbourhood as a whole; this thesis sets out to remedy that. In pursuing this objective, several more specific research questions will be considered:

- What can the material culture record tell us about everyday life in nineteenth century North Dunedin?
- Is it possible to see evidence of the major social and economic transformations occurring within the city during the last half of the nineteenth century in the material culture record?
- Does this evidence support or contradict orthodox historical ideas about the neighbourhood and its inhabitants?
- How did the experiences of North Dunedin residents compare with those from other similar neighbourhoods in the colonial world?

A second, and perhaps equally important, objective of this thesis is to highlight the potential of material recovered from development-driven archaeological investigations for academic
research. This is an extremely under-exploited resource, but one that is rapidly growing and may well constitute the major part of the archaeological record recovered in modern urban settings. Through the detailed case study presented here it is hoped that other academic archaeologists will be encouraged to take advantage of this resource.

**Dunedin – Setting and History**

Dunedin is a small city of around 120,000 people in the southeast of New Zealand’s South Island (Figure 1). This location was initially chosen to take advantage of the sheltered natural harbour (Otago Harbour) (Forrest 1964). The Free Church of Scotland joined forces with Wakefield’s New Zealand Company with the intention of creating a two-tiered, wholesomely Presbyterian settlement that might one day rival Edinburgh, the city from which it derived its name (Reed 1956: 19). The first European settlers (most of whom were Scots) arrived in Dunedin in 1848 aboard the *John Wickliffe* and *Phillip Laing*. Many were hoping to escape the overcrowding, poor living conditions and rigid class system of Britain at the time and build themselves new lives (Wood 2005: 5). For the first decade of its existence the settlement grew slowly and was focused around the area south of the Octagon. This was all to change, however, with the discovery of gold in the hills of Central Otago in 1861. The gold rush which was to follow saw a massive influx of wealth and people to Dunedin and see it develop from a small frontier town into the foremost city of New Zealand.

Outside the realms of archaeology there have been a number of historical investigations into Dunedin’s past. The majority of the histories written on the city (McDonald 1965; McLintock 1949; Olssen 1984; Reed 1947, 1956) focus heavily on the municipal development and famous figures rather than the everyday lives of the residents. One exception is the work of Wood (2005) which gives an in depth discussion of sanitation and public health of nineteenth century Dunedin. While this research presents a vast amount of information about how these factors shaped the city and its people, it only covers one aspect of the community. A far broader study was undertaken by Olssen and others (Olssen 1995; Olssen *et al.* 1999; Olssen *et al.* 2011; Stenhouse 2005) into the traditionally working class neighbourhoods of South Dunedin. Known as the Caversham Project, this research project spanned many years and attempted not only to profile the inhabitants of these neighbourhoods but to draw meaningful conclusions about the social processes (in particular class and social mobility) which were at work there (Olssen 1995: 2). This work provided us
with a valuable insight into the social history of South Dunedin but ran into some difficulties, such as gaps or ambiguities in the documentary record (Olssen et al. 1999: 41) that could have been aided by the inclusion of archaeological investigations had this been a multidisciplinary project.

North Dunedin

The North Dunedin study area comprises the flat land between the Town Belt in the west and the former shoreline of the Otago Harbour in the east, extending from Bell Hill in the south, to Logan Park and the Botanic Gardens in the north (Figure 2). This was chosen mainly because of the presence of a number of comparable archaeological sites that provided relatively extensive material culture assemblages. The social history of this area is also somewhat neglected, with most completed histories concentrating on the area just south of the Octagon (the oldest part of the city) and the suburbs of South Dunedin (Olssen 1995; Olssen et al. 2011; Stenhouse 2005). North Dunedin was largely unpopulated during the first
decade of settlement due to its unappealing swampy land and the presence of a natural barrier in the form of Bell Hill. This spur, which rose to 150 feet, ran between present day Dowling Street and Moray Place, prevented all but the most determined horse or bullock drawn vehicles from accessing the Octagon and George Street directly from Princes Street (Reed 1956: 57). Once this obstacle was removed (a process which would take around 15 years and be completed in the early 1870s (Reed 1947: 272)) the North Dunedin flat became considerably more desirable, especially once the swamp was largely filled in. These improvements resulted in a rapid northern shift of the town’s central business district from Princes Street to George Street where it remains today. The area also contains some of Dunedin’s first suburbs which have the potential to reveal a great deal about the changes in residential land use patterns and the factors which influenced this development, such as industrialisation.

Dunedin Urban Archaeology
A small amount of academic research into Dunedin’s urban archaeology has been undertaken in the last few years. An Honours dissertation was completed in 2009 by Davies in which he attempted to synthesise the archaeological excavations undertaken in Dunedin before that date in order to produce a meaningful and comparable dataset and provides us with a basic overview of a large portion of the work completed within the city. Carter (2011) undertook an investigation of the maritime cultural landscape of the Otago Harbour as a Master’s research project and went some way to proving how useful a landscape approach is for understanding archaeological sites. The vast majority of urban historical archaeological work done in Dunedin to date, however, has been cultural resource management related. At least 26 sites were excavated in the Dunedin urban area during the period from 2000 to 2013, all as a response to proposed development. Many of these sites were probably not utilised to their full potential due to the site specific nature of the investigations. Often, as Carter mentions, a site’s importance is only truly recognised when it is considered as part of the broader cultural landscape (2011: 218). One of the main goals of this thesis, as mentioned above, is to demonstrate the ability of these cultural resource management investigations to act as an invaluable dataset for the academic archaeologist, as attempted semi-successfully by Davies, and, when considered together rather than individually, to provide us with a relatively in depth picture of the historical community.
Figure 2. Map of Dunedin showing original shoreline, study area and sites
Each of the assemblages and sites used in this research were investigated in conjunction with development projects in North Dunedin. A total of eight sites were able to be used and their locations can be seen in figure 2. The material from one site, 234-242 George Street, was able to be accessed and analysed first hand, but for the remainder of the sites only the reports were available. These final reports focus mostly on a description of the features and material uncovered and present limited interpretations of how the site fits into the larger North Dunedin community. This is largely due to the time and money constraints that are always present with these types of projects. Despite this lack of interpretation, the presence of such (usually) detailed description of the artefactual material and contexts means that these reports are incredibly important and useful sources of information for research purposes.

**Community Studies in Archaeology**

In archaeology, as in history and social anthropology, the potential for a community to act as a useful case study when researching a particular culture or society or more general social processes and problems has long been recognised (Arensberg 1961: 241). The way in which research into these communities is best undertaken, however, varies significantly between researchers. Cusick (1995) defines a community study as “a study of a town or other small settlement at the household level, comparing numerous household sites, with information on the occupants compiled both from documents and excavation.” He argues that to truly understand a historical community and the social structures and processes that acted upon it highly contextual archaeological evidence is required, such as material from household sites that can be securely linked with particular families or individuals. Introducing this limiting factor to this type of research, as Cusick admits (1995: 60), causes a number of problems, for example it cuts out a vast amount of excavated sites and material that could provide a great deal of evidence about the community but lack clear links to specific people. Compiling an in depth family history for every site in an area is also extremely time consuming, and while it is undeniably a good way to interpret the sites or households, most research projects lack the labour or time necessary to complete this to the required standard.

Deagen (1983) used a similar approach for her study of the colonial Spanish community of St. Augustine in Florida in that those involved focused on collecting evidence of “social
variability and regularity” rather than undertaking the research in a household-by-household way (Deagen 1983: 6). Praetzellis and Praetzellis (2004) used yet another adaption for their study of the late nineteenth and early twentieth century community of West Oakland in San Francisco. They employed a distinctly post-processualist approach in which they utilised not just material from individual household sites but also general oral histories and local literature. Slightly closer to home, La Trobe University and the Historic Houses Trust of New South Wales recently undertook a research project titled ‘The Archaeology of the Modern City’ which had the intention of contributing to the understanding of several communities in Sydney and Melbourne through the material culture recovered during previous cultural resource management excavations. To facilitate this they developed two databases: the EAMC Archaeology Database and the People+Place Occupancy Database. The first was an attempt to find a way to catalogue material culture that would support meaningful comparisons between assemblages when combined with historical data (Crook and Murray 2006b) and the second to connect this material to the people who lived and worked at each particular site through links with historical documents (Crook et al. 2006: 5). This method proved to be effective and several papers and publications have been released which present important contributions to the understanding of these communities (for example: Crook et al. (2005); Murray (2006, 2010)). These works, which are just a few examples of this type of study, demonstrate that the approach Cusick describes is not the only way in which to form an understanding of a neighbourhood or community, and although most did rely on some degree to access to highly contextual information, it is possible that at least a broad understanding of a neighbourhood could be constructed without these resources. This thesis is presented in the hopes of demonstrating the possibilities of this idea with what could perhaps be best described as a “neighbourhood” study.

It has also been recognised by many that it is essential communities and neighbourhoods such as those studied above are not considered in isolation but instead as part of a larger whole (Orser 2009: 253). A comparative approach to this type of research, or at least an element of comparison, is the easiest way to understand how and why social change occurs (Mrozowski 1988: 20). This is especially relevant when studying a colonial area like Dunedin as it existed as part of a much wider British network that would have had a major influence
on the products and material culture available to the residents as well as the social and ideological structures in place in these settlements.

**Structure of the North Dunedin Study**

The research presented in this thesis was carried out using an approach adapted from studies such as those discussed above. The nature of the study material and sites meant that the highly contextual, household based research favoured by some was unachievable. It is also not the intention of this thesis to present the history of North Dunedin and subsequently link the archaeology to this. Instead, the material culture recovered during the development projects used was analysed and used to interrogate and test established ideas about the broader events and processes that were occurring during the second half of the nineteenth century in this part of the city. This process involved a number of steps:

1. An analysis of the material culture from a primary study site (234-242 George Street) in order to provide one in depth, research oriented analysis of a nineteenth century material culture assemblage.
2. Extensions of this initial analysis to the wider study area using previous archaeological investigations with the intention of characterising a North Dunedin material culture assemblage.
3. The identification and explanations of any patterns visible within this material culture assemblage that can add to our knowledge of everyday life in the area.
4. Comparisons of the situation in nineteenth century North Dunedin and other British colonial cities in order to develop a broader understanding of the social context of the neighbourhood during this period.

**Thesis Outline**

Chapter Two presents the analysis of the material culture from the primary study site, 234-242 George Street. The information gathered during this analysis is then used to create a site narrative which attempts to place the site within a meaningful context. The following chapter (Three) draws in evidence from previous archaeological investigations undertaken within the study area in order to characterise the nineteenth century North Dunedin material culture assemblage. Chapter Four is a discussion of the information extracted from the artefactual record and which incorporates various historical sources in order to create a
picture of everyday life in the area. Major influences, processes and stereotypes that feature in the historical record are tested against the archaeological evidence in order to dispel or strengthen these ideas. Chapter Five widens the scale of the study and compares the situation and experiences of the residents of nineteenth century North Dunedin to other British colonial cities elsewhere in New Zealand, Australia and the United States of America. This chapter places North Dunedin within a global context and allows more meaningful conclusions to be drawn about the nature of the neighbourhood than research just at the local or national level. The final chapter evaluates the extent to which the research questions were met and offers some suggestions for future research directions.
CHAPTER 2: 234-242 George Street

Excavations took place at this site as part of the extension of the building at 234-242 George Street from July to November 2011. Archaeological assessments and monitoring were not organised prior to the onset of work, however, and it was only part way through the work that archaeological monitoring began. This resulted in a significant amount of material, a lot of which probably related to the very earliest European activity at the site, being lost or severely disturbed. Despite this, a reasonably large amount of material was recovered by archaeologists when construction work recommenced and was able to be recorded and analysed appropriately and the site was still able to shed light on life in this area of North Dunedin during the late 19th century.

Excavation Area

The excavations were undertaken for installation of the extension footings and services (mostly sewer lines). Five deep trenches and four auger holes were dug and the ground level of the car park was lowered by around 700mm (Figure 3). Several features which aid in the interpretation of the site and material were found in some of the trenches and are discussed briefly below. A more detailed description of the excavation process can be found in the interim and final site reports (Middleton and Maxwell 2011; Middleton et al. 2012).

Contexts

Several contexts were able to be identified in the stratigraphy of the site. Only those contexts which relate to the 19th century activity at the site are discussed here (Layers 3 and 4), the top layers and the unprovenanced material are described in the excavation report.

Layer 4

This was the lowest layer of the site; a blue-grey clay layer found at the base of most of the trenches. This clay probably relates to a stream that ran through this area during the first decades of European occupation. The outlet can be seen in figure 2, in which the edge of the tidal swamp that once covered swathes of North Dunedin is overlaid (in green) on the modern street layout. This is further supported by the large amount of water that collected...
in the base of the one of the deepest trenches (Trench 1) after it collapsed due to structural insecurity.

Figure 3. 234-242 George Street site plan showing excavated trenches

A large amount of artefactual material was found within this layer, and the anaerobic nature of the clay meant that organic material, such as fabric and floral remains, were preserved much better than in the later deposits. In Trench 1 a layer of flax leaves separated the clay from the above deposits and acted as a seal for the material below. This was not present in the other trenches, however, and there was some evidence of slight disturbance in places. There was also evidence that the mechanical excavation methods resulted in the contamination of this layer with material from higher up, but this was rare and generally easy to distinguish, for example three fragments of clearly mid-twentieth century glass bottles were found while the rest appear to date to the mid-1880s at the latest.
Layer 3
A layer of mixed fill extended across most of the site just above the clay. In one area the fill is distinct enough to have been referred to as a feature in itself (Feature 3), but on closer examination of the material it seems that this darker fill relates to the same event as the rest of the layer. It appears that this layer consists of re-deposited material from elsewhere, although the artefacts are generally very similar to those from Layer 4, so it is probable it was sourced from nearby. The intention of dumping this fill here was probably to fill in the swampy land to make it more serviceable. Within this layer there is at least one noticeable discrete dumping event consisting of an assemblage of pharmaceutical bottles, as well as a range of other material seemingly incorporated into the fill. There are also deposits of ash and iron slag close to the top of this layer which almost certainly relate to activity at the Vulcan Foundry in the section to the rear of the site during the mid- to late-1800s.

At the interface of this layer of fill and the layer above is an intermittent band of more-or-less sterile yellow silt (Figure 4). This is consistent with reports of a flood in November of 1894 which caused considerable damage to the surrounding businesses and covered the floor of the Drapery Association building (in the adjacent section to the site) in a two inch deep layer of silt (Otago Daily Times 5/11/1894, page 3). This event acts as both a precise chronologic marker but also as an indicator of the level of disturbance of the material in the layer below. As there are several places where this band seems intact it can be surmised that a significant proportion of the artefactual material in Layer 3 has not been disturbed since it was redeposited here. This may not be of great importance as the material is still out of its original context, but it shows that the constant cycle of building and re-building that occurs in urban areas does not always destroy earlier archaeological deposits.
Artefacts

The site yielded a considerable amount of artefactual material, so much so that it was not feasible to recover it all. Instead, what was thought to be a representative sample was collected for analysis and diagnostic portions of objects were favoured over less useful fragments. The majority of the objects have already been described in the excavation report so only those artefacts that can be securely provenanced to the 19th century deposits are discussed in detail here. Despite the loss of some of the contextual detail of the material during the excavation a considerable amount of information regarding the nature of the surrounding community was able to be extracted from the artefact assemblage and several meaningful conclusions were able to be drawn.
Ceramics

A reasonably large assemblage of ceramics was recovered from Layers 3 and 4 of the site, consisting of 562 fragments with a minimum number of vessels (MNV) of 217. Almost 80% of these vessels and fragments came from the lowest excavation layer (Table 1).

Table 1. 234-242 George Street ceramic assemblage

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NISP</td>
<td>416</td>
<td>146</td>
<td>562</td>
</tr>
<tr>
<td>MNV</td>
<td>171</td>
<td>46</td>
<td>217</td>
</tr>
</tbody>
</table>

Only three complete vessels (all stoneware bottles) were found but most others were represented by large enough fragments to confidently discern their form. A number of manufacturer’s marks were also able to be identified, some on multiple vessels. There do not appear to be any fragments which join to any from the other layer; however there is what could be a set of flow blue teaware items, examples of which were found in both contexts. A wealth of important information relating to chronology, international trade links and various other aspects of the local community were able to be drawn from the ceramic assemblage.

Vessel Forms

Relative frequencies of vessel forms were consistent across both layers (Table 2). Table and teaware items dominated, with plates being the most common vessel type, closely followed by cups and saucers. Other vessel types were represented in smaller amounts, mainly those relating to food preparation and storage and toiletry items. A small number of decorative ceramic objects were recovered: a small fragment of a figurine and two terracotta flower pots from Layer 4. Four toys were also found, three of which were miniature Bone China tea cups and the other a porcelain doll. These are discussed in the “Personal Items” section.
### Table 2. Ceramic vessel forms by MNV

<table>
<thead>
<tr>
<th>Ware Type</th>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tableware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plates</td>
<td>39</td>
<td>12</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Bowls</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Tureens</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Ashettes</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Jugs</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Eggcups</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>17</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td><strong>Teaware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cups</td>
<td>32</td>
<td>6</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Saucers</td>
<td>26</td>
<td>11</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Teapots</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>62</td>
<td>17</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td><strong>Food Prep/ Storage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowls</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Bottles</td>
<td>12</td>
<td>3</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Storage Jars</td>
<td>8</td>
<td>4</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>26</td>
<td>8</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td><strong>Toiletries</strong></td>
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<td></td>
</tr>
<tr>
<td>Ewers</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Basins</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Chamberpots</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cosmetic Jars</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Soap Dishes</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
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<tr>
<td>Toys</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Unidentified</td>
<td>6</td>
<td>2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>3</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>171</td>
<td>46</td>
<td>217</td>
<td></td>
</tr>
</tbody>
</table>

**Ware Type**

As with form, the pattern of body materials was very similar in each of the two layers. Refined earthenware was by far the most common material, with smaller amounts of Bone China and hard paste porcelain (both Chinese and British), coarse earthenware and stoneware (Table 3).
Table 3. Ceramic ware types by MNV

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse Earthenware</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Refined Earthenware</td>
<td>123</td>
<td>33</td>
<td>156</td>
</tr>
<tr>
<td>Bone China</td>
<td>21</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>Porcelain</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Stoneware</td>
<td>15</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>171</td>
<td>46</td>
<td>217</td>
</tr>
</tbody>
</table>

Earthenware

Earthenware vessels of several different types make up almost 75% of the Layer 4 ceramics and over 70% of the Layer 3 assemblage. Whiteware is by far the dominant ware type but yellowware, creamware, dyed-body ware, refined red, buff-bodied and coarse earthenware are also represented (Table 4).

Table 4. Earthenware types by MNV

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whiteware</td>
<td>115</td>
<td>31</td>
<td>146</td>
</tr>
<tr>
<td>Creamware</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Yellowware</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>White Granite</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Refined Red</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Buff-Bodied</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dyed Body</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td>33</td>
<td>156</td>
</tr>
</tbody>
</table>

Whiteware

This ware type accounts for over 90% of the earthenware vessels for both layers. Three quarters of the whiteware vessels are decorated in one of numerous styles, including underglaze transfer-printed (UGTP), sponged, banded, moulded and hand-painted decorative techniques, although most of this variety is found in the Layer 4 assemblage as only UGTP, spongeware and undecorated vessels were recovered from Layer 3. Most vessels made from
this material are table and teaware items with a small number of storage jars, toiletry vessels and a kitchen bowl.

Other Earthenware

Within the two assemblages several other types of earthenware are represented. Creamware, yellowware, refined red and buff-bodied earthenware, dyed-body ware, terracotta and coarse earthenware are all present, but in much smaller amounts than whiteware. These body types were most often restricted, at least during this period, to utilitarian vessels. Exceptions to this, however, are teapots, which were often made from material such as refined red or buff-bodied earthenware but are highly decorative and intended to be displayed.

Layer 4

There are sherds from four teapots in the Layer 4 assemblage, three refined red earthenware and one of buff-bodied earthenware. The other vessels include a creamware jar, two large yellowware kitchen bowls, two terracotta plant pots, a White Granite cup with moulded Berlin Swirl motif (Figure 5), at least one moulded blue dyed-body ware jug and a tin-glazed coarse earthenware bowl. The latter is almost certainly of Chinese origin and appears to be handmade. These items are all typical of a mid- to late-nineteenth century urban deposit.

Figure 5. White Granite cup sherd with Berlin Swirl motif
Layer 3

Only two other types of earthenware were found in Layer 3, each represented by a single vessel: a buff-bodied earthenware cup (Figure 6) and large creamware kitchen bowl.

![Buff-bodied earthenware cup](image)

Figure 6. Buff-bodied earthenware cup

Bone China

This ware (a type of soft-paste porcelain) gets its name from the bone meal that was added to the clay prior to firing and was the most common type of British porcelain in the second half of the nineteenth century (Brooks 2005: 27). After earthenware this was the most common ware type in the George Street assemblage. As is usually the case with this ware, the majority of the Bone China vessels from the site are teaware items and exhibit sprigged, moulded, gilt and enamel decorative techniques.

Layer 4

About 12% of the Layer 4 ceramic vessels are Bone China. These vessels exhibit a much narrower range of decorative styles than the earthenware items, only displaying sprigged, moulded and gilt decoration. All are teaware items with the exception of two plates.

Layer 3

Five Bone China saucers were found in this context displaying several decorative techniques.
Porcelain

A much smaller proportion of the assemblage is made up of hard-paste porcelain. Three types are present: British, Chinese and industrial. A number of decorative techniques are represented on these pieces, including UGTP, hand-painting and enamel.

Layer 4

The British porcelain vessels from this layer are quite varied in their form and appearance. A small moulded jug is one of the more functional porcelain items, with the rest appearing to be purely decorative (a figurine, highly decorative cosmetic jar lid and two unidentified vessels that could be vases or planters).

The industrial porcelain fragments also proved difficult to identify. Several fragments of thin, flat and very smooth porcelain were found as was a round moulded piece that could be part of a light fitting (Figure 7).

![Figure 7. Industrial porcelain fragments from Layer 4](image)

Layer 3

Only two hard-paste porcelain vessels were recovered from Layer 3. A plain white saucer is of British origin while an enamelled bowl has the distinctive blue tinted body of Chinese porcelain.

Stoneware

Stoneware is one of the most robust types of ceramics and is most commonly used for vessels involved in the storage and transportation of goods. This can be clearly seen in the
234-242 George Street stoneware assemblage as it is exclusively made up of bottles and crocks, some of which bear the names of international merchants. Because of the utilitarian nature of these vessels, decoration is minimal, usually consisting of a simple salt or Bristol glaze.

Layer 4

Stoneware bottles and storage jars accounted for just fewer than 10% of the ceramic vessels from this context and all are decorated with either a Bristol or Salt glaze. Two of the Salt-glazed bottles can be identified as ink bottles (Figure 8) and the largest of the Bristol-glazed vessels bears the mark of W. G. Nixey (Figure 9), a London based household chemical manufacturer, but it is not possible to identify what kind of contents the other bottles held.

Figure 8. Stoneware bottles from Layer 4
Layer 3

As with Layer 4, the stoneware assemblage from this context is exclusively bottles and storage jars with either salt or Bristol glazes. The single salt-glazed example appears to be a large ink or blacking bottle. Three of the Bristol-glazed crocks bear retailer names. Two bear the name J. T. Morton (Figure 10), a London “provisions merchant” located on Leadenhall Street, while the other bears the name of the also London based wholesale and export druggists Baiss Brothers & Co (Figure 11). Both companies shipped a wide variety of products to the colonies so these names do not aid the identification of the contents.
Decoration Styles
As Table 5 shows, a relatively wide range of decorative techniques and styles are represented in the George Street ceramic assemblage. Under glaze transfer-printing (UGTP) in a variety of colours is the dominant style, accounting for almost half of the vessels, a characteristic which is common of New Zealand historic period sites of this date. The presence and range of decoration types can provide us with a wealth of information, not only about the chronology of the site, but about the nature of the community in the surrounding area.
UGTP

As is often the case with assemblages from this time period, UGTP was by far the most common decorative technique amongst the ceramics from both layers. A wider range of colours and patterns are represented in the Layer 4 assemblage compared to the layer above (Table 6), but this could be related to the significantly larger volume of material recovered from the lower context.
Layer 4

Every UGTP vessel from this context is an item of table or teaware with the exception of a black UGTP floral soap dish (Figure 12) and a Japanese style wash basin. Almost the full range of print colours are represented: various shades of blue (the most common colour), black, purple, green, red, brown, grey and flow blue. While blue and white ware has enjoyed a lengthy popularity, even up to today, other print colours were in vogue for much shorter time periods, with peak manufacture of most being restricted to the early-to mid-1800s (Samford 1997: 22). Several patterns were identified (Figure 13): Asiatic Pheasants (12 vessels), Willow (nine), Rhine (five), Teddesley (three), Fibre (two), Albion (two), Rouen (two), Gothic (two) Province (one) and Cable (one).

Figure 12. Floral UGTP soap dish from Layer 4

Predominance of Asiatic Pheasant patterned tableware is a characteristic of assemblages from after around 1850 (Hudson n.d.), although with this collection there are still a large number of Willow patterned pieces, which could suggest that this material dates to not long into the second half of the century. At least two of the identified patterns (Rhine and Fibre) are most commonly found in sites dating to the middle decades of the 1800s (Woods 2012). These relatively early characteristics contrast with the evidence from the identified maker’s marks, which are discussed in a later section.
Figure 13. Identified UGTP patterns from Layer 4
A variety of other unidentified patterns were present, several of which had very similar motifs. Japanese motifs feature on a number of vessels, and one, a basin, is decorated with a black Japanese inspired design featuring scrolls and blossoms on a background of ivory-dyed whiteware (Figure 14). This style was most popular in the 1870s and 1880s (Samford 1997: 19). Classical themed patterns (for example see figure 15) featuring columns and urns are also represented, reflecting the nineteenth century love of all things classical (Praetzellis and Praetzellis 2001: 646). Patterns, particularly on borders, which resemble the gothic architectural style (such as concentric circles and leaf-shaped designs like those in Figure 16) are also common and can be assumed to serve a similar purpose to gothic sauce and salad oil bottles. These are thought to be intended to resemble the gothic architectural features which were popular on Victorian churches and therefore show piety and morality (ibid). Also present is a cup with a tartan style UGTP pattern (Figure 17) which acts as a reminder of Dunedin’s Scottish heritage.

Figure 14. Black UGTP basin with Japanese motifs and ivory dyed body
Figure 15. Blue UGTP bowl with Classical inspired design

Figure 16. Gothic inspired UGTP designs
Layer 3

All but four of the whiteware vessels from Layer 3 are transfer-printed and a range of colours are represented, although not as comprehensive a range as in the lower layer. Blue is, as usual, the most common colour (eight vessels), although not by much in this case as there is only one less brown printed vessel. Purple, black, green and flow blue prints are also present in smaller amounts. As with Layer 4 all the vessels are either tableware or teaware items apart from two toiletry related vessels (a toothbrush holder and wash basin) and so all would have been intended as items for display in various areas of the house.

Asiatic Pheasant is, again, the most numerous pattern in the Layer 3 assemblage (four vessels), followed by Willow and Rouen with two vessels each. Teddesley, Dulcamara (Figure 18), Gothic and Ribbon (Figure 18) are each represented by a single vessel. The unidentified patterns include Japanese, classical, floral and gothic inspired designs very similar to those from Layer 4.
Banded
Ten banded vessels are present in this assemblage, all of which were found in Layer 4. The precise configuration, thickness and colour of the bands vary but they are almost exclusively restricted to the outer and/or inner rim of the vessel (Figure 19). This technique is present on plates, cups, saucers and a chamberpot. Blue, red, purple, green and brown bands were identified, with one plate having both blue and red. This style of decoration was especially popular in hotel-ware during the last quarter of the 1800s (Miller 1991: 7).
Sponged

This decorative style is represented by a total of seven vessels from the site, all but one of which are teaware items. This style of decoration is restricted to the rim of the vessels and the colours used (blue, green and brown) are similar to those on the transfer-printed ware. The crudely printed patterns clearly resemble the intricate border designs on the transfer-printed wares. This technique was most popular from around 1830-1860 (Woods 2011: 63), at a time when the price of UGTP ware was significantly higher than those produced with the lower skill but more labour intensive process of sponging designs onto ceramics (Miller 1991). By the end of the peak popularity of this style advances in manufacturing techniques had improved and transfer-printed ware was being mass-produced which would have made a significant difference to the affordability of that ware type, which is probably the main reason people bought much less spongeware.

Layer 4

Three spongeware cups and two saucers (none of which match) were found in this context (some are shown in figure 20). The presence of these vessels, like the range of UGTP colours and patterns, contradict the dates suggested by the manufacturers’ marks discussed later, which has significant implications for the interpretation of the site.

Layer 3

This, aside from the UGTP and plain vessels, was the only other style of decoration found on whiteware from this layer. Two vessels, a brown plate and black cup (Figure 21), were
represented. As with the lower layer the patterns stamped onto these vessels appear to resemble simple versions of UGTP border designs.

![Moulded and Sprigged](image)

**Figure 21. Black spongeware cup fragment**

**Moulded and Sprigged**

Moulded decoration is present on a variety of wares and vessels in the George Street assemblage including whiteware, White Granite, dyed body ware, Bone China and hard paste porcelain items. Several of the moulded vessels also have gilt edge-banding. Sprigged decoration is generally restricted to Bone China teaware vessels (Brooks 2005: 42) and this was definitely the case with this assemblage.

**Layer 4**

Sherds from several moulded vessels were found in Layer 4 including whiteware, White Granite, Bone China and porcelain items. The whiteware vessels include two jugs, one with a weave style design and the other a cable pattern, and a teapot with a gothic style repeating circle pattern around the body. As the pieces are so small there is little information to be taken from them. A White Granite cup is decorated with a Berlin Swirl motif (Figure 5) which was the most common form of decoration on vessels of this type of earthenware (Brooks 2005: 35). A small, intricately moulded jug is one of the more functional porcelain items in the assemblage.

Moulded decoration in the form of scalloped rims and sprigging were the only forms of decoration found on the Bone China vessels from this layer apart from gilt banding. Two patterns were identified on the sprigged vessels: Chelsea Sprig (Figure 22) and Imitation Jasper (Figure 23). The latter is seen as a cheaper copy of Wedgewood’s popular Jasperware.
The thistles of the Chelsea Sprig, and the fact that they appear on teaware vessels, could be seen as a display of the owner’s Scottish identity, which is hardly surprising to find in the “Edinburgh of the south.”

**Figure 22. Chelsea Sprig**

**Figure 23. Imitation Jasper**

**Layer 3**

A buff-bodied earthenware cup with an intricately moulded floral design around the body (Figure 6) and a Bone China saucer with a simple moulded pattern around the rim are the only vessels from Layer 3 that bear this type of decoration.

**Hand-painted and enamelled**

These two types of decoration are similar in that the decoration is hand-applied but there is an important distinction concerning the stage of manufacture during which it is applied. ‘Hand-painted’ refers to decoration applied under the glaze and is relatively resistant to wear while ‘enamel’ is the term used for painted decoration over the glaze and is much
more prone to fading and chipping due to the lack of protection (Brooks 2005: 38). Enamelled vessels were usually more expensive than the under-glaze printed versions and this type of decoration is usually restricted to higher quality and display pieces (Miller 1991: 13). A small number of vessels recovered during the George Street excavation display hand-painted decoration, both over and under the glaze.

**Layer 4**

An enamelled British porcelain cosmetic jar lid from Layer 4 is decorated with very fine polychrome flowers (Figure 24) and would have taken pride of place on a dressing table. The assemblage also contains two similarly hand-painted vessels: a saucer and an unidentified vessel. Both are decorated with a pattern which resembles foliage of some kind in green and blue. A small sherd of a painted porcelain figurine was also found, although not enough of it is present to say what it was. The same problem applies to a hand-painted hard-paste porcelain vessel (Figure 25). It is decorated with white flowers on a bright pink background but all that can be said about the vessel form is that it appears to have a wide rim and is quite heavy.

![Figure 24. Enamelled porcelain cosmetic jar lid](image)
Layer 3

One of the Bone China saucers recovered from this context has delicate flowers enamelled around the rim (Figure 26) and a Chinese porcelain bowl has a more rustic floral design on the outer surface (Figure 27). This particular vessel bears what is presumably a maker’s mark in the form of a red “squiggle”, although it has not been identified.
Other Decoration Styles

A number of other decorative techniques are represented in this ceramic assemblage but in much smaller amounts.

Layer 4

A variety of vessels from this layer are decorated in ways not covered in the previous sections. Two refined red earthenware teapots are simply decorated with a black slip and another is decorated in a style known as Lustre (Figure 28). This particular example has a black base with a thick blue band and metallic gold swirl detailing. A buff-bodied teapot is, again, more simply decorated with a Rockingham type glaze. Blue decoration on the characteristic opaque white of a tin-glaze is present on a seemingly handmade bowl of presumed Chinese origin (Figure 29). Gilt banding and edging features on a number of Bone China vessels. Two industrial slip-decorated vessels were also found, one with engine turned (Figure 30) and the other mocha patterning (Figure 31). As mentioned in the Stoneware section, all vessels of this material were decorated with either a salt or Bristol glaze. These styles are all typical of the mid to late 19th century except for the tin-glazed vessel which is characteristic of the earlier decades of the 1800s (Woods 2012).
Figure 28. Refined red earthenware teapot fragments. The top fragment is decorated in a style known as Lustre.

Figure 29. Chinese tin-glazed vessel.
Layer 3

The only other styles of decoration represented in the ceramics from Layer 3 are two Bone China saucers with gilt decoration, one with the popular Tea Leaf motif (Figure 32), and the stoneware vessels which are all, like in Layer 4, decorated with either a salt or Bristol glaze.
Undecorated

A total of 35 ceramic vessels show no evidence of decoration. While most of these plain pieces have little interpretive value, the presence of two creamware vessels, one in each layer, is of interest. This ware is generally associated with the first decades of the 1800s, which is very early for this site and presumably came to Dunedin with some of the earliest European settlers.

Layer 4

The undecorated whiteware from the lowest excavation layer includes a range of vessel forms including tableware (plates and a tureen), teaware (cups and saucers), food preparation and storage vessels (jars and mixing bowls) and a chamberpot. This is a much wider range than the other styles of decorated whiteware and includes several vessel types which would have been valued more for their utility rather than their aesthetics. Plain tea and tableware would have probably have been used when there were no guests around to save the more highly decorated items and would have been the cheapest crockery available (1991; Miller 1980). Also included in this assemblage are a plain creamware storage jar (Figure 33), bone china saucers, several British porcelain vessels (an egg-cup, jug and two plates) and two terracotta plant pots.
Figure 33. Selection of undecorated ceramic vessels from Layer 4. The bottom centre sherd is creamware while the rest are whiteware.

Layer 3

Several undecorated vessels are represented in this assemblage: a creamware kitchen bowl, two saucers (one Bone China and the other British porcelain) and two whiteware vessels (an egg-cup and storage jar) (Figure 34).
Figure 34. Undecorated whiteware storage jar (left) and egg-cup (right) from Layer 3

Maker’s Marks
A number of manufacturer’s and retailer’s marks were identified on some of the vessels. A full description of the manufacturers responsible for the marks can be found in the excavation report (Middleton et al. 2012: 30). Below are presented those marks which were able to be definitively assigned to a company (Tables 7 and 8), with the unidentified marks pictured and described in Appendix 1.

Layer 4
Six of the back stamps found on vessels from this layer were able to be identified to manufacturer, with one of the marks found on multiple vessels (Table 7). The marks are illustrated in figure 35.
The identified maker’s marks belong to pottery companies from three main areas (Staffordshire, London and Glasgow). Each of these cities were important trade hubs during the nineteenth century, particularly for ceramics. It is also interesting that the mark of Pinder, Bourne & Co appears on four different vessels, suggesting that this assemblage relates to an importer of this company’s wares rather than a household. If the Pinder, Bourne & Co vessels are, as they appear to be, broken shop stock rather than used household items, this would suggest that the time between manufacture and deposit was fairly short. This, combined with the other date ranges, suggests a period of accumulation of material at the site which began as early as the 1860s and stopped in the mid-1880s.

Table 7. Layer 4 ceramics manufacturer’s marks

<table>
<thead>
<tr>
<th>Mark</th>
<th>Manufacturer</th>
<th>Vessel(s)</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORT DUNDAS/GLASGOW/POTTERY COY</td>
<td>Port Dundas Pottery Company (Glasgow)</td>
<td>Bristol-glazed bottle</td>
<td>~1850-1932</td>
</tr>
<tr>
<td>J &amp; M P B &amp; CO</td>
<td>J. &amp; M. P. Bell &amp; Co (Glasgow)</td>
<td>Willow pattern plate</td>
<td>1850-1870</td>
</tr>
<tr>
<td>REG DIAMOND/ 6./T/80</td>
<td>W. T. Copeland &amp; Sons (Staffordshire)</td>
<td>Black UGTP basin</td>
<td>13/3/1878 (possibly 1880)</td>
</tr>
<tr>
<td>P B &amp; CO</td>
<td>Pinder, Bourne &amp; Co (Staffordshire)</td>
<td>Four UGTP vessels</td>
<td>1862-1882</td>
</tr>
<tr>
<td>DOULTON/LAMBETH</td>
<td>Doulton (London)</td>
<td>“W. G. Nixey” Bristol-glazed crock</td>
<td>1858-1900s</td>
</tr>
<tr>
<td>BAILEY &amp; CO/FULHAM</td>
<td>Bailey &amp; Co (London)</td>
<td>Salt-glazed bottle</td>
<td>1864-1889</td>
</tr>
</tbody>
</table>
Figure 35. Layer 4 ceramics manufacturer’s marks
Layer 3

Four manufacturer marks were able to be identified amongst the ceramic material from this layer (Table 8 and Figure 36).

Table 8. Layer 3 ceramics manufacturer’s marks

<table>
<thead>
<tr>
<th>Mark</th>
<th>Manufacturer</th>
<th>Vessel(s)</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIATIC PHEASANT/F.JONES.../LONGTON</td>
<td>Frederick Jones &amp; Co (Staffordshire)</td>
<td>Asiatic Pheasant dinner plate</td>
<td>1865-1886</td>
</tr>
<tr>
<td>COPELAND/COPELAND LATE SPODE</td>
<td>W. T. Copeland &amp; Sons (Staffordshire)</td>
<td>Willow side plate</td>
<td>1847-1867</td>
</tr>
<tr>
<td>REGD MARCH 1849/6/POWELL BRISTOL</td>
<td>William Powell (Bristol)</td>
<td>Two Bristol-glazed bottles</td>
<td>1849-1906</td>
</tr>
<tr>
<td>GOTHIC/C.P.CO</td>
<td>Clyde Pottery Co. (Glasgow)</td>
<td>Gothic ashette</td>
<td>1863-1900</td>
</tr>
</tbody>
</table>

Figure 36. Layer 3 ceramics manufacturer’s marks
These marks give a quite a wide range of manufacture periods so it is not possible to settle on as conclusive a date as it was in the previous context. The fact that this material has clearly been re-deposited makes it almost impossible to be sure that these vessels were even related to each other in the original context. It does appear, however, that they are from a similar time period as those from Layer 4.

**Discussion**

Layers 3 and 4 overall contain very similar ceramic material so can be mostly discussed together. The few differences are related to the volume of material recovered from the deposits, which tells us something of the nature of the formation processes at work. Layer 4 is clearly a surface accumulation or layer (Butcher and Smith 2010: 55) containing a selection of household, commercial and broken shop stock items. The layer above is different in that the material is more sparsely distributed through mixed fill that is redeposited from elsewhere, characteristic of ground levelling processes (ibid). While the primary provenance of the Layer 3 artefacts is lost, they can still show the kinds of ceramics used in the area and their close similarity to the Layer 4 material suggests that they are not far from their original context, and the assemblage as a whole can tell us much about the date of the deposits and the nature of the surrounding neighbourhood.

Chronological evidence can be taken from a number of sources within the 234-242 George Street ceramics assemblage, including manufacturer’s marks, known patterns, ware types and decoration styles. However, the nature of the material and the site context has a significant impact on how this evidence should be interpreted. In Layer 4, for example, there are several vessels represented which appear to be broken shop stock deposited not long after manufacture alongside vessels which would be expected to be found in sites dating to the first half of the nineteenth century.

Interestingly, a significant proportion of the ceramic vessels found at the site are stylistically characteristic of a pre-1860 assemblage, such as sponged and creamware vessels, while those with identifiable maker’s marks mostly date to the late 1870s-80s. In the lowest layer 49 vessels (28.7%) would be classed as being definitely or probably of pre-1860 manufacture according to the model proposed in Woods (2011), while in Layer 3 this proportion is much higher, with 22 vessels (47.8%) fitting into one of these two categories. There could be several reasons for this contradiction in the material, such as a prolonged period of dumping
or several phases of activity, but in this case the evidence suggests that it is a result of the older material, which presumably arrived with the early European settlers, having an unusually long life-span. This is supported by the fact that some of the vessels, such as the creamware and tin-glazed earthenware items, are characteristic of a time period prior to the commencement of settlement in Dunedin in the late 1840s. Further supporting this conclusion is the fact that the older style vessels within the assemblages are mostly those that Miller (1991; 1980) places at the lower end of his price scale while the items dating to the 1870s-80s are higher up the scale. This could be explained by an increase in wealth amongst the inhabitants of the area, probably as a result, direct or indirect, of the gold rush of the 1860s, which could have allowed households to exchange their older table and teawares for newer more fashionable styles. It is also evidence that, if this increase in wealth was related to the gold rush, that it took a while to reach the working class members of the community.

The ceramic vessels can provide us with more than just chronological evidence. Several aspects of the nature of the neighbourhood surrounding this deposit can be surmised from this material, including the types of businesses in the area and where they were sourcing their products as well as the ways in which the locals tried to portray themselves and their identity to others.

A number of businesses can be identified through the ceramics assemblage, including grocers and merchants, druggists and hotels. Examples of these can be seen in a map of the block from 1869 (Figure 37). Almost all of the ceramics are of European origin, with only the handmade tin-glazed bowl and an enamel porcelain bowl being recognisably Chinese. The manufacturers identified through their back stamps were all based in one of four areas of Great Britain: London, Bristol, Staffordshire and Glasgow. These areas were hubs of ceramics manufacture and export during the nineteenth century. Although Dunedin is known for its strong Scottish roots, there is nothing overly Scottish about the ceramics, at least as far as place of origin goes. There are no more Scottish produced vessels represented here than you could expect to find in similar sites in other New Zealand cities (for example Auckland (Plowman 2000) and Whangerei (Campbell 2008)) which suggests that the settlement was relying on the same trade links as the rest of the colony.
The styles and patterns represented in the ceramic assemblage can also provide us with some insight into the nature of the domestic community in this part of Dunedin in the 19th Century. Something that stands out clearly is just how British the material is. The UGTP vessels in particular show the British influence, although the main reason for this is probably that this is where they were produced and the main market they were aimed at. Regardless of this fact, by this point in time consumers would have had some degree of choice and would not have to settle for British ceramics if they preferred American or Chinese, for example. There were also an extensive range of patterns and designs available in New Zealand so the fact that consumers were choosing those that were in vogue in Britain at the time (such as Asiatic Pheasant, Willow and various gothic style motifs) suggests that the majority of people, around this site at least, still identified themselves as British. A small number of vessels show distinctly Scottish motifs, such as the thistles of the Chelsea Sprig teaware and a tartan patterned UGTP cup. The fact that these items are all teaware vessels is interesting as it means they were meant to be seen by visitors and thus be a display of the owner’s Scottish identity, which was clearly still important. This “Britishness” of the ceramic material is supported by census information from 1886, which shows that there were almost as many English born residents (17.1% of the population) as Scottish (17.7%), with a reasonable sized Irish population as well (7.7%) (McDonald 1965: 182). It can also be
assumed that most of those people born in New Zealand (almost half of the population) were of British descent.

This almost complete dominance of British ceramic styles could be explained by the segregation of groups of people on grounds of nationality (there was a large Chinese “slum” a few blocks to the south of this area known as the “Devil’s Half-acre” (Wood 2005: 190)), or alternatively it could mean integration among the community. It could be that any non-British residents adopted British styles in an attempt to fit in with the majority of the community and therefore left very little signs of their own roots. It is almost impossible to tell which conclusion is the correct one without the association of at least one traceable household with the material.

Glass

A total of 438 glass fragments were recovered from the lower two layers of the excavation, with a minimum vessel count (MNV) of 130. Most of the bottles were incomplete, although many were represented by large enough fragments to ascertain the form with reasonable ease. As can be seen from Table 9, Layers 3 and 4 contained roughly the same quantity of fragments and vessels, although as can be seen in the following sections, there are some noticeable differences in the make-up of the two assemblages.

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NISP</td>
<td>236</td>
<td>202</td>
<td>438</td>
</tr>
<tr>
<td>MNV</td>
<td>64</td>
<td>66</td>
<td>130</td>
</tr>
</tbody>
</table>

The vessels were divided into four main functional categories for analysis: beverage, pharmaceutical, food and other, with the first two accounting for the majority of the assemblage (Table 10). Bottles were identified to type using embossing (when present) and body shape. All relevant information on dating and stylistic aspects of the glass assemblage presented below was taken from the comprehensive Historic Bottle Identification website run by Bill Lindsey (n.d.) (http://www.sha.org/bottle/index.htm), and names for body shapes were taken from Smith (n.d.) unless otherwise stated.
**Beverage related**

As in most historic sites, the most common types of glass vessel in the 234-242 George St assemblage were those which relate to the storage and consumption of beverages. Table 11 shows the range of this type of vessel found within Layers 3 and 4. The make-up of the beverage related bottles from the two layers are very similar, with both being over 70% alcohol bottles. It must be remembered, however, that bottle names such as “Spirit” or “Black Beer” relate to the shape and these vessels would have held a variety of liquids, both alcoholic and non-alcoholic. It is also probable that most were re-used multiple times. Some of the alcoholic beverages would also have been used differently than today, such as schnapps which was marketed more as a health tonic.

**Table 10. Glass vessel types by MNV**

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverage</td>
<td>30</td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>10</td>
<td>41</td>
<td>51</td>
</tr>
<tr>
<td>Food</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
<td><strong>66</strong></td>
<td><strong>130</strong></td>
</tr>
</tbody>
</table>

**Table 11. Beverage related glass vessels by MNV**

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcoholic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Black Beer</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Black Porter</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Case Gin</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Schnapps</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Ring Seal Wine/Beer</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>12</strong></td>
<td><strong>35</strong></td>
</tr>
<tr>
<td><strong>Non-Alcoholic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torpedo</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Soda</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Codd</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Milk</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Square Bevelled</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7</strong></td>
<td><strong>5</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>30</strong></td>
<td><strong>17</strong></td>
<td><strong>47</strong></td>
</tr>
</tbody>
</table>
Layer 4

Drink related bottles accounted for almost half of the glass vessels from the lowest layer of excavation. Most of the bottle forms are typical of the mid to late-nineteenth century (such as the black beer, case gin and spirit bottles), with the exception of fragments from two Thompson’s Purity soda bottle bases embossed with “1912”. These almost certainly originate from one of the above layers and were probably displaced by the mechanical digger used at the site. The rest of the vessels (most of which are represented by fragments) exhibit typical hand-applied tops and a variety of mould types that identify this assemblage as dating to the second half of the nineteenth century. Some bottles show evidence of manufacture techniques dating to earlier decades, such as hand-blowing and dip moulds, but these were probably old by the time of deposition and most of the bottles appear to have been made with two or three-piece moulds which were common from the 1820s throughout the rest of the century. The fact that “black” glass bottles (Figure 38) are the most common type suggests a date of around 1880 for the assemblage as after this date green ring-seal bottles take over as the dominant vessel form (Petchey 2009: 58).

Figure 38. "Black" glass bottles from Layer 4
Several specific brands and products are identifiable through the embossing present on many of the bottles and show the many international trade connections exploited by Dunedin at the time. Two complete and several fragmentary Symington & Co and Paterson’s Ess “Camp” Coffee and Chicory bottles (Figure 40) were recovered, originating from Edinburgh and Glasgow respectively. Part of a Dutch Hoytema gin bottle (Figure 39) suggests links with continental Europe, and two fragments from Udolpho Wolfe’s Aromatic Schnapps bottles (Figure 41) were most likely made in North America. Only one beverage bottle shows any signs of containing a locally produced product: part of a torpedo shaped soda water bottle with “…DIN” embossed on the side, which is probably part of “DUNEDIN”.

Figure 39. Fragment from a Hoytema gin bottle
Layer 3

The selection of beverage bottles recovered from this layer show that there has been some disturbance, as it is a mix of relatively early hand-blown and dip moulded black beer and spirit bottles, later nineteenth century Codd, torpedo and schnapps vessels and twentieth century crown-topped soda and milk bottles. This is potentially due to a number of factors including the continuing cycle of construction and demolition of buildings in the immediate vicinity, the effects of the mechanical digger used for excavation and the fact that this material has been re-deposited from its original context. The majority of the bottles from this layer are very similar to the vessels from Layer 4, suggesting a similar date of the early 1880s. This is further supported by the presence of a single Codd style bottle as this finish
was patented in 1870 but was slow to take off in colonial areas such as America and it can be assumed that it was similarly slow to reach New Zealand.

The marked bottles include four Udolpho Wolfe Aromatic Schnapps identical to those from the lower layer, but as this product enjoyed a lengthy popularity this is not necessarily a sign that the two layers were deposited at the same time. Two soda bottles were marked with the names of New Zealand retailers or manufacturers: a Codd type vessel marked with “BENNETT & SONS DUNEDIN” (Figure 43), and a more generic soda bottle embossed “HOGBEN’S PATENT/ 1870” (Figure 42). Hogbens’ Patent was a specific method of bottling soda water developed by a Wellington company Dixon and Hogbens and was used during the last quarter of the 1800s. The Bennett & Sons codd soda bottle is also marked “KILNER BROS LTD MAKERS LONDON” which is evidence that the Dunedin bottling firm of Bennett & sons were having their bottles made in England. The torpedo bottle (Figure 44) is from somewhat further afield. Marked “MATTONI//SODA WATER”, it contained a popular brand (Mattoni) of carbonated water from what is today the Czech Republic. The twentieth century material found at this level included another Thomson’s Purity crown-topped soda bottle with the “1912” mark (Figure 45) and a pint milk bottle (Figure 46).

![Figure 42. Hogben’s patent aerated water bottle](image)
Figure 43. Bennett & Sons Codd bottle

Figure 44. Mattoni soda water bottle
Pharmaceutical bottles accounted for about a third of the assemblage, however they mostly originated from one discrete deposit within Layer 3 (Table 12).
### Table 12. Pharmaceutical related glass vessels by MNV

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectangular Bevelled</td>
<td>7</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Rectangular Panelled</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Oval</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cylindrical Pill</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>41</td>
<td>51</td>
</tr>
</tbody>
</table>

**Layer 4**

This layer contained fragments of at least ten pharmaceutical bottles, most of which have the rectangular, paneled body most commonly used for patent medicines. One oval cross section and one cylindrical pill bottle were also recovered.

Three of the rectangular bottles bear the embossed mark of Dr. Neil, a Dunedin chemist (Figure 47). All three bottles contained his Rosemary Tricopherous, a popular hair tonic. These are probably related to the dump of this type of bottle described in the following section, which means either this is more evidence of cross-contamination during the excavation or that a hole was dug to dump the bottles into and it encroached into this layer. It is possible to identify another two of the rectangular bottles as also coming from Dunedin retailers (‘‘…OC.../DRUG [GIST]/DUN [EDIN]’’ is embossed on the body of one, ‘‘…INSON & P.../[ME]DICAL H.../DUNED [IN]’’ on the other), but not enough of the names remain to pinpoint which ones. A further rectangular bottle bears ‘‘COD LI...’’ on the body, identifying it as having once held cod liver oil. The oval cross sectioned bottle is also embossed but only some of the letters are still present and the mark (‘‘CHRISTIANI...//...OR: V...’’) was not able to be identified.
Layer 3

Pharmaceutical bottles made up the largest proportion of glass vessels in this layer and almost all are Dr. Neil branded. This suggests a single stock clear out event of Dr. Neil’s chemist shop, which was located across the road from this site (Figure 48). The bottles all appear to have been empty at the time of deposition, as there is no sign of any residue and no related tops or caps were found.

Figure 47. Dr Neil’s Rosemary Tricopherous bottle
Figure 48. Detail from 1892 Ignis et Aqua plan showing Dr Neil’s premises outlined in red and approximate location of the 234-242 George Street site in green

Figure 49. Dr Neil pharmaceutical bottles
At least two of Dr. Neil’s own-brand products are represented: his Rosemary Tricopherous for the hair and his “Hop Bitters”, although there are also eight bottles simply marked “J. NEIL” with no mention of the contents. The Hop Bitters bottle provide a rough *terminus post quem* for this particular dumping event, as it was described as a new product in newspaper advertisements in 1882 (e.g. *Otago Daily Times* 28/11/1882, page 3). The rectangular beveled tricopherous bottles dominate the assemblage and are made from a variety of different coloured glass, including aqua green and blue as well as a richer green shade. The fact that there is significantly more of this product in the deposit than any other suggests that this event occurred as a result of demand for the baldness tonic ceasing and production of the product stopping. Also present are two aqua blue oval cross-sectioned pharmaceutical bottles and four unmarked cylindrical pill bottles, in either aqua green or colourless glass, which probably relate to the same event.

**Food related**

A relatively small number of glass vessels were identified as food related. These were mainly sauce and salad oil bottles, with the exception of one pickle jar (Table 13).

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salad Oil</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sauce</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Worcester Sauce</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pickle Jar</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

**Layer 4**

Four food related bottles were able to be identified as coming from this layer: a wide-mouthed pickle jar and three sauce bottles (one ribbed, one Worcester sauce and one tomato sauce). All four are aqua green in colour.

Two of the sauce bottles can be identified more precisely than just to type. The Worcester sauce bottle was able to be identified by its embossing which reads “[L]EA & PERRIN[S]”, the most popular brand of the condiment throughout the nineteenth and twentieth centuries.
The tomato sauce bottle (Figure 50) was also able to be assigned a brand name: that of Holson’s, a manufacturer based in Auckland.

![Figure 50. Holson’s sauce bottle showing embossing on each side](image)

Layer 3

Only one food related vessel was recovered from this layer: a salad oil bottle (Figure 51). These bottles were often decoratively embossed as they were intended to be set on the table during meals.

![Figure 51. Salad oil bottle identical to fragmentary example found in Layer 3](image)
Other

Various other bottles were found which did not fit into any of the above categories or were only able to be tentatively assigned a body shape (Table 14).

<table>
<thead>
<tr>
<th>Layer</th>
<th>4</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ink</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Square Panelled</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Flask</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Round Cross-section</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Square Cross-section</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Polygon Cross-section</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Tumbler</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>7</td>
<td>27</td>
</tr>
</tbody>
</table>

Layer 4

A total of twenty vessels from Layer 4 were placed in this category, including an ink bottle, two lacquer bottles, the base of a tumbler, a small flask of twentieth century manufacture and various generic bottles with round, square and polygon body cross-sections.

The ink bottle (Figure 52) is of a shape known as an English burst-off finish rectangular ink, which is characterized by the crude finish and the two grooves on the shoulder which act as pen rests. Two complete square, panelled ‘Taine’s Black Lacquer’ bottles (Figure 53) are also included here. This household product was used to touch up black furniture and stoves. Some lacquer still remains in one of the bottles.
Figure 52. English burst-off finish rectangular ink bottle

Figure 53. Taine's Black Lacquer bottle
The small flask is more evidence of the displacement of material from above layers during the excavation as it is clearly twentieth century. It is obviously machine-made as the finish is not separate to the rest of the bottle and the plastic screw-cap is still in place. It is unclear what this bottle may have held.

Layer 3

None of the seven glass vessels from this layer that could not be fitted into one of the other categories could be identified any further than body shape, generally because of their fragmentary nature. Four had round cross-sections, two were square and one colourless glass bottle had a polygon shaped body.

Discussion

The beverage bottles provide a considerable amount of information about North Dunedin. The identified products show some of the trade connections Dunedin had with the rest of the world in the early 1880s. Residents of the city had access to products from Wellington, Auckland, Scotland, England, North America, Holland and what is today the Czech Republic, as well as several products that were manufactured in Dunedin itself. Of particular interest is the range of soda waters present within the assemblage. At least two brands were produced in Dunedin, one in Wellington (Hogben’s) and the other (Mattoni) from Europe. This implies that some consumers were deliberately seeking out foreign versions of products that were readily available from local sources. It is also probable that the imported products were significantly more expensive than their local counterparts so at least one resident of this area must have had enough expendable income to purchase luxury European soda water, perhaps as a result of money made during the gold rush. These waters were often marketed as having specific health benefits, for example the Dunedin beverage company Thomson & Co. produced a soda water specifically for invalids (e.g. Otago Daily Times 27/11/1895, page 2), so this may have had an impact on which brand the consumer chose.

Further insights into life in the nineteenth century city can be found within the pharmaceutical bottle assemblage. Almost all of these bottles appear to have come from a single concentration and although the precise context details have been lost, it seems that a
hole was dug through Layer 3 and into Layer 4 in which the bottles were deposited. At the most basic level they give us an idea of some of the medicinal products available at the time, although this list is fairly limited as the range represented here is quite narrow. A supplement still taken by some today, Cod Liver oil, is represented, although it was claimed to have distinctly different benefits. Advertisements of the day proclaim it as a potential cure for consumption as well as “wasting diseases and general debility” (e.g. *Otago Daily Times* 22/10/1864, page 8). The other two products identified were both produced by herbalist and chemist Dr. Neil. His “Hop Bitters” contained imported and local herbs (hops from England, mandrake and bucha from America, rhubarb root from India and local dandelion) as well as “a few other ingredients” which he does not care to list and was touted as a remedy for a number of complaints, including those relating to the stomach, liver, kidneys and bowels (*Otago Daily Times* 13/5/1886, page 3). The fact that he specifically mentions the place of origins of some of the ingredients suggests that their exotic nature would have been viewed favourably by the customer. This supports the evidence from the soda water vessels that consumers would have been able to choose what they viewed as the best product from a selection of brands, and internationality seems to have been a desirable characteristic for consumables. This, in turn, would have had an impact on the manufacturers and retailers who would have strived to portray their products as having this characteristic. The other product, which is present in the greatest quantity, is Dr Neil’s “Rosemary Tricopherous,” a hair tonic. As the pharmaceutical assemblage is almost exclusively made up of these hair tonic bottles it suggests that this dumping event relates to a clear out of stock when this product line ended. Perhaps this was a side effect of the post-gold rush economic slump; people no longer had money to spend on something so unnecessary as hair tonic so its popularity declined so much that it was no longer profitable. According to cemetery records Dr Neil died aged 70 in 1914 and this product stops appearing in his newspaper advertisements after 1890 which gives an idea of when these bottles could have been deposited.

The assemblage of food related bottles is very small so there is relatively little information that can be extracted. The size of this assemblage compared to the beverage bottles is probably due to the different way in which these types of bottles were used. Many food bottles, such as the decoratively moulded salad oil varieties, were intended to sit on the
table during meals and because of their appearance were more likely to have been re-filled and kept for a long period of time. Beverage bottles, on the other hand, were usually more utilitarian in form and though some of them were almost certainly recycled, their life-spans would have been significantly shorter than sauce and oil bottles, not least because their contents would have been consumed at a much quicker rate. What is clear is that most of these vessels held condiments that were intended to add flavour to food, such as Worcester and tomato sauce. This could imply that the majority of food eaten by inhabitants of North Dunedin at this time was fairly bland and needed strong sauces to improve its palatability. A much larger sample size would be needed to draw any concrete conclusions about the types of food being eaten by the community.

**Window Glass**

Two fragments of window glass were recovered from Layer 3. Both are a light aqua green colour, one 8mm thick and the other much thinner (2.7mm). Both are very clearly modern as the glass is a consistent thickness and free from imperfections.

**Metal**

A relatively small collection of metal artefacts was recovered from the 234-242 George St site, and most of the objects had little diagnostic potential. Only ten fasteners were found, but this was probably down to the sampling methods, which out of necessity were focused on efficiency rather than retrieving every artefact. The rest of the metal artefacts were typical of the kind of items you would find in a mid to late nineteenth century urban rubbish dump, such as a discarded tobacco tin and parts of metal containers.

**Layer 4**

**Fasteners**

Six nails were collected from the lowest layer (Figure 54), but this is almost certainly a significant under-representation of the fasteners that were actually present. Fasteners are known to be temporally sensitive (Hamel 2002) so the small sample size could negatively impact the integrity of dating evidence for the layer, but because of the large number of other diagnostic items it is probably not a major deficit.
Five of the nails that were recovered can be identified as cut, with the other too heavily accreted to be able to identify its manufacture conclusively. This is consistent with a pre-1886 site according to Hamel’s (2002) tentative nail chronology, which fits with the other dateable material. Two have rose, three have flat and one has an unidentified head shape and the points are mostly chisel shaped, with the exception of two square points. None appear to be bent or clenched suggesting they have not been used. They may instead have been dropped during the construction of a building in the area or transported here amongst other dumped material.

*Other metal artefacts*

A variety of miscellaneous metal artefacts were recovered from the lowest layer of the excavation, as listed below:

- The lid of a Silver Fern Mild Smoking Tobacco lid (Figure 55 (b)). This brand of tobacco was grown in New Zealand and processed in a factory in Petone which is still manufacturing cigarettes today.
• The face-plate of a door lock (Figure 55 (a)), with a maker’s mark on the inner surface. This mark is hard to decipher but includes a sun motif and some initials which potentially read “M T & S”.
• An iron heel plate from a shoe (Figure 56 (a)). This horseshoe shaped plate has five nail holes, three of which still contain small nails.
• A gold-coloured metal cap from a can with a central hole (Figure 56 (b)).
• A piece of iron hoop metal, presumably from around a storage barrel.
• One piece of iron sheet metal.
• Two fragments of iron strip metal.
• A fragment of an unidentified metal item consisting of two curved pieces of iron nailed together.

Figure 55. Door lock face plate (a) and Silver Fern tobacco tin lid (b) from Layer 4
Layer 3

Fasteners

An even smaller assemblage of fasteners was recovered from Layer 3 than the lower layer. Two cut nails were found (Figure 57), both with flat heads, as well as a much larger fastener, possibly a spike, which was missing its head but had a square cross section and chisel point. One of the nails and the spike were bent, potentially through use. The assemblage is too small to draw any meaningful conclusions.
Other Metal Artefacts

Only two other metal objects were found at this level: a large iron butcher’s hook (Figure 58) and an unidentified flat piece of iron. The butcher’s hook could relate to the neighbouring restaurant kitchen that was operating at the start of the twentieth century or one of the several butcher shops which occupied various sections of this part of town from the late nineteenth into the twentieth century (Figure 59).

Discussion

The metal assemblage recovered from the George Street site consists of building materials (fasteners and the door lock faceplate) and other miscellaneous pieces, few of which have
any sort of real diagnostic value. There is also not enough material to draw any meaningful comparisons between the two layers. Some types of activity happening in this block of the city can be hinted at, however, including building, butchery/food preparation, food storage and tobacco use.

**Fabric and Leather**

A number of pieces of fabric, in various states of preservation, were found in the lower two excavation layers. They include pieces of clothing, offcuts, strands of thread and some netting like material that resembles curtain fabric (Figure 60). While not a huge amount of information can be drawn from the pieces in themselves they can give an insight into the taphonomic processes acting on the artefactual material.

![Figure 60. Netting-like material found in Layer 4](image_url)

A selection of leather items were also found at the site, mostly in the lower layers. The majority are fragments of shoes and boots, with a few unidentified strips and fragments.

**Layer 4**

This layer contained twenty well preserved fragments of various fabrics. Most are woven, probably from wool. Only one piece of clothing can be identified: a men’s waistcoat (Figure 61). The fabric used is quite heavy and tightly woven and appears to have been a deep maroon colour. The positions of the pockets are still visible, although almost none of the
material of the pockets remains. Six button-holes can be seen on the left panel. No buttons are attached but some discolouration that seems to line up with their positions is noticeable, suggesting this garment was finished and had been well-worn by the time it came to be discarded. The rest of the fabric appears to be offcuts and scraps, and a small bundle of thread was also recovered, suggesting this cache might relate to a seamstress or similar activity.

Figure 61. Men’s waistcoat from Layer 4

Fragments of several adult’s and children’s shoes were recovered. One potential pair of adult’s shoes (Figure 62) is represented but the rest are merely pieces of soles, heels and uppers. Two heel fragments were found, all of which are constructed from multiple layers of leather vertically attached to the outsole. One of the heels tapers down considerably and appears to be from a woman’s boot (Figure 63). Only one of the fragments, an insole, was complete enough to give a reliable estimate of size at around 240 millimetres long. In modern New Zealand terms, this is a women’s size 5½ or a men’s 5.
A number of small children’s shoe fragments were also found, including the heel and toe from a right shoe that were constructed the same way as the adult examples, a different style heel and outsole from a straight shoe which could not be assigned a side and a complete insole. The insole (Figure 64) is around 150 millimetres long, which is very small and probably fitted a toddler.
Most of the soles and heels showed considerable wear, which, along with the fragmentary nature of the assemblage and the fact that only one potential pair was present, suggests that this is the waste from a boot maker or cobbler. There was a boot maker on this block of George Street in the mid-1800s (Figure 65), so it could have originated from there.

A strip of leather with a metal fastener at one end was also found. This is probably part of a harness.

**Layer 3**

Several more scraps of fabric were recovered from this layer; however they were nowhere near as well preserved. This would suggest that the post-depositional environment within this layer was not completely anaerobic like the lower deposit and also that they were probably exposed on the surface for a time before being buried.
The sole of an adult’s shoe and heel of a child’s were also found. It is possible they belong with the footwear from the layer below, as they are very similar in form, or they could simply have been discarded with the other waste in this layer.

**Discussion**

The assemblage of leather and fabric fragments gives us some important insights into the clothes and footwear worn by the nineteenth century inhabitants of this area. Much of the fabric recovered from the site is fairly thick and tightly woven, suggesting that warmth and durability were important considerations when purchasing clothing. The fact that the buttons have been removed from the waistcoat is evidence that items such as buttons were valuable and were re-used when the rest of the garment wore out.

The shoes tell a similar story as almost all are noticeably worn or are fragments, such as soles and heels, which could feasibly have been replaced instead of buying a new pair. This could be due to the fact that this appears to be a boot-maker’s discard assemblage as repairing shoes was one of the main services offered by one of these establishments but it could also show that, like buttons, shoes were valuable and people would try to repair rather than replace them.

This evidence that some everyday items such as buttons and shoes were valued and invested in, as well as the suggestion that clothes were made to last, could be interpreted as showing that the money pouring into Dunedin during the gold rush period was not immediately passing down to the working class inhabitants of the city. Alternatively, the working class community could have benefited from the increase in wealth but ingrained attitudes and ideas about caring for possessions that had previously been important investments remained the same and the money was used for other purposes, such as buying tea-wares that would impress the neighbours.

**Personal Items**

Various artefacts recovered from the site can be classed as personal items. These include toys, personal ornaments and clay pipes. The toys are of particular interest as they can give some small insight into the lives of children in late nineteenth and early twentieth century Dunedin.
Layer 4

Toys

One glass marble and half of a miniature bone china tea cup (Figure 66) were found at this level. Two more identical miniature tea cups were recovered from the top excavation layers but as the top layers are extremely mixed and contain very early material as well as later 20th century items, they have been described here. It is also entirely possible that they were only labelled as originating in the top, modern layers due to the nature of the excavation. This situation is not helped by the lack of dateable features displayed by the cups, which are plain white with simple moulded decoration. It can, however, be noted that they were made with the use of a two-part mould as the seam is clearly visible.

Figure 66. Glass marble and miniature tea cup from Layer 4

The main body of the marble is colourless glass and it has a polychrome “spiral” in the centre which gives this type of marble its name. It is heavily chipped but evidence of its manufacture is still visible in slight protuberances at opposite ends. These are a result of the individual marble being cut off a glass rod with a set of shears and are only present on handmade glass marbles (after the manufacture process was mechanised in the early twentieth century they became more uniform in shape). The process of making these marbles was developed in the 1840s in Germany, but they did not prove overly popular, potentially down to their high price and/or poor performance compared to their clay or stone counterparts. By the time this particular example was lost, however, they were probably fairly common and not overly prized (Gartley and Carskadden 1998: 128-129).

Marbles were also used by adults for a variety of gambling related games, and the
newspapers of the day are full of accounts of people being prosecuted for cheating people out of their money this way (for example see the City Police Court proceedings in the *Otago Daily Times* 12/1/1876, page 3 and 20/11/1878, page 5).

The miniature tea cups, as mentioned previously, are rather nondescript and bear no diagnostic features other than a very noticeable vertical mould seam. The ceramic body itself is not of very high quality and there are dark flecks in the glaze, and they appear to have been made with durability and cost in mind rather than aesthetics. Miniature tea sets were extremely popular girl’s toys in the nineteenth century. Any toy, such as tea sets or dolls, that would encourage young girls to take part in domestic activity such as caring for younger siblings and eventually their own children or organising social gatherings were looked upon favourably by parents when purchasing play-things (Yamin 2002: 121).

*Personal ornaments*

Two objects from Layer 4 can be classed as personal ornaments: a comb and porcelain button (Figure 67 (a) and (b)). Both almost certainly belonged to a woman before they were discarded. The comb is made from a black plastic and has moulded beading decoration along the spine. It is slightly curved to allow it to sit comfortably in the hair. The button has green enamel decoration on a white porcelain body and appears to be of quite fine quality.

*Clay pipe*

The bowl from a clay pipe (Figure 67 (c)) was also found. It has little information value as there is no identifiable maker’s mark or decoration present but it is possible to say that it had been used before it was discarded as the inside of the bowl is blackened.
Layer 3

The only personal items recovered from this layer were several unmarked fragments of clay pipes (two stems and a bowl, all of which showed signs of use) and the head (Figure 68) and shoulder of a porcelain doll.

The doll has a moulded crop of hair that has been painted black with a head band that would have presumably been a different colour, although the over-glaze paint has chipped away completely in this area. Faded pink paint can still be seen on the shoulder fragment, as can the attachment hole for the body which would have been made from fabric and stuffing of some description. These were very popular toys for girls throughout the nineteenth and twentieth centuries and are commonly found in historic sites.
The small collection of personal items recovered from the site can tell us several things about life in nineteenth Century North Dunedin. The fact that there are very few clay pipes present in the assemblage is of interest as they are often one of the more common artefact types in historic period sites. This could be a result of the excavation process which would not have been conducive for finding small items such as stem fragments, but it could also be because there was very little smoking happening at the site. The use of clay pipes for smoking tobacco was a social activity (Praetzellis and Praetzellis (2001) include them in their “social drug” artefact class) and the evidence suggests that this site was not the kind of place anyone would chose to spend more time than they had to, the smell alone would have probably been extremely unpleasant.

The toys found at the site shed some light on what it was like to grow up in the area in the second half of the 1800s. Dunedin had a very young population at this time (for part of the 1850s over 50% of the population was under 14 (Reed 1956: 138)) so children would have
been a common sight on the streets and even in the workplace. Figure 69 shows the staff of the Vulcan Foundry (in the section behind 234-242 George Street) lining up along Great King Street and the group includes a number of children. It is probable that they are the offspring of some of the employees rather than workers themselves, but it is still evidence that they were present even in the industrial work environment. This photograph is not dated but must be between the erection of the two storey pattern shop and store building in 1875 (Otago Witness 23/10/1875, page 17) and the company going out of business in 1892 (Otago Daily Times 20/2/1892, page 3).

There is a clear difference in the toys of boys and girls during this period. Marbles, such as the one found here, were the toy to have for boys and large groups engrossed in games would have been seen wherever there was a flat surface, often to the annoyance of other residents. Girls on the other hand, were encouraged to stay indoors and practice for their future domestic duties with playthings such as miniature tea sets and dolls.
Other
A number of artefacts were recovered from the site which do not fit into any of the above categories.

Layer 4
A graphite crucible (Figure 70) probably relates to the Vulcan Foundry. It has remnants of copper and straw residue on the inner surface. These crucibles were an essential component of the metal smelting process and were manufactured from graphite (or “black lead”) because of its ability to retain its structural integrity at the very high temperatures required for smelting (Booth 1884: 283). This particular example is ca. 80mm tall and has a diameter of ca. 180mm.

Layer 3
This layer yielded a cylindrical sandstone blade sharpener and the electrode of a carbon arc lamp (Figure 71). The electrode is marked “SIEMENS & CO LIGHT” along with a series of
numbers. It does not appear to have been used, as the process of creating light with one of
these lamps involved the burning of the carbon electrodes, which had to be regularly
replaced. Carbon arc lamps were developed in the 1840s with Siemens being one of the
biggest producers (Martini 2011). From around the 1880s onwards they were especially
popular for street lights as they were relatively cheap and efficient compared to gas or oil
(Whelan 2010). The process of changing the Dunedin street lights from gas to electricity,
however, was a relatively slow one which began around the turn of the twentieth century
and continued for several decades. In 1917, for example, there were 1, 210 electric lamps
but still 934 powered by gas (McDonald 1965: 307). This particular electrode could have
been intended for one of these early electric street lamps or from a smaller household or
shop light. Regardless of the appliance it was going to be used in, electrodes such as these
would have been everyday items, much as light bulbs are today and are, like most of the
material from this site, typical of an urban household and commercial rubbish dump.

![Figure 71. Siemens carbon arc lamp electrode from Layer 3](image)

More evidence of industrial activity in the area was also present in this layer in the form of a
distinct lens of oxidised iron ore and pieces of slag. This was probably dumped here by a
worker from the Vulcan Foundry, possibly as part of the final clean-up process when
operations at the company went into liquidation and operations ceased in 1892.

**Discussion**

These artefacts are evidence of some of the more industrial-type activity happening in this
area. The Vulcan Foundry would have had a considerable impact on the nature of the
community in the immediate area, providing a source of employment but also affecting the
environment. It would have produced great amounts of noise and pollution, making the
surrounding sections rather unpleasant to spend any more time than necessary in. This is
probably one of the reasons that there do not appear to have been many domestic sites in
the surrounding sections. Household sites were restricted to the northern end of this block, which would still have been affected by the foundry, particularly in its heyday when it occupied two sections and produced everything from bridges to large ships (Otago Daily Times 11/4/1868, page 3). This peak of activity at the Vulcan Foundry, which occurred in the second half of the 1870s, was probably a direct result of the change from the early gold rush towards capital intensive mining, especially since they were manufacturers of mining machinery such as stamper batteries (Otago Witness 12/5/1866, page 11). The closure of the foundry in 1892 was likely a result of the post-gold rush depression on the 1880s and ‘90s. The Vulcan Foundry is a clear example of how the Otago gold rush and associated economic slump directly affected this neighbourhood.

The presence of the carbon arc lamp electrode also sheds some light on major changes in technology occurring during the late nineteenth century. The introduction of electric lighting for buildings and the streets was a slow process, as mentioned previously, but it would have made a huge difference to the atmosphere of North Dunedin at night. In the early days of this technology especially it was seen as more of a novelty than a convenience and buildings lit in this manner were sure to draw crowds after dark. It would not be until well into the twentieth century that electricity was the most common form of lighting for homes and streetlights.

Site Narrative

The artefactual material collected from 234-242 George St can help to build up the story of the site with the help of documentary evidence in the form of photographs, maps and street directories as well as newspaper advertisements and articles. Even though some important contextual information was lost as a result of the excavation process, a fairly precise and detailed narrative of the site during the second half of the nineteenth century was able to be constructed and can reveal several important aspects of what the community was like in this area as well as how it developed. For the purpose of this discussion the narrative is commenced in the 1860s, prior to which this area was very sparsely populated and there is little evidence of activity at this particular site.
1860s

As can be seen from an 1861 photograph from the top of View Street (Figure 72), the area around 234-242 George Street is mostly unoccupied. Most of the early activity in Dunedin was focused to the south of the Octagon as Bell Hill obstructed the road to North Dunedin and the area was too swampy to attract many residents or businesses.

Riemann’s 1869 map of Dunedin (Figure 37) shows the site as still vacant but several of the surrounding sections are occupied by a variety of businesses. Immediately next door are a tailor (P. Cairns) and confectioner (Binnie) on one side and Johnson’s ironmongery on the other. To the Great King Street side lays Kincaid and McQueen’s Vulcan Foundry, this possibly explains why so few of the Great King Street facing sections are in use. If the town plan is overlaid onto a map of the tidal inlet as in figure 2 it becomes obvious why the site was unoccupied as a stream can clearly be seen to pass right through the centre of Sections 4 and 17. This is supported by the heavy anaerobic clay which makes up Layer 4 and also by the fact that one of the excavation trenches collapsed and filled with water when it got too deep. This would have made very poor land for living or setting up a business on but a perfect location to discreetly dump refuse amongst the flax bushes which would have been
prolific along the stream bank (Reed 1956: 70). By the end of this decade most of the tidal swamp had been filled in and was beginning to be built upon (Petchey 2009). There is a possibility that some of the Layer 4 material dates to as early as the late 1860s but most appears to belong to the next two decades.

1870s-1880s

The 1870s saw a rapid increase in activity around what is now 234-242 George Street, although civic records from this decade are notoriously sparse (Petchey 2009: 11). In 1875 the Vulcan Foundry was extended considerably and nearly all sections in this block were occupied. It seems to be during this and the next decade that the majority of the material in Layer 4 was deposited. An 1874 photograph (Figure 73) of this block shows how quickly the area had become built up since the early 1860s, though the precise location of the site is obscured by an unfortunate smudge in the image and the buildings of the Foundry (Figure 74).

![Figure 73. Dunedin 1874. Part 6 of 10 part panorama. 234-242 George Street is located one block beyond the curve of Moray Place in the foreground. (Copy negative No. Pt 6 c/nE2506/14, Hocken Collections, University of Otago)](image-url)
The next useful map is an 1889 insurance plan; however some of the buildings associated with the site require a separate index to identify which was not available. It does show the excavated area as including a portion of the Vulcan Foundry yard, potentially the corner of an unidentified building and Albion Lane, some bricks of which were found during the excavation (Middleton et al. 2012: 12). Of potential interest is also a row of terrace houses two sections towards Hanover Street from the site. It is likely that at least some of these were occupied by Foundry employees and also that some of the domestic refuse deposited in Layer 4 originated from these households. The artefacts themselves can help identify some of the surrounding businesses not noted on the map. The fabric recovered probably relates to a seamstress or tailor and the leather footwear to a bootmaker. Some of the ceramic vessels appear to be broken shop stock which would suggest one of the local shops imported ceramics and other vessels resemble those popular with hotels. Several of these types of businesses are noted on earlier maps and it can be assumed that they were present during the 1880s.

Sometime during this decade, probably in the second half, the stream which ran through the site was finally filled in using fill from a nearby location (Layer 3). This was likely related to the movement to clean up the city which was occurring at this time. The city back lots and alley ways had, up until now, been the place to dispose of unwanted waste but the mid to late-1880s saw a change in attitudes and a desire to create a cleaner environment. It was as
a result of this movement that many of the parks around Dunedin were created. (McDonald 1965: 210).

1890s
The site appears to have continued to have been used as a rubbish dump, all be it much less intensely, into the 1890s. The local herbalist Dr Neil, or one of his employees, deposited around 50 empty pharmaceutical bottles into a hole in around 1890 when he stopped production of his Rosemary Tricopherous. It is interesting that he appears to have gone to the effort of digging a hole whereas previous refuse was dumped on the surface. This is probably a reflection of the changing ideas about rubbish disposal discussed above.

The Vulcan Foundry went into liquidation and was subsequently sold in 1892, which was of direct significance to the nature of this site and the neighbourhood. The downfall of this once incredibly successful business was most likely a result of the commercial depression which followed the gold-rush boom and is evidence that this commercial slump would have had far reaching effects, as a large number of local people would have relied on the Foundry for employment. Several patches of iron slag and other remnants of foundry related activity can be seen near the top of Layer 3 so were probably part of the closing down and clean-up process. Despite the obvious negative effects of this event it also meant that a sizable section of land was now available for development and paved the way for an influx of new businesses better suited to the economy at the time.

An 1892 plan (Figure 75) shows the (now vacant) foundry and adds some details that were not available with the 1889 map. The row of terrace houses is labelled as “Chamber’s Dwelling” and the range of businesses surrounding the site can be seen, many of which would have been in the same locations four years previously.

The final event of interest to this research is a flood which occurred in November 1894. This flood (described in a previous section) was well documented in newspapers of the day and the silt left by the waters can be seen in the stratigraphy of the site as a thin yellow band at the interface of Layer 3 and the deposits above.
Figure 75. 1889 Ignis et Aqua plan showing block containing 234-242 George Street. Ian Smith, University of Otago Department of Anthropology and Archaeology
CHAPTER 3- The Material Culture of North Dunedin

The material culture assemblages recovered from other archaeological sites within the study area can help to create a more comprehensive picture of the North Dunedin neighbourhood. The highly descriptive nature of the majority of the final reports relating to each of these assemblages meant that a re-analysis of the material itself was unnecessary (and also often impossible due to the location of many of the artefacts being unknown). Instead of reviewing each assemblage individually this chapter is organised by artefact type as a slightly different approach is required to extract the optimum amount of information from each class of object. The similarity in contents and date ranges of the material recovered from the sites also lends itself to this approach and allows the material to be seen as a representative, quintessentially North Dunedin material culture assemblage. A vast amount of data relating to the nature of the neighbourhood during the second half of the nineteenth century and the changes in society that were taking place at this time was able to be recovered. The artefacts were able to reveal aspects of life such as international links, social identities and how they were portrayed, popular products and important social issues of the day, which, when combined with the evidence gathered from the 234-242 George Street assemblage, allow us to step inside the world of the nineteenth century inhabitants of this neighbourhood.

The Sites

Seven other sites (shown in Figure 2) were used for this section of the study and are briefly introduced below. All information has been taken from the relevant report cited at the beginning of each description.

Farmers (Petchey 2004)

Peter Petchey oversaw the excavation of the Farmers Trading Company Site at 151-182 George Street in 2003. The site had originally been on the edge of the swampy tidal inlet that covered much of the North Dunedin flat and had contained a variety of industrial and commercial premises, including livery stables, boot, hat and cordial factories and a monumental mason. The swamp was completely filled in by 1869 and the site became the
location of a series of large department stores (A. & T. Inglis, Brown Ewing & Company, Hays Ltd and finally Farmers Trading Company). The archaeological investigation of the site revealed a large number of relatively secure contexts dating from the earliest occupation phase in the 1850s right through to the twentieth century. Artefactual material relating to most businesses and industries that occupied these sections was uncovered, as were several domestic rubbish deposits. The information from this investigation provides vital evidence for life in North Dunedin right through the second half of the nineteenth century.

**Wall St Mall (Petchey 2009)**

The excavations that took place in conjunction with the construction of the Wall Street Mall on George Street from 2007 to 2009 were also led by Petchey. This investigation is perhaps best known for the discovery of an extremely well preserved 12 metre long timber causeway dating to the 1850s or early 1860s (site I44/469). The anaerobic matrix that allowed for the preservation of the causeway also contained a variety of organic material that is rarely found in archaeological deposits in such good condition, including fabric, leather and botanical remains. This material related to the various businesses that occupied this site in the 1800s, such as hotels, timber yards and a range of shops, as well as a number of small cottages that once stood there.

**Riego St (Middleton and Williams 2009)**

Development work at the Otago Polytechnic School of Art on Riego St in 2008, monitored by Angela Middleton, revealed important evidence about the growth of North Dunedin’s residential suburbs at the end of the nineteenth century. Much of the site was located on land that was reclaimed between the 1880s and the 1920s and was almost exclusively residential, with the exception of a coal merchant which occupied a section at the end of the street. The stratigraphy provided a wealth of information about the reclamation process itself and the material culture found within the fill layers offered an insight into the domestic lives of the inhabitants of the site.

**Harbour Terrace (Middleton 2009)**

The Otago Polytechnic Student Centre on Harbour Terrace underwent renovations between 2008 and 2009 which required archaeological monitoring, undertaken by Middleton. This site was the location of a row of houses that were once on the bank of Lake Logan (now Logan Park). While no discreet rubbish deposits were uncovered, an assemblage of domestic
material was collected from what appeared to be a surface accumulation or redeposited fill. These artefacts were able to tell us something about the residents of the area even with their lack of overly secure contexts.

**Countdown Car Park (Hamel 2008)**
In January 2008 excavations as part of an extension to the Countdown supermarket between Cumberland and Great King Street unearthed several large timber beams that are thought to be part of a 1850s retaining wall. The site was initially on the shoreline of Dunedin and this structure had been put in place to extend the usable land right to the water’s edge. Although no artefactual material was found other than the timbers themselves and 13 metal fasteners, this site can still tell us something about the development of the city and the process of harbour reclamation.

**Moray Place (Hamel 2004)**
The construction of a car park building on Moray Place in 2004 required extensive excavations. These uncovered a range of structural and artefactual remains relating to a blacksmith that had occupied the site for several decades towards the end of the nineteenth century and Hudson’s biscuit factory which was present at the site for a much shorter period. The material culture recovered during the investigation is not described in detail in the report but there is enough to get a basic idea of what was found and begin to understand how this site fitted into the wider North Dunedin neighbourhood. This site marks the southern extent of the study area.

**73 St Andrew Street (Williams 2008)**
A small material culture assemblage was collected during redevelopment of 73 St Andrew Street in 2007. As the site had been a vacant plot or yard for most of its history, very little archaeological evidence was found there, although a proportion of the artefactual material, in particular a deposit of alcohol bottles, are thought to be commercial rubbish from the Harp of Erin Hotel which stood next door in the late nineteenth century.
Table 15. North Dunedin artefact assemblages

Minimum number of items/vessels

<table>
<thead>
<tr>
<th>Site</th>
<th>Date Range</th>
<th>Ceramic</th>
<th>Clay Pipes</th>
<th>Glass</th>
<th>Metal</th>
<th>Fabric/leather</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Farmers</td>
<td>1860s-1880s</td>
<td>336</td>
<td>24</td>
<td>458</td>
<td>265</td>
<td>64</td>
<td>152</td>
<td>1299</td>
</tr>
<tr>
<td>2. Wall St</td>
<td>1850s-1880s</td>
<td>212</td>
<td>10</td>
<td>407</td>
<td>282</td>
<td>80</td>
<td>62</td>
<td>1053</td>
</tr>
<tr>
<td>3. Reigo St</td>
<td>~1888-</td>
<td>135</td>
<td>0</td>
<td>49</td>
<td>13</td>
<td>19</td>
<td>12</td>
<td>228</td>
</tr>
<tr>
<td>4. Harbour Terrace</td>
<td>Late 1800s-</td>
<td>237</td>
<td>0</td>
<td>57</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>306</td>
</tr>
<tr>
<td>5. Countdown</td>
<td>~1850s-</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>6. Moray Place</td>
<td>1870s-1880s</td>
<td>&quot;few&quot;</td>
<td>4</td>
<td>&quot;few&quot;</td>
<td>present</td>
<td>Present</td>
<td>present</td>
<td>?</td>
</tr>
<tr>
<td>7. 73 St Andrew St</td>
<td>1860s-</td>
<td>11</td>
<td>0</td>
<td>4</td>
<td>present</td>
<td>0</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>8. 234-242 George St</td>
<td>~1860-1892</td>
<td>217</td>
<td>2</td>
<td>130</td>
<td>20</td>
<td>41</td>
<td>11</td>
<td>421</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1148</td>
<td>40</td>
<td>1105</td>
<td>596</td>
<td>210</td>
<td>248</td>
<td>3343</td>
</tr>
</tbody>
</table>
Only aspects of the material culture assemblages deemed relevant for developing a picture of nineteenth century are used here, so there is very little discussion of things such as dating evidence and aspects of the artefacts thought to have no real information value, as far as this research is concerned at least.

Ceramics
The ceramic artefacts from 234-242 George Street went some way to revealing the types of businesses in the area as well as the social identities of some of the inhabitants. When the rest of the sites are incorporated into a North Dunedin ceramic assemblage a more complete image emerges. The range of maker’s marks found across the study area provide evidence of important trade links as well as movement of people and the styles of decoration show the ways in which people tried to portray themselves. Variation in styles and motifs can also, to some degree, show the changes that were occurring at the end of the nineteenth century in this neighbourhood.

Maker’s Marks
The range of maker’s marks found on ceramic vessels (Table 16) was similar to the 234-242 George Street material in that most originated from a small number of areas in Britain. In the Wall Street site assemblage there were 16 vessels marked with Staffordshire manufacturer marks, three from Derbyshire, four from Glasgow and two that Petchey describes as of Australian origin (2009: 84). These last vessels are of interest as they are decorated with the Australian coat of arms on the front but bear British heraldry on the reverse, which highlights that while the two countries were on opposite sides of the planet the ties between them were still extremely tight at this point in time. This would have been the case in New Zealand at the time as well, a fact which the majority of the material culture from these sites displays. The Australian ceramics are also evidence of the presence of Australians within the city. The Otago gold rush is known to have attracted large numbers of Australian miners and entrepreneurs, particularly from the goldfield areas around Victoria, which not only added to the mix of nationalities residing in the city during the 1860s and subsequent decades but also created a strong bond with the city of Melbourne (McDonald 1965: 51). The other Australian maker’s mark (that of Sydney potter T. Field) was found on a stoneware
bottle and shows that there were other, closer (albeit probably smaller and less well known) sources for products that were traditionally sourced from Britain yet the majority of merchants and consumers favoured the brands and products they knew from “home.” This is further supported by the origin of the vast majority of the other maker’s marks on ceramics from both the Wall St and Farmers site, 75 per cent of which come from the Staffordshire potteries. These makers account for almost all of the marked tableware in the assemblages, with the only other positively identified sources for this type of item being Glasgow and Germany. The stoneware vessels that were able to be identified to manufacturer all came from regions that were traditionally involved in the production of this type of ceramics: London, Bristol and Derbyshire.

Although they lack identifiable manufacturer’s marks, there are also a number of ceramic sherds which are clearly of Chinese origin that were recovered from two North Dunedin sites. The base of a celadon ware bowl and fragments of a Chinese ginger jar were recovered during the excavations at the Otago Polytechnic campus on Harbour Terrace (Middleton 2009) and one fragment of what is almost certainly Canton ware is recorded by Petchey (2009: 74, Fig 93). Canton ware was one of the cheapest and most mass produced Chinese export porcelains and was extremely popular during the first half of the nineteenth century, especially in Australia and America. Although it has apparently only been recorded in one New Zealand site (Hohi (Smith et al. 2012)) a review of several ceramic assemblages and reports reveals that is has merely been misidentified (usually as earthenware) and is in fact, present in a number of sites ((McGovern-Wilson and Bristow 1994; Plowman 2000)). This has important implications as it shows that nineteenth century Dunedin, and New Zealand, trade links extended further than Western Europe. Street directories show that there was a “Chinese Bazaar” in the block to the south of the Wall St site at least as early as 1888/9 and it is likely that, following the gold rush explosion of the Dunedin Chinese population, there would have been fairly well established links with Asian trade markets. Even before the gold rush the Dunedin community would have had secondary access to goods from China via their links with Britain. It is unlikely that this is merely a fragment of a single vessel which was brought from China with one of the gold miners as Canton ware was exclusively for export to Western markets.
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Location</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. &amp; M. P. Bell</td>
<td>Glasgow</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Powell</td>
<td>Bristol</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>John Cliff &amp; Co</td>
<td>London</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Joseph Bourne</td>
<td>Derbyshire</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sampson Bridgwood &amp; Son</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Thomas Dimmock &amp; Co</td>
<td>Staffordshire</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Pinder, Bourne &amp; Hope</td>
<td>Staffordshire</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Pinder, Bourne &amp; Co</td>
<td>Staffordshire</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Turner, Goddard &amp; Co</td>
<td>Staffordshire</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Edward Challinor</td>
<td>Staffordshire</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ralph Malkin</td>
<td>Staffordshire</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Mellor, Venables &amp; Co</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Samuel &amp; John Burton</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>W. T. Copeland</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>W. Davenport &amp; Co</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>D. &amp; S. Dimmock &amp; Smith</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Eardley &amp; Hammersley</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wood, Challinor &amp; Co</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Burgess &amp; Leigh</td>
<td>Staffordshire</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>T. Field</td>
<td>Sydney</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>“R S GERMA[NY]”</td>
<td>Germany</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
Decoration Styles, Patterns and Motifs

Popular decoration styles and patterns on the ceramic vessels used by the nineteenth century inhabitants of North Dunedin can tell us a great deal about the community. They can reveal the different social pressures and factors acting on the people here as the century progressed as well as going some way to show how the members of the community identified themselves. Several broad themes can be identified within the decoration styles which are discussed below (Table 17).

Table 17. Ceramic decoration themes by MNV. Sites numbered as in Table 15

<table>
<thead>
<tr>
<th>Style</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>7</th>
<th>8</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Romantic</td>
<td>33</td>
<td>&quot;common&quot;</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>Eastern</td>
<td>58</td>
<td>40</td>
<td>3</td>
<td>9</td>
<td>1</td>
<td>30</td>
<td>141</td>
</tr>
<tr>
<td>Scottish</td>
<td>19</td>
<td>6</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Border only</td>
<td>44</td>
<td>12</td>
<td>45</td>
<td>69</td>
<td>1</td>
<td>10</td>
<td>181</td>
</tr>
<tr>
<td>Banded</td>
<td>22</td>
<td></td>
<td>43</td>
<td>36</td>
<td></td>
<td>10</td>
<td>111</td>
</tr>
<tr>
<td>Other/not reported</td>
<td>102</td>
<td>123</td>
<td>17</td>
<td>78</td>
<td>1</td>
<td>113</td>
<td>311</td>
</tr>
<tr>
<td>Not decorated</td>
<td>54</td>
<td>30</td>
<td>27</td>
<td>43</td>
<td>1</td>
<td>35</td>
<td>190</td>
</tr>
<tr>
<td>Total</td>
<td>336</td>
<td>212</td>
<td>135</td>
<td>237</td>
<td>5</td>
<td>217</td>
<td>1142</td>
</tr>
</tbody>
</table>

Classical

Classical themed motifs such as urns, ruins and columned buildings are common on early to mid-Victorian period transfer printed tableware items. This style has been noted at Farmers, the Wall Street Mall and 234-242 George Street and named patterns include Triumphal Car, Grecian and Medici. It is of interest that it is only at the sites within the central business district (centring on George Street) include vessels with these motifs and the sites further to the North (Harbour Terrace and Reigo Street (Middleton and Williams 2009)) do not contain them (Table 17). This can be explained by the fact that these northern areas were on the edge of nineteenth century North Dunedin and would have been first occupied at a later date than the centre of town. These sites therefore show the expansion of the settlement and are invaluable sources of evidence about the changes taking place here right at the end of the century.
The Classical style of some of the earliest North Dunedin ceramics is also a reflection of the popularity of this aesthetic during the first half of the nineteenth century. This style also influenced far more than tableware motifs, the original layout of Dunedin is a result of an interest in classical design. The surveyors responsible for laying out the town (led by Charles Kettle) wanted a well-planned, regular grid in homage to the great Greaco-Roman period cities and, as Forrest (1964: 10) describes it, saw it as an opportunity to “escape the unplanned, ill-conceived results of the industrial revolution” that were so rampant in the sprawling, irregular British cities of the time. This problem with this classical grid approach, however, was that it did not take into account Dunedin’s undulating landscape and led to a great number of future problems with drainage and inappropriately steep gradients on many of the streets. This is still noticeable today, with a number of streets being lined with steps rather than footpaths and the need for special considerations for surface materials on the steepest streets (for example View and Baldwin Streets).

**Romantic**

Another style that is far more common in the earlier central city sites and therefore demonstrates a degree of time depth is known as Romantic. This style, generally found on transfer printed vessels, is characterised by containing a variation of the generic “Romantic” scene: a central body of water with a building to one side and a large tree to the other, mountains in the distance and people engaged in various activities in the foreground. Numerous examples of this style were found, the most common of which were Rhine and Albion. The peak period of popularity for Romantic motifs was 1845-1860, so it not surprising that very few examples were found in the peripheral sites.

**Eastern themes**

Another style that reoccurs in sites throughout this area is Oriental inspired patterns and designs. Chinese inspired motifs were popular throughout most of the nineteenth century, with Willow pattern being the most recognisable example, and Japanese style designs were in vogue during the 1870s and 1880s. It is interesting to note that it is the British versions of these Oriental designs and motifs that were popular rather than genuine Chinese and Japanese examples, despite the fact that these would have been accessible to the North Dunedin consumer. This suggests that it was not an interest or appreciation for the Oriental aesthetic that was driving this popularity but instead a desire to keep up with the fashions.
back home in Britain. This is further evidence that the majority of residents in North Dunedin in the nineteenth century still identified themselves as distinctively British.

Scottish motifs

Although the evidence from manufacturers’ marks suggests that the trade links exploited by the inhabitants of North Dunedin were no more Scottish than would be expected elsewhere in New Zealand at the time, there are a number of ceramics decorated with distinctively Scottish motifs. A tartan cup and various Chelsea Sprig patterned teaware items found at 234-242 George Street have already been mentioned but similarly themed vessels were found in other North Dunedin sites as well. Chelsea Sprig vessels were found at Farmers and Wall Street while the Farmers assemblage also featured a number of patterns with distinctively Scottish names such as Balmoral and Buccleugh. The fact that the ceramics from the slightly later sites within the study area seem to lack this Scottish flavour could be a reflection of the social changes occurring within North Dunedin as well as the rest of New Zealand at this time. It was during the last 40 years of the nineteenth century that the national New Zealand identity truly emerged, before this point the colony had been fairly segmented into distinct colonies and Maori communities (Smith 2008).

Pattern Simplification

The 1880s saw a marked decline in the popularity of under-glaze transfer printed vessels with a central scene and a move towards much simpler designs in which the decoration is almost entirely restricted to the rim. This is visible in the material recovered from across North Dunedin as the sites which have been occupied for longer (Farmers, Wall Street Mall and 234-242 George Street) are dominated by vessels featuring central designs in bold hues, for example the ubiquitous blue Willow, while those sites that were not occupied until the last decade of the nineteenth century (Reigo Street and Harbour Terrace) contained far more of these simple border designs. Named examples include Dresden, Dulcamara, Buccleugh and Rouen. The later sites also featured a lot more simple paint and/or gilt banded as well as plain white, which fit with the trend toward simplification.

Further evidence of this change from bold, busy central scenes to simpler designs can be found in the floral patterned ceramics. Floral designs had been popular throughout the century but there is a notable change that occurs in the last few decades of the 1800s.
Whereas previously floral motifs were often just part of the overall design (usually as a border for the central motif), towards the end of the century they became the only decoration. There was also a clear shift from continuous floral borders which when on a plate would cover the entire marley to far more delicate patterns such as Teddesley. Polychrome decoration also became more popular towards the close of the century which allowed for more realistic representations of flowers and foliage.

**Clay Pipes**

Clay pipes have been touted as the “ideal archaeological artefact” because of their information value, the fact that they were so readily available and their ability to survive in the archaeological record (Gojak and Stuart 1999: 38). Unfortunately, a relatively small number of diagnostic pipe fragments have been recovered from North Dunedin sites. As mentioned in the previous chapter, no marked stems or bowls were recovered from 234-242 George St and the total MNI was just two. Only three other sites in the study area yielded any tobacco pipes, and then only small assemblages (the MNI from Wall Street was 10 while from Farmers it was 24 and Moray Place just four). There are, however, a number of pipe manufacturers that have been identified from these assemblages which can tell us something about the supply of these supposedly everyday items. Between the three sites a total of nine pipe makers were able to be positively identified and another mark from the Wall Street site was able to be attributed to a specific location (see Table 18). These marks showed that almost 80 per cent of the marked pipes originated from Scotland (all but one from Glasgow), with the remaining pipes being made in England, France and the Netherlands. At this point in time Scotland was the world leader in pipe manufacturing and export so this result is not surprising (Gojak and Stuart 1999: 40). This is also not necessarily a characteristic specific to a Scottish settlement, as it is probable that most contemporary colonial sites with clay pipe assemblages are dominated by Scottish manufactured examples.
Table 18. Clay tobacco pipe manufacturer's marks by MNI. Sites numbered as in Table 15

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Factory Location</th>
<th>1</th>
<th>2</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Davidson &amp; Co.</td>
<td>Glasgow</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>William C. Wood</td>
<td>Glasgow</td>
<td>1</td>
<td>2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>William Murray &amp; Co.</td>
<td>Glasgow</td>
<td>8</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Duncan McDougall &amp; Co.</td>
<td>Glasgow</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Thomas White &amp; Co.</td>
<td>Edinburgh</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>C. Crop &amp; Sons</td>
<td>London</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>William Higgins</td>
<td>London</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>William Southron &amp; Co.</td>
<td>Shropshire</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Louis Fiolet</td>
<td>Saint Omer, France</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>&quot;...N ROTTED...&quot; &quot;...PARNADY&quot;</td>
<td>Rotterdam</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The main point of interest with the North Dunedin clay pipe assemblage is not where they came from, however, but the fact that there are so few of them. Gojak and Stuart state that the average life span of a clay tobacco pipe ranged from a few days to two weeks (1999: 39), which means that the entire clay pipe assemblage (an MNI of 40) from all the study sites is as many pipes as a single individual would be expected to use in just over a year and a half (20 months). This is despite the fact that these deposits cover several decades of activity. In some of the context this could be explained by type of activity at that particular spot, as tobacco smoking was often seen as a social activity, places in which people did not ordinarily gather or spend any amount of time could be expected to contain few pipes. Many of the deposits from these sites, however, have been interpreted as domestic refuse or as yards of businesses which would have provided the perfect place for a smoking break. If, as Gojak and Stuart claim, the pipes were rendered useless as quickly as within a few days it would also be expected that the areas of reclamation using rubbish would contain a much higher number of discarded pipe bowls and stems. These factors suggest that, in this case at least, an alternative explanation is required. It is, of course, possible that the excavators themselves are the cause of this lack of pipes. The deadline driven environment of cultural resource management excavations does often limit the precision that can be taken with recovering artefacts and clay pipe fragments can be small so could potentially get left behind. There are a several reasons why this is probably not the case. As mentioned before,
clay pipes are widely known to have a high information value and are often one of the main types of diagnostic artefact that archaeologists look for when excavating. They are also quite distinctive and the fact that some have been recovered suggests that they are not that easily missed after all. Personal correspondence with a number of archaeologists directly involved in the excavations at these North Dunedin revealed that most are adamant that they were as thorough as possible and do not feel they missed hoards of these artefacts (Jessie Garland and Justin Maxwell personal communication, 3/4/2013). A review of some of the assemblages also supports this fact as there are many artefacts, such as ceramic sherds, marbles and fragments of glass, that are much smaller and easier to look over than a fragment of tobacco pipe. Despite all this, the often fragmented nature of this type of excavation means that it is entirely possible the parts of these sites that contained most of the clay pipes were simply not investigated.

An alternative explanation which needs to be considered is that clay tobacco pipes were not as commonly used in North Dunedin as previously thought. Petchey cites Gojak and Stuart’s argument that a marked presence of tobacco pipes is associated with a working class population when discussing the pipes recovered from Wall St/Farmers (2009: 86). It would make sense to apply this to the North Dunedin neighbourhood as it was known to be a generally working class area, but the assemblage size simply does not support this association. This is particularly contradictory when it is noted that the centre for clay pipe production and export was Scotland (more specifically Glasgow), that country which Dunedin was supposedly so closely connected. It could be the case that the inhabitants of this area were using an alternative method to smoke their tobacco. Cigarettes had been around since the early decades of the nineteenth century and they overtook clay pipes in popularity in Australia by the end of the century (Gojak and Stuart 1999: 40), so it is a possibility that this occurred slightly earlier in North Dunedin. The issue with this interpretation is that, as well as a lack of pipes, there have only been a very few tobacco tins and containers found in these sites. The thin metal tins, however, could easily have been lost to a number of taphonomic processes or misidentification, and tobacco could have been held in various other containers.
Glass

The North Dunedin glass assemblage (Table 19) was able to provide a tremendous amount of evidence about everyday life here in the nineteenth century. Vital information on trade and product availability was able to be extracted from the bottle assemblage as well as evidence of what was important in a product for the nineteenth century consumer. These details can reveal not just what the inhabitants of this neighbourhood were buying but the reasons behind their choices. They also provide hard evidence against which some of the stereotypes attached to these people by contemporary and secondary sources can be tested.

Table 19. Glass vessel types by MNV. Sites numbered as in Table 15

<table>
<thead>
<tr>
<th>Bottle Type</th>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
<th>Site 4</th>
<th>Site 5</th>
<th>Total</th>
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</thead>
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<tr>
<td>Alcohol</td>
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<td>224</td>
<td>3</td>
<td>14</td>
<td>3</td>
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<td>Other Beverage</td>
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<td>9</td>
</tr>
<tr>
<td>Food</td>
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<td>45</td>
<td>7</td>
<td>13</td>
<td>5</td>
<td>112</td>
</tr>
<tr>
<td>Pharmaceutical</td>
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<td>25</td>
<td>21</td>
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<td>226</td>
</tr>
<tr>
<td>Total</td>
<td>458</td>
<td>407</td>
<td>49</td>
<td>57</td>
<td>11</td>
<td>130</td>
</tr>
</tbody>
</table>

Beverage Related

Alcohol

Alcohol related bottles are often one of the most common glass vessel types found in excavations, and this is definitely the case in North Dunedin. Out of the five sites which yielded glass assemblages, all but one was dominated by alcohol bottles. This could potentially be seen as evidence of the heavy drinking undertaken by many of the nineteenth century inhabitants of the neighbourhood which is often commented on by contemporary sources but caution must be taken with this explanation. As Petchey (2004) points out, alcohol bottles would have had a much shorter life span than other types due to the nature of their contents. When filled with beer or wine these vessels would have generally been emptied in one sitting, while the stronger spirits may have lasted slightly longer (although it is just as likely they too were consumed rather quickly, especially in a social setting). Other
products contained in glass vessels, such as pharmaceutical concoctions or condiments, would have been used at a far slower rate and so taken much longer to be discarded. It is also probable that at least a few of these “alcohol” bottles held non-alcoholic contents, as the names given to these styles of bottles (such as black beer, champagne or ring seal beer) are usually, and not always correctly, taken as more or less proof of the contents. When these factors are taken into consideration, the residents responsible for the domestic glass assemblages at sites such as the Farmers Trading Company and Wall Street mall were potentially not consuming as much alcohol as popularly assumed, especially as these deposits were built up over several years.

A number of products and brands were able to be identified across the study area. These can provide important evidence about trade links with other areas and countries, the range of products available and the reoccurring products can tell us something about what type of alcoholic beverages were popular. As in the 234-242 George St assemblage, numerous Dutch Hoytela gin bottles were found during the other excavations, as were several Udolpho Wolfe’s Aromatic Schnapps containers from the United States of America. The Farmers assemblage also contains the cork from a French Cognac bottle, the makers of which (Jas Hennesy Cognac) are still in production today. By far the most common vessel, however, are the ubiquitous “black beer” and “spirit” bottles. These would have held a range of beverages from ginger beer to whiskey but without the remains of any embossing or labels it is not possible to positively identify the contents. A few of these black glass bottles are able to be identified to manufacturer at least, however. Within the Farmers assemblage are a number of bottle bases bearing the mark of Richard Cooper and Co., who operated out of a glassworks in Portobello, Edinburgh during the second half of the nineteenth century and into the twentieth. These bottles are extremely common in historic sites throughout the country. Two other black beer/whisky bottles from this assemblage were marked in a similar fashion and can be attributed to the German manufacturer Heye Bremen and the Newcastle, England firm of Dobbeson and Warren. Wine bottles were also found in most sites, although in significantly smaller numbers, which would suggest that wine was not as popular as other types of alcohol.

Discreet deposits consisting almost entirely of alcohol bottles (in one case alongside a large collection of bottle foils and wire) were found at both the Farmers and Wall Street Mall sites.
and have been interpreted as evidence of commercial dumping activity, most likely related to hotels. The number of such establishments in this part of Dunedin increased significantly after the removal of Bell Hill and as George Street took over as the central business district.

**Bottled Water**

Mineral and aerated water bottles are a common artefact type that are a part of the material culture recovered from every site in the study area which yielded a glass assemblage. There are a number of factors which probably contributed to the popularity of bottled water at this time. The first and most practical reason for purchasing bottled spring water was the poor quality of the town supply. While the settlement was in its infancy it was not deemed necessary to install a public supply or storage system so inhabitants relied on the numerous small streams which fed from the surrounding hills into the tidal inlet. This caused significant problems as the majority of these waterways were also used as places to wash clothes (and presumably people) and dump both domestic and industrial rubbish. The situation was further exacerbated by the fact that many household latrines were dug into the water table and therefore leaked excrement into several of the streams. These provided the perfect breeding ground for diseases such as typhoid, scarlet fever, tuberculosis and any number of other deadly contagions (Frost 1991: 136). The smell so often complained about in contemporary accounts of the city was largely due to the contaminated water ways and the tidal swamp where all of the material would accumulate. It was eventually recognised that the water supply situation required attention and in 1867 the Ross Creek reservoir, along with the beginnings of a mains water pipe system, was officially opened. Almost a decade later, however, there were still problems with supply, especially to the higher hillside suburbs such as Roslyn and Maori Hill.

This alone would have made bottled water, especially from springs outside of Dunedin, attractive to a lot of inhabitants, and it is probable that the stigma attached to Dunedin drinking water remained for a time after the problems were resolved. Mineral and aerated water companies, however, helped their cause further by marketing their products as having a wide range of health benefits. A brief review of mineral and soda water advertisements in Dunedin newspapers of the day reveals a long and varied list of ailments that could be alleviated with mineral and soda water. As mentioned in the previous chapter, Dunedin bottling firm Thomson and Co marketed their soda water as an aid for invalids and supplied
it direct to the local hospital. When they later opened another spring in North Taieri they claimed this “Wai-rongoa” water acted as an antacid and diuretic as well as being a rich source of iron (Ashburton Guardian 11/10/1895, page 4). Puriri mineral water, a bottle of which was recovered from the Otago Polytechnic site on Harbour Terrace, was sourced from the North Island and claimed to help with gout, kidney and bladder problems and as a digestive aid (Thames Advertiser 6/12/1878, page 2). From further afield, The Apollinaris Company Ltd imported a range of European mineral waters including Hunyadi János from Hungary and Friedrichshall from Germany. Both brands were supposedly laxatives, with the Hungarian water claimed as “the most certain and comfortable purgative in cases of constipation and sluggish liver or piles” (Otago Daily Times 31/3/1888, page 4). Another, even more brash claim was made by Carlsbad Natural Mineral Waters. Their product was supposedly effective against a wide range of health problems, including gall stones, diabetes, gout and “diseases of the spleen arising from residence in the tropics or malarious districts” (Otago Witness 14/2/1889, page 19). While it is probable that these mineral waters were healthier than the contaminated streams and creeks of North Dunedin, these claims were almost certainly a little bold. Although it is near impossible to tell from the available evidence whether most consumers bought a specific bottled water brand for its supposed health benefits, the presence of several brands from outside of Dunedin, and even New Zealand, that pushed their product as a health drink suggests that this played a part in some consumers’ decisions.

Other Beverages

Very few other beverages were able to be identified from sites around North Dunedin. A small number of Symington and Co. and Paterson’s coffee and chicory drink mixture like those found at 234-242 George Street were recovered from the Riego Street site at the northern extreme of the study area and a Bristol’s Sarsaparilla bottle from New York was found at the Farmers site. It is not until the early twentieth century deposits that soda bottles (as opposed to soda water) make an appearance in the archaeological record. This could suggest that soft drinks, as we think of them today at least, were not popular in nineteenth century North Dunedin. During the investigation of the Farmers site, however, Petchey (2004: 6) identified a cordial factory on the southeast corner of the site, which would suggest there was a market for soft beverages. This apparent lack of cordial and soft
drink bottles despite the fact that these products were known to have been produced locally can actually be easily explained. Glass bottles were not produced in New Zealand on any significant scale until the turn of the twentieth century, meaning that nineteenth century businesses that required these vessels would have to order them in from overseas. While some firms ordered bottles embossed with their name others would either have chosen or not been able to afford this step. It is probable that many Dunedin manufacturers, including the local cordial factory, chose paper labels for their bottles, which very rarely stand up to most taphonomic processes once deposited in the ground. It is probable that a proportion of the generic, unidentified bottles recovered from these sites once held a variety of soft drinks that are merely unable to be identified.

Food Related
A much smaller collection of food related bottles were recovered from sites within the North Dunedin study area. This is almost certainly due to the much longer use-life of these types of bottles compared to those containing beverages as mentioned previously. The food related vessels found in the area include pickle jars, various styles of decorative salad oil bottles, vinegar, sauce and flavour essence bottles and a baby food container.

The majority of these products appear to be intended to add flavour to what was presumably a relatively bland diet. From the faunal remains recovered from the sites it seems that mutton was by far the most common meat and would have been supplemented by much smaller amounts of beef, pork, chicken and seafood (Middleton et al. 2012: 36; Middleton and Williams 2009: 20). Unfortunately the archaeological remains tell us little about the types of vegetables consumed, although the earliest inhabitants of the North Dunedin flat are known to have cultivated gooseberries at least (Petchey 2009: 116). It would also appear from the types of food bottle present within the assemblages that there was a fairly limited range of sauces and condiments available to the inhabitants of the neighbourhood. Three sauce brands were noted on top of the Holson’s tomato and Lea and Perrins Worcester sauce bottles from 234-242 George Street, including another Lea and Perrins, a “Hoe’s Sauce” (a brand of brown sauce) and a generic condiment bottle marked with the name George Whybrow. All of these sauces apart from Holson’s originate from England and would probably be a welcome taste of home for many of the people in this area.
Pickle jars and salad oil bottles are also common in nineteenth century sites. Pickling would have been one of the few practical ways of preserving food stuffs at the time and, as discussed in the previous chapters, salad oil bottles were common features on Victorian dinner tables, particularly the decoratively moulded varieties. Slightly less commonly found are baby food containers and feeding bottles, examples of which were uncovered at the Riego Street and Harbour Terrace excavations. Baby food was first manufactured and sold commercially in the second half of the nineteenth century, with Mellin’s (the brand found at Riego Street) first being produced in 1874. This brand, originating in England, was relatively slow to take off, however, which could explain the solitary example. At this time, supplementary nutrition for infants would have probably been prepared at home from everyday ingredients such as oats or barley (Olver 2004). This area was also of a relatively low socio-economic status, which may have meant that pre-prepared baby food from overseas would have been out of reach for most families.

Pharmaceutical

A range of pharmaceutical bottles and products were also identified across the study area. Common products include: Bonnington’s Irish Moss (produced in Christchurch and found at Reigo Street and Harbour Terrace), Davis’ Vegetable Painkiller (from Wall Street), Cod Liver Oil (Wall Street as well as 234-242 George Street), Woods’ Great Peppermint Cure (Riego St, although this bottle possibly dates to the very early twentieth century) and Baxter’s Lung Preserver (Riego Street). Of more interest than the products themselves, however, is the local nature of the pharmaceutical bottle assemblages. This was most noticeable in the 234-242 George Street material which was dominated by Dr Neil’s products, but is also apparent in the other sites. The assemblage from every site in the area (apart from 234-242 George Street) contained multiple bottles marked with the name of a prominent local chemist: B. Bagley, who had a shop on George Street. While a couple of the products mentioned above originate overseas (Davis’ Vegetable Pain Killer was made in the USA and Woods’ Great Peppermint Cure was sourced from Australia), the others were produced in Christchurch. This suggests that when buying pharmaceutical products the nineteenth century consumer preferred those brands that came from somewhere, or someone, they felt they could trust. Even when exotic ingredients and international medical knowledge were viewed as selling points (as with Dr Neil’s products) it clearly required the association of a trustworthy local
face before the product would sell in any great numbers. This is further supported by the fact that the only overseas products present in the assemblages were extremely well known and had a very solid reputation.

**Other**

A small number of bottles were found throughout the study area which do not fit into any of the above categories but can still provide information on everyday life in this part of Dunedin. These include perfume, cleaning products and other various household product bottles. The reason so few of these types of bottles were found is probably due to the slow rate at which the contents would have been used; perfume, for instance, is only used a few drops at a time so a bottle can potentially last for years.

Two small perfume bottles were recovered from the Wall Street Mall site and three from Farmers. The Wall Street bottles (Petchey 2009: 58) were both marked with the name “Piesse and Lubin” which belongs to a London perfumier and one of the Farmers vessels bears the mark of the Paris manufacturer Ed Pinaud (Petchey 2004: 44). With the various problems concerning rubbish and sewage disposal that were still a major issue in this part of Dunedin right until the end of the nineteenth century the pleasant aroma of an exotic perfume would undoubtedly have been welcomed.

Household cleaning products also feature in some of the domestic deposits from the north of the study area. At the Otago Polytechnic excavation on Harbour Terrace a Taine’s Black Lacquer bottle of the type found at 234-242 George Street was recovered while a slightly different product was found at Riego Street: Jeyes Fluid (Middleton and Williams 2009: 11). The deposit in question at Riego Street is slightly later than the George Street and Harbour Terrace deposits, dating to the last few years of the nineteenth and the first of the twentieth century, and shows a change that was occurring in ideas about hygiene. For most of the nineteenth century homeowners had been content with using products such as blacking which were more focused on making the surfaces and furniture of the home look clean and tidy but as the century came to a close and medical practice began to be more concerned about germs and bacteria the public began to want products that would remove the unseen dirt as well. This change is also reflected in the improvements in sewage, water supply and general cleanliness of the city that were taking place at this time.
Metal
After ceramics and glass, metal artefacts were the next most common objects found in North Dunedin sites. The following discussion only includes those items which could tell us meaningful information about the nature of the community here, mainly containers, lighting fixtures and a small number of miscellaneous artefacts. Fasteners, which were by far the most common metal artefact type (Table 20) have not been discussed here as their main information value lies in identification of building and demolition activity, and to a lesser degree chronology, all of which are not of direct interest for this portion of the study. The tools are discussed in the Work Related Artefacts section.

<table>
<thead>
<tr>
<th>Artefact Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
<th>Total</th>
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<tr>
<td>Containers</td>
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<td>41</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>53</td>
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</tr>
<tr>
<td>Tools</td>
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<td>18</td>
<td></td>
<td></td>
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<td>Lighting</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>83</td>
<td></td>
</tr>
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<td>17</td>
<td>8</td>
<td>13</td>
<td>2</td>
<td>9</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>265</td>
<td>282</td>
<td>13</td>
<td>3</td>
<td>13</td>
<td>20</td>
<td>596</td>
</tr>
</tbody>
</table>

Containers
Various metal containers such as matchboxes and food tins were found in several of the study sites. While many were too poorly preserved to possess any significant information value, the anaerobic condition of several of the deposits allowed some to be identifiable.

A number of matchboxes found at the Farmers and Wall Street Mall sites were well enough preserved to be identifiable to manufacturer which proved useful as dating aids for some of the deposits. Bell and Black, R. Letchford and Co., George Dowler and several different J. Palmer and Sons examples were identified, which dated the deposits to ca. 1860-1875. Aside from chronological information, which is not of direct significance to this research, these boxes provide more evidence for the trade links of nineteenth century North Dunedin. The majority of these manufacturers operated out of London factories, which also suggests that there was not an established match manufacturing industry within the colony during this period (matches were first produced in New Zealand in 1895 (Anson 1983: 115).
The anaerobic conditions at the Wall St site preserved a number of tin cans well enough to read the labels, something which is almost unheard of in the majority of archaeological deposits in this area. Four rectangular tins were able to be identified as having contained sardines and presumably come from France as the writing on the labels is in French. Another round tin can was labelled as “John Tainsh’s Blackcurrant Jam”, with the John Tainsh in question being a well known jam maker based in Lanarkshire, Scotland. As Petchey (2009: 89) points out, this shows that even the working class members of the North Dunedin community were consuming a relatively varied diet and were able to afford and access treats such as jam from international sources. Examples of tin cans and other containers which can be presumed to have held food items that did not survive as well as those from Wall Street were found in most of the other sites in the area.

**Lighting**

During the excavations at the Wall Street Mall site a number of lighting related artefacts (Petchey 2009: 90) were found which represent almost all of the lighting methods used during the nineteenth century in North Dunedin. A large cache of 79 small candle holders of the type favoured by miners was recovered and is thought to represent a commercial dump of unwanted stock. This is of particular interest as it is possibly evidence of the effect the end of the gold rush would have had on local businesses as items that were once in high demand ceased to sell. A more substantial brass candle lantern was found in one of the domestic deposits and is probably more representative of the types of candle receptacles that would have been found in peoples’ homes in the first few decades of the city’s existence. Also recovered were parts of several household oil lamps which would have been common throughout the nineteenth century. One of the major issues with both main sources of light being based on combustible materials and open flames was the increased risk of fire. This was further exacerbated by the fact that until fairly late in the century most buildings within the central city were constructed of wood. Local newspapers and secondary sources are full of reports of major fires that could well have been caused by an unattended candle or oil lamp (e.g. *Otago Witness* 1/9/1877, page 7; 4/10/1879, page 11; 8/11/1879, page 6). A slightly later and much more substantial gas powered lamp was also recovered. This particular example bears a patent mark with a 1901 date but this type of lighting was being
used for street lighting in the years leading up to the turn of the century. Petchey suggests that this lamp came from one of the George Street shops that once stood at the site.

When the carbon arc lamp electrode found at 234-242 George Street is added to this collection it forms an interesting representation of the changes in lighting technology that were occurring at the end of the nineteenth century in North Dunedin.

**Other metal artefacts**

As is usually the case in urban historical sites a wide selection of miscellaneous metal artefacts were recovered from across the study area. Only those which were identifiable and considered to provide information on life in nineteenth century North Dunedin are discussed here, the remainder can be found in the appropriate site reports.

The previously mentioned anaerobic condition of the Wall Street mall deposits again allowed a chance to examine an artefact type which does not generally stand up to usual taphonomic processes, this time a selection of tin-plated vessels (Petchey 2009: 90). Five plates, a rectangular dish and a cup were found in remarkable condition along with a single enamelled tin dinner plate. Unfortunately, due to the rarity of these types of artefacts surviving in the archaeological record little is known with regards to how common they were or in what settings they would be expected. It is clear, however, that they were being used by some members of this community, and the fact that most pieces were found in a single deposit suggests that they could have been fairly commonplace. This is further proof that absence of evidence is not evidence of absence, something which is often said in archaeology but not always heeded.

The only other metal object that can provide any real information as to what North Dunedin was like in the nineteenth century is a single rowlock from a small boat that was recovered from the Otago Polytechnic excavation on Harbour Terrace (Middleton 2009: 16). This unassuming artefact provides a connection to Lake Logan which would have been an important feature of the landscape in the nineteenth century. It was a popular place for a variety of recreational activities such as boating before it was reclaimed in the early twentieth century and transformed into Logan Park playing fields.
**Personal Items**

A range of artefacts were recovered from the North Dunedin sites that included some domestic activity (Farmers, Wall Street Mall, Reigo Street and Harbour Terrace) that can be classified as personal items (Table 21). This type of artefact, which includes clothing, footwear, toys and items of adornment, has the potential to reveal a great deal of information about the appearance and daily life of the nineteenth century residents of the area.

<table>
<thead>
<tr>
<th>Site</th>
<th>Artefact type (MNI)</th>
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<th>3</th>
<th>4</th>
<th>8</th>
<th>Total</th>
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<td>25</td>
<td>76</td>
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<td>Footwear</td>
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<td>6</td>
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<td>Toys</td>
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<td>90</td>
<td>23</td>
<td>6</td>
<td>37</td>
<td>276</td>
</tr>
</tbody>
</table>

**Clothing and footwear**

Thanks to the anaerobic nature of several of the North Dunedin archaeological deposits, a relatively large assemblage of fabric and leather items has been able to be collected. These items can provide us with a glimpse of what the inhabitants of North Dunedin would have been wearing in the nineteenth century.

Within the collection of fabric and footwear items recovered from around North Dunedin (specifically Farmers, Wall Street, Reigo Street and 234-242 George Street) can be found examples of several pieces considered to be the quintessential “uniform” of colonial New Zealand men. Petchey (2004: 60) describes this uniform as consisting of heavy boots, moleskins, a flannel shirt, jacket and a felt hat. Two reasonably complete felt hats have been found (one from Farmers and another from Wall Street), as have fragments of moleskin trousers and jackets and a large number of heavy duty hobnailed boots. The practical nature of these clothes would have been a necessity, especially for those men who worked outdoors, and does not seem to have been restricted to a certain class.

While the clothing worn by women would have been more focused on fashion and appearance than practicality, some measures did have to be taken in order to make
traversing the poorly formed streets possible. The fine fabrics found at Wall Street, Farmers and 234-242 George Street provide an idea of the kinds of material that fashionable ladies would have been wearing: silks, lace and very finely woven wools and cottons. These, especially when you take into account that most dresses would feature heavy full length skirts, would not have held up well to the nearly knee deep mud that was a feature of most North Dunedin streets until the end of the century. The solution many women appear to have resorted to involved tucking their skirts into long, heavy duty boots, which probably would have been hobnailed to provide grip (Wood 2005). This was jokingly referred to by many Dunedin residents as the “Town Board of Dunedin uniform” in reference to the lack of attention given to the state of the main streets by those in power (Reed 1956).

**Toys**

A similar range of children’s toys to that found at 234-242 George Street were recovered from the Farmers and Wall Street Mall sites. Marbles were by far the most common toy, but miniature tea set items and a small rubber dog figurine were also present.

Marbles have been a favourite toy for children for hundreds of years, with around 30 million being produced a year by German manufacturers alone in the mid nineteenth century (Gartley and Carskadden 1998: 1). The largest assemblage of children’s marbles came from the Farmers site (Petchey 2004: 59), which included 18 clay and 14 glass examples, within which several sub types were able to be identified. Seventeen of the clay examples appear to be whiteware marbles which were most common in the late nineteenth century and often, as is the case with some of these, have hand-painted designs. Stripes have been painted on two, one in blue and the other purple, one bears a blue star and another has the faded remnants of red paint. Is has been suggested that these decorated marbles were an attempt to appeal to the female marble player (Carskadden and Gartley 1990). The remaining clay marble appears to be what is known as a “Bennington” which is characterised by a tortoiseshell style brown glaze. These marbles were produced in during the last three decades of the nineteenth century (Gartley and Carskadden 1998: 133). All of the glass marbles were of the same “spiral” type as the example from 234-242 George Street. A further two glass and two clay marbles were found at Wall Street (Petchey 2009: 96), although no further details were given as to their characteristics. We can be almost certain
that the majority of these originated in Germany, as this was the centre of ceramic and glass marble production at this time.

The other toys found include various miniature tea set vessels in earthenware and porcelain from the Farmers, Wall Street Mall and Harbour Terrace excavations similar to the cups found at 234-242 George Street and a somewhat strange rubber shaft with a carved dog head at one end. It is possible that this is only part of a larger toy.

**Other Personal Items**

Various other personal items were found at the sites in the study area including items of adornment and personal hygiene implements but as it was usually the case that only one or two of each item were found there is little meaningful information on the nature of the surrounding neighbourhood that is able to be taken from these pieces.

**Work Related Artefacts**

The North Dunedin material culture assemblage also provides us with an insight into some of the employment opportunities that would have been available to various members of the nineteenth century community. This information in turn reveals some of the major social issues of the day, such as sweating and worker’s rights.

**Seamstresses**

Three of the study sites (234-242 George Street, Farmers and the Wall Street Mall) contained deposits of fabric offcuts, partially finished garments and other dressmaking related artefacts such as cotton reels, pins and thread. At each of these sites, however, it is obvious that these deposits are not factory refuse but instead appear to be seamstress or dressmaker activity on a much smaller scale, probably each representing the work of a very small number of workers or even a single individual. This is almost certainly evidence of women (dressmaking and clothing alteration were almost exclusively the realm of women and girls) undertaking what was known as piece work in their own homes. With the introduction of mechanised production in the last quarter of the nineteenth century, particularly in the clothing industry, women became the employees of choice as they were generally cheaper than skilled male workers and seen as easier to exploit (Bedggood 1980: 88). This type of work caught the colony’s attention when Reverend Rutherford Waddell exposed the long hours and meagre pay endured by these women in a series of public
lectures around Dunedin in the 1880s: “The Sigh and the Song of the Weary” in 1883 and, more famously, “The Sin of Cheapness” in 1888. Waddell wanted to bring the plight of the women involved in this business to the attention of the wealthier members of Dunedin and New Zealand society and laid the blame on them for refusing to pay a fair price for items made by the working class, in particular clothing. In order to survive on the hourly rate paid by many of the clothing factories in the city many employees were forced to work overtime as well as bringing their work home with them. Some women would regularly work from 9 am until 11 pm without any significant breaks and would still earn as little as 10 shillings and sixpence a week, which in the early 1880s would have bought the cheapest trimmed hat from the Dunedin department store Brown, Ewing and Co. (Otago Daily Times, 21/11/1883), a ladies mantle from A. Evans and Co. (Otago Witness, 8/5/1880) or the smallest size of plain white blanket from Herbert Haynes and Co (Otago Daily Times, 26/10/1883).

Reverend Waddell succeeded in bringing the issue into the public eye and the press willingly took up the story. As a direct result of the Reverend’s public talks a national commission was set up to investigate the matter, a Tailoresses’ Union was formed by and for the women themselves and these, combined with the negative press and public pressure, resulted in a significant improvement in the working conditions and wages of factory women. Employers stopped sending work home with the women and restricted their daily hours to eight. A seamstress could now expect to earn at least 12 shillings a week, which according to Ellen Wilson (Wilson 1993), a shirt finisher at an unnamed Dunedin factory, was able to provide her with a reasonably comfortable living, although she admitted she was a “small eater” and was unable to save anything at the end of the week. It would appear that most women were earning slightly more than Miss Wilson, however, and the higher skilled workers could easily earn around 23 shillings a week.

**Industrial Artefacts**

In addition to the artefacts relating to the Vulcan Foundry found at 234-242 George Street, a range of items that reveal something about the Industrial activity occurring in his area were uncovered in several of the study area sites. Excavations at the Farmers trading Company site revealed another example of light industry surrounded by shops and homes. A monumental mason (Munro & Sons, later Bingham & Co) occupied one corner of the site from at least the 1880s into the twentieth century. This left its mark on the archaeological
record with numerous lenses of fine limestone dust and part of the base of a turned limestone column. Petchey (2004: 6) also mentions the presence of two other small factories along the Great King Street side of the site which manufactured cordial and hats. This site differs from the Countdown site discussed below in that the small scale industries here are completely unrelated, while at Countdown most were involved with timber and metal and would have overlapped to some degree.

Amongst the artefactual material recovered from the Wall Street Mall deposits was a selection of tools (Petchey 2009: 92), in particular seven large files. These, along with lenses of ash and coke, were seen as evidence of smithing activity, although as only seven well used horseshoes were found across the whole site it does not appear to be a farrier’s deposit. None of the street directories of the time note the presence of a blacksmith in this vicinity, although where these tools were found is marked as a yard with a generic “shed,” so it is possible that smithing was a side-line activity or business for one of the other occupants. Some of the other tools found, including the head of an axe, numerous chisels, a sharpening steel and a mallet head, could relate to the timber yard which Petchey mentions as being present in one of the Filleul Street sections. At this site it is clear that smithing and timber milling related activity was occurring but it was far from the primary use of the sections, often not even appearing on street directories. It was instead a matter of small-scale industry being carried out behind the shops and homes that take up the majority of the space over this site.

During excavations for the construction of a carpark on the southern boundary of the study area in Moray Place Hamel uncovered the premises of a printer and another blacksmith, present at this location during the late 1870s until 1894 when the section was purchased by Richard Hudson and became a biscuit factory (Hamel 2004: 4). Similar to the case at the Wall Street site, no horseshoes were found, which Hamel, like Petchey, took as evidence that this smith was not a farrier.

**Other Artefacts**

A variety of other material culture items were recovered during the excavations around North Dunedin that do not fit into any of the above categories. Only those that were thought to add something meaningful to a discussion of the neighbourhood and its inhabitants are discussed below.
**Timbers**

At the current site of the Countdown supermarket on Cumberland Street (Hamel 2008) a retaining wall constructed from large recycled timbers was uncovered. These timbers are thought to have been part of the slipway of a shipyard on the site or nearby before they were repurposed as a retaining wall to extend the usable land here right to the edge of the harbour in the 1860s. Through cartographic and other sources Hamel was able to identify a number of businesses which occupied the site in the 1860s-1880s. In 1865 there were multiple timber yards and two iron foundries here and when a fire devastated the site in 1873 a range of related industrial businesses were listed as destroyed, including a saw mill, door factory, a tub, bucket and washboard factory, turner, bone crusher and goldsmith. Several of these businesses rebuilt and continued at the site for at least another decade. This major event was not only memorialised in the newspapers of the day but also in the archaeological record as the part of the wooden beam retaining wall that would have been exposed in 1873 was clearly charred.

**Equifacts**

Equifacts refer to objects within the archaeological record which relate to horses. In nineteenth century North Dunedin, as with most places at this time, horses were an extremely important animal. They were vital for transporting people and goods but also would have featured in a number of recreational activities.

At Moray Place (Hamel 2004: 15) remnants of a horse blanket was found and there is photographic record of a single horse having been grazed on site. The Wall Street excavations unearthed a number of used horseshoes and several pieces of harness, relating to both heavy work horses and lighter hacks (Petchey 2009: 94). There is also record of a stable on site at Wall Street during the 1880s. It would be surprising if neither of the blacksmith facilities mentioned in the previous section were ever employed for the shoeing of the nearby horses, even if it was not the main type of smithing undertaken. The lack of unused horseshoes could be a result of farrier work being a secondary activity at the sites, as it would be unlikely that the smith would keep large stockpiles of shoes around the workshop. It is even possible that they were made to order so there may have been no shoes apart from those on the feet of the horses. It is also not surprising that there is a lack of any small horseshoe nails that would be clear evidence of farrier work. These would have
been, and still are, extremely easy to drop and lose due to their small size, but for the same reason they would be easily missed, especially in a time-constrained contract excavation.

**Woven bags**

The anaerobic conditions of the Wall Street Mall site allowed for the preservation of three bags woven from unknown plant fibres (Petchey 2009: 103). While their origin is uncertain, the style is similar to bags made by Maori weavers. If this is the case they offer a tantalising glimpse of the otherwise archaeologically invisible interactions between Maori and later settlers in Dunedin during the nineteenth century.
CHAPTER 4: North Dunedin in the Nineteenth Century

The North Dunedin material culture assemblage, as discussed in the previous chapter, was able to reveal a vast amount of information regarding the nature of the nineteenth century community in this part of the city. This section draws in information from the documentary record, including histories, maps, insurance plans and photographs to allow for a more comprehensive description of the neighbourhood. Major issues, stereotypes and assumptions raised within the historical information have also been tested against the archaeological evidence where applicable.

Environment

The physical environment had a significant effect on the development of North Dunedin and the experience of its inhabitants. The topography of the area caused major headaches for the initial town planners and became an obstacle to be overcome in the creation of their ideal city. It also contributed to the multitude of problems with basic services and infrastructure that would plague the residents for much of the nineteenth century. The ways in which the population chose to approach and solve these problems went a long way to building the character of the city as it is today.

Topography

The modern North Dunedin landscape is almost unrecognisable compared with its natural form. The first European visitors to North Dunedin in the late 1840s would have been confronted with an expanse of tidal mudflats and swamps bordered by steep, bush-clad hills and gullies. Reed (1956: 70) shares the reminiscences of one of the earliest settlers who as a child remembered getting lost amongst extensive flax bushes somewhere between St Andrew and Hanover Streets. The flax leaves found on the top of the 234-242 George Street Layer 4 material act as a physical reminder of this vegetation which would have been such a feature of the landscape for the first decade or so of North Dunedin’s existence. The cutting down of Bell Hill precipitated a rapid change from a flax covered swamp to the built up business district and suburban area the neighbourhood was to become. This undertaking, which took 15 years (Reed 1947: 272), was one of the most significant topographical
alterations that was to occur to the fledgling settlement, both in terms of scale (at its peak the spur rose 150 feet and was removed entirely by hand (Forrest 1964: 19)) and effect it was to have on the layout and nature of the town. Whereas previously this landmark had acted like a dam constraining the majority of settlement to the area around Princes Street, its removal allowed businesses and homes to spill out across the North Dunedin flat and opened up the road to Port Chalmers and the North East Valley.

The only other topographical alteration that had a similar scale of effect on the city was the reclamation of the foreshore, tidal inlet and swamps. The reclamation of the foreshore was first proposed by the Provincial Council in 1873. This plan involved using material excavated during the dredging of the harbour to reclaim 100 acres of land (Otago Daily Times 16/9/1873, page 5). Reclamation was not just extending the foreshore, however, but was also occurring inland. As mentioned above, part of the North Dunedin flat was initially a large swamp which required significant alteration and in-filling before it was suitable for major development. The tidal streams and some of the gullies which inconveniently crossed the planned grid of the streets were treated in a similar way. The material used for these large scale reclamation and in-filling projects is of great interest and significance archaeologically. While the bulk of Bell Hill and the dredging of the harbour provided a vast amount of useable fill (Otago Daily Times 16/9/1873, page 5) it was still only a fraction of what was required. In order to solve this problem, and also as a way of dealing with the refuse being produced in ever increasing amounts by the growing city, rubbish from the factories, warehouses, shops and homes of Dunedin was piled into the harbour, swamps and any other depression which required levelling (Hamel 2001: 2; Middleton et al. 2012: 13; Petchey 2009: 124). This process, which began in the 1850s and continued well into the twentieth century, is responsible for much of the artefactual material recovered from a number of the study area sites: the Farmers site was at one time right on the edge of the tidal swamp so has foreshore reclamation deposits while 234-242 George Street and the Wall Street Mall sites contain material dumped to level out a stream bed. Reigo Street shows evidence of later reclamation and ground levelling, still consisting largely of household waste, which took place in what became the suburbs of North Dunedin. The rapid nature of this dumping into waterlogged areas is also responsible for the anaerobic conditions of many of the area’s archaeological deposits, something which has allowed at times unprecedented levels of preservation among the artefacts.
Infrastructure

This use of rubbish as reclamation material is indicative of the problems facing nineteenth century Dunedin when it came to providing basic services such as waste and sewage disposal and water supply to its rapidly growing population. These problems had their origin before the city even came into existence with the plan presented by the New Zealand Company to Kettle from which to prepare the settlement for the arrival of the first European settlers. The Company suggested that the surveyors make provisions for well-made roads, a jetty, a church and school, public buildings, plots for cultivation and sufficient transit barracks to provide shelter for the new arrivals (Forrest 1964: 20). Nowhere in this plan was there mention of drainage, waste disposal, sewer or water supply systems. Even if there had been provision for these essential services they, like many of the others set out in the Company’s plan, would almost certainly not have been fulfilled as Kettle only received orders to commence the preparation of the settlement for its first settlers when the John Wicklifffe was a week away from landing at Dunedin (Reed 1956: 29). Despite this setback the settlers set to work creating a settlement they hoped would be free of the filth and “Old World evils” of home (Wood 2005: 5). It only took a couple of years, however, before these evils they thought they had left behind resurfaced in the form of large amounts of refuse strewn alongside the streets and in empty sections, almost undrinkable water sources and a harbour full of sewage. These conditions also resulted in regular breakouts of sickness, thought to be caused by the harmful “miasmas” given off by the swamps and piles of waste, and a mortality rate on par with many British cities (Frost 1991: 150).

The situation was further exacerbated by the massive boom in population caused by the discovery of gold in Otago in 1861. Within six months of this discovery Dunedin’s population had doubled (Wood 2005: 7), which would have put considerable strain on the town’s infrastructure even if it had existed. Many of these new arrivals set up tents and shanties wherever they could find space (Figure 76), which not only caused problems when it came to waste disposal but also made the whole town, most of the rest of which was constructed of wood, one massive fire hazard (McLintock 1949). During the 1860s destructive fires were a regular occurrence, often taking out whole blocks of buildings (McDonald lists some of the biggest (1965: 207-209)). This is noticeable in the archaeological record at the Countdown car park site where many of the large timber beams recovered showed clear evidence of
burning as a result of a fire in 1873 (Hamel 2008: 2) and at Farmers where Petchey (2004: 44) notes that many of the glass vessels show evidence typical of being burnt. The lack of a town water supply, and also the lack of any fire appliances until the end of the decade, made fighting the regular blazes extremely difficult (Reed 1947: 270). With the large amount of wealth flowing into the city thanks to the gold rush, however, things began to improve. Buildings began to be constructed out of stone and regulations were brought in regarding building standards, although in some areas the enforcement of these was somewhat lax (Hargreaves 1992: 5; Reed 1956: 167). The impressive stone buildings came to reflect Dunedin’s new position as the New Zealand’s commercial and industrial centre by the end of the 1860s (McLintock 1949: 478) and are still seen as an important part of its character today.

The unpleasant conditions plaguing North Dunedin, as well as the rest of the city, resulted in the appointment of a Sanitary Commission in 1864 but the situation would not be significantly improved until well into the last decade of the century. A town water supply was installed in 1867, but problems with the location and elevation of the reservoir at Ross Creek meant that water was only able to be supplied to homes on the North Dunedin flat, and even then not all of them. It would take decades for the higher hill suburbs to receive a

Figure 76. Dunedin, 1862, between Maclaggan Street and High Street. (Reference No. 13407, Hocken Collections, University of Otago)
reliable supply. A large part of the problem was that many areas of the suburbs had relatively low-density populations who could not afford the rates required to provide this service or simply refused to pay them. The Town Board’s initial attempts to collect rates from the population in the 1850s had to be abandoned due to public outcry, even though it was almost undoubtedly these same people who were complaining about the lack of services (Bush 1971: 71). This was a problem commonly faced by cities experiencing rapid suburban growth late in the nineteenth century (Frost 1991: 34). Supplying sufficient water to the town had not been thought to be a problem in the late 1850s when the population was only around 2000. A presentation to the Town Board on the matter argued that the streams that travelled through the town would provide enough water for 165,629 people at a rate of 30 gallons per head per day when not in flood, so it was not thought necessary to make provisions for a reticulated supply until well into the future (Otago Witness 9/7/1859). This calculation did not, however, take into account the quality of the water in these streams, most of which had become contaminated with household refuse, animal carcasses, sewage and various other pollutants (Otago Daily Times 7/2/1891, page 3; Wood (2005: 71)). The conditions can easily be imagined when considering that the majority of the material from 234-242 George Street was recovered from an old stream bed. This could go some way to explain the selection of exotic soda and mineral water bottles found within the study area, some from as far away as Germany and Hungary. The fact that they were marketed as having a wide range of health benefits, in particular as purgatives and purifiers, would have made them attractive to the many residents who were not entirely comfortable with drinking the local water, or at least those who could afford them. It would be interesting to compare the proportion of exotic mineral and soda water bottles in a “working-class” and middle-class household assemblage from this period in time to see whether wealthier families were buying more of these products; however the lack of middle-class assemblages from Dunedin does not allow this as yet.

A combination of poor drainage, a contaminated water supply and the use of waste as a reclamation material resulted in regular outbreaks of fevers and sickness (for example Otago Daily Times 2/3/1881, page 3; 21/3/1881, page 3). Rates of sickness and mortality at times exceeded those in many industrialised British towns, thus dispelling the idea of Dunedin as a pristine land where settlers could come to escape the conditions of “home.” In 1889, due to
the raw sewage accumulating in the harbour, Dunedin earned the title “Stinkapool.” Many commentators blamed the residents of the town themselves, arguing that they knew full well how damaging to their health the presence of all this filth was but they chose to ignore it, perhaps out of laziness (for example Otago Daily Times 20/10/1882, page 4). Several of the townspeople conversely blamed those in authority, complaining that they spent too much time organising sports matches and social gatherings and not enough on supplying basic services (Wood 2005: 33). Whatever the cause for the problem of waste and drainage, the solution was to be slow in coming. Even in 1900 there were still areas of North Dunedin that were as bad as they had been in the 1860s, though by this point this was restricted to back alleys and the odd vacant lot (McDonald 1965: 260).

Several factors probably contributed to the steady improvement in conditions towards the end of the nineteenth century. McDonald (1965: 210) suggests that the post gold rush economic depression of the 1880s diverted the city’s attention away from profit making towards improving the environment. This could have been a catalyst for the formation of the Dunedin Amenities Society in 1888 whose main concern was the preservation and beautification of the city’s scenic attractions (Wood 2005: 89). A by-product of this was the creation and up-keep of a number of parks and other open spaces which would have had a beneficial effect on the environment, making North Dunedin a much more pleasant area to live in. On a more fundamental level a shift was occurring in the way people thought about dirt and the spread of illness and diseases. The 1870s saw the emergence in the medical community of germ-theory, the idea that many diseases are spread by micro-organisms, many of which live in rubbish and sewage. Previously the assumption had been that it was harmful vapours (miasmas) that emanated from low-lying swampy regions and were the cause of most unpleasant smells that caused sickness (Frost 1991: 138). This shift in thinking was relatively slow to trickle down to public knowledge, however, and it is not until the 1890s North Dunedin deposits that disinfectant products, such as Jeyes Fluid, begin to appear in the archaeological record and replace products that were intended to cover up dirt, such as Taine’s Black Lacquer.

Activity Types and areas
Frost (1991: 14) describes a broad model for Anglo-Saxon cities at the end of the nineteenth century in which there were three main zones: a central business district which was made up
of offices and commercial premises alongside the tightly packed homes of the poorest members of the community, a second, intermediate zone in which most of the population resided and much of the industrial activity took place, and a final outer zone which consisted of true suburbs and the wealthier portions of the community. The archaeological investigations within the study area, however, reveal the more eclectic and dispersed nature of activity occurring in North Dunedin at this point in time. In character it was closer to the “New Frontier” cities described by the same author, the growth of which were fuelled by industry and did not result in the high density, clearly delineated zones of those in Britain and the east coast of North America (ibid: 20).

Several of the industrial premises identified in the previous chapters were established at a time when the North Dunedin flat was still on the outskirts of the city and land was affordable and easy to obtain. The rapid expansion of the central business district from Princes Street to north of the Octagon after the removal of Bell Hill meant that instead of slowly being forced out of the area to make way for retail and residential activity the new businesses and homes were built around these pockets of industry, sometimes even on the same section. This resulted in a very diverse neighbourhood in terms of land use.

*Industrial*

The general pattern in modern cities is that industrial activity is centred in areas where land is undesirable for residential or other activity types (Frost 1991: 15). One of the main contributing factors to this is that such land is generally inexpensive, especially important for those types of industry that require a large space. This pattern is clearly visible in modern Dunedin, with distinct industrial areas in the southern part of the city. In the nineteenth century, however, the city did not have one main industrial centre but several small pockets of industry, many of which were located in North Dunedin on the edge of the tidal swamp. Aside from availability and affordability of land, transport costs were one of the main considerations in deciding the location of industrial activity. In young cities such as Dunedin without established transport infrastructure this meant that sites close to the harbour and eventually the railway station were most desirable (Wood 1974: 134), a fact which is reflected in the positioning of many areas of industry along the edge of the tidal swamp. The reclamation of the harbour that was occurring throughout the period in question here meant that the most accessible areas were constantly shifting, particularly in relation to
water transportation. This could go some way to explain the scattered nature of industrial premises within the study area.

The Vulcan Foundry on Great King was one of the largest single industrial premises in the area, but archaeological investigations of several other North Dunedin sites have revealed evidence of various industrial activities. The Countdown site (which featured a saw mill, door factory, a tub, bucket and washboard factory, turner, bone crusher and goldsmith to name a few) is an example of an area which was almost exclusively industrial, but as can be seen from material recovered from the other contemporary sites in this area, industry was more often occurring alongside multiple other activities.

This work also highlights the worth of archaeology as a historical research tool, as at least one of the businesses unearthed during excavations (the blacksmith at the Wall Street site) was not listed on any of the street directories or insurance plans that would normally be relied upon for information as to the previous activities at a given site. The effects of industrialisation on the composition of the neighbourhood are also visible in the industrial archaeological record. In the 1870s and 1880s, the small blacksmith’s workshop would have been a common site on most blocks of North Dunedin (Hamel 2004; Petchey 2009: 95), but they had largely disappeared by the 1890s, replaced with the large mechanised factories that were prospering elsewhere in the city, for example the Vulcan Foundry on Great King Street. This process put an end to “backyard industry” and the skilled craftsmen who worked from such establishments and replaced them with large machines that required significantly less human skill and labour to manufacture the same products. This would have had a sudden effect on the neighbourhood, leaving many previously self-sufficient artisans out of work and pocket while providing jobs for the unskilled members of the community who would have previously struggled to find employment (Olssen 1984).

*Commercial and Retail*

Commercial and retail activity is also very visible in the archaeological record in this part of town. Discreet dumps of material from such premises are present in several of the sites covered in the preceding chapters: the Dr Neil pharmaceutical bottles from 234-242 George Street, hotel bottle dumps at Wall Street Mall and Farmers and ceramics clearly from single importers at Farmers and 234-242 George Street. During Dunedin’s earliest days almost all types of activity were focused around the landing site of the immigrant ships near what is
today known as the Exchange (the dark area in Figure 2). The focus of the commercial sector of the fledgling settlement was a pair of hotels (the Commercial and the Royal) which were both situated just to the south of the Octagon along Princes Street (Forrest 1964: 21). At this point in time the immense bulk of Bell Hill acted as a barrier against any significant expansion to the north, but the cutting that began in the late 1850s and eventual removal by 1892 of this 150 feet tall landmark enabled the CBD and thus most of the commercial and retail activity to shift to George Street where it remains today (Forrest 1990: 316). This location was advantageous as this street lay along the main thoroughfare from the main town to the rapidly growing North East Valley and Port Chalmers, and meant that George Street now experienced the highest volume of traffic and therefore potential customers.

*Residential*

Prior to the cutting of Bell Hill visitors to the North Dunedin flat would have seen a scattering of small cottages and shacks and not much else. The land here was swampy and out of town which made it undesirable for anyone who could afford better. This attracted squatters who set up their ramshackle homes on vacant pieces of land where they were more or less ignored (Wood 2005: 45). By the end of the 1890s, however, the area contained a wide range of house types dispersed amongst the industrial, commercial and retail premises of the blocks around George Street and stretching out into the new suburbs. Along Filleul Street up until the end of the 1880s there were a number of substantial homes with large gardens virtually next door to tightly packed rows of terraced worker’s houses. This would have been typical of the neighbourhood at that time, with wealthy capitalists living side by side with the poorest members of the community (Olssen 1984). In several of the sections between Filleul and George Street small houses can be seen nestled in behind some of the shops and would have presumably, in some cases at least, been occupied by the shopkeepers. On the opposite side of George Street next to the Vulcan Foundry was an area of tightly packed houses that would probably have been occupied by employees of the foundry and other inner city factories and shops. A similar area of housing amongst industrial premises was located in the block bounded by Cumberland and St Andrew Streets and Moray Place during the 1880s. The archaeological investigations within the study area reveal the eclectic and dispersed nature of activity occurring in North Dunedin towards the end of the nineteenth century. This pattern of pockets of low income housing in back alleys
and on lots bordering areas of noxious industry is typical of Frost’s (1991: 21) “New Frontier” cities mentioned earlier. The close proximity of houses, shops, warehouses and industrial premises is noticeable in the material culture as most of the central business district sites from the study area contain artefacts from all of these activity types.

The only purely domestic assemblages were recovered from Harbour Terrace and Riego Street (although this site also featured a small amount of commercial activity in the form of a coal yard). These two sites were first occupied slightly later than the others and show the development of suburban North Dunedin subsequent to the 1880s reclamation of the tidal inlet and swamp which originally covered the area. The inhabitants of these sites would have been those who worked in town but could afford to live in the slightly larger houses that would have distinguished these suburbs from the inner city tenement houses. This would have been by no means one of the more wealthy neighbourhoods of the city, however. Most of Dunedin’s wealthier population had moved up into the hill suburbs such as Roslyn and Maori Hill as soon as they became accessible with the introduction of trams in the 1870s, a common pattern in late nineteenth century cities (Frost 1991: 15). The elevated nature of these areas would have made them attractive to people wanting to escape the unpleasant smells, noise and harmful miasmas of the swampy North Dunedin flat. Once the middle class residents had moved to greener pastures, North Dunedin was mostly populated by labourers, artisans and employees of the ever increasing number of factories (Wood 2005: 93). This pattern would continue well into the twentieth century until eventually the neighbourhood would become a largely student occupied area as it is today.

**People**

While the material culture discussed in this thesis cannot answer questions about how the “working-class” inhabitants of North Dunedin compared to the wealthier population due to lack of comparable material, it can help to test some of the stereotypes assigned to these people. It also provides us with evidence of how they portrayed their identity to others, and indeed what identity they were trying to portray.

**Class**

The nineteenth century middle class capitalists of North Dunedin had a clear mental picture of the working class population which was more often than not at odds with how these
members of the community saw themselves. Contemporary accounts and the newspapers of the day abound with complaints about the heavy drinking, poor morals and slovenly conditions that were thought to be rife among the community. In 1860 the large quantities of bottles discarded in the streets was subject of a public meeting while the *Colonist* reported that spirit consumption in the town had trebled within the last three years even though the population had only just doubled in the same time (Reed 1956). The archaeological record could well be used to support this idea of heavy drinking as over half (52%) of the glass bottle assemblage recovered from the area are recorded as being alcohol related. As mentioned before, however, there are many factors which need to be taken into account with the bottle assemblage, such as recycling, misidentification and relative rate of consumption. The population boom resulting from the gold rush contained a large number of characters that were seen as incredibly undesirable to the tone of the neighbourhood (McLintock 1949: 425). The Chinese set up opium dens and brothels while the Irish miners and railway workers were always drunk and disorderly and, even more worryingly, Catholic. This last issue became such a concern that in 1878 a quota was imposed on Irish immigrants by the current Minister of Immigration (Olssen 1984). Many perhaps feared the influence these “undesirables” would have on the established population, concerns that were not helped by the relatively high number of young women that shunned traditional domestic service roles for jobs as barmaids, entertainers or even prostitutes, for example (ibid). By the late 1880s church attendance among the working class, particularly the unskilled proportion, was also noted to have dropped considerably, with those who kept up attendance preferring non-Protestant churches (Stenhous 2005: 62) (although this reference refers specifically to South Dunedin working class communities it can be assumed from other accounts that the pattern extended to the northern part of the city).

A much more pressing concern was the conditions in which many of the working class community lived. North Dunedin was home to some of the poorest residents of the city due to the undesirability of the swampy land. The area’s waterways were quickly polluted with all manner of waste and patches of vacant land, as well as backyards and road sides became rat infested rubbish dumps. The small, often hastily constructed dwellings were often dilapidated and at risk of catching fire at any moment. This was seen as a problem for more than just those living in these conditions but as a public health hazard for the whole of the
city. The long suffering Inspector of Nuisances James Nimon, whose job it was to investigate matters which could potentially negatively impact the well-being of the community, blamed a combination of the swamp itself and a “almost utter disregard to cleanliness” shown by the poorer members of North Dunedin society, a view that was shared with many others (Wood 2005: 45). The idea that this section of society was generally slovenly was probably further influenced by the idea that in the colony upwards social mobility was relatively easy. Many commentators (Otago Witness 25/3/1854, page 2; 22/11/1873, page 1) drew attention to the wealth of chances available to immigrants compared with what they could expect back home and some just could not understand how many members of the community were not taking full advantage of these opportunities. This is despite the fact that many of these immigrants were encouraged, even assisted on occasion, to relocate to colonies such as Dunedin with the two main intentions of providing cheap unskilled labour for these wealthier business and land owners and relieving the strain on society back home in Britain that was at the time being caused by high levels of unemployment and poverty rather than with the altruistic idea of improving their circumstances (Bedggood 1980: 21).

The working class population themselves had a very different view on things. The apparent apathy towards the state of their homes described by Inspector Nimon and others was in their opinion the fault of the landowners, as most residents of North Dunedin rented their houses. Absentee landlords often gave little thought to the state of their properties, allowing them to become filled with rubbish, weeds and vermin. It was sometimes also the case that the reluctance to improve the conditions of these properties was driven by the notion that doing so would increase the rates payable by the landowner, something even John Hyde Harris, mayor during the mid- to late-1860s was guilty of (Wood 2005: 46). There is also plenty of evidence that residents tried their best to improve their local surroundings, with an emphasis on material culture. Even in some of the most forlorn looking homes could be found a matching tea service (ibid, 28), with elements of many such sets appearing in the North Dunedin archaeological record. China and other household items would have been the main way that people could make their spaces their own when they were unable to do so through the house itself. The blame for diminishing church attendance was also placed squarely on the shoulders of Dunedin’s emerging capitalist population. Many felt that although at church services the middle classes happily prayed for them, the rest of the week
was spent preying on them as employers and landlords and so gave up on that social institution (McLintock 1949: 721).

The industrialisation of the city was a key factor in the widening gap between the workers and capitalists of North Dunedin. Whereas initially the relatively egalitarian nature of the settlement had been a characteristic noted by many (Hargreaves 1992: 5; Olssen 1984; Petchey 2009; Reed 1947) and seen as a triumph against the rigid Old World class system of Britain (Olssen 1995: 231), the rise of large factories and mass production put an end to this. Although a large proportion of immigrants during the 1850s and ‘60s were unskilled labourers, the skilled workers, self-employed artisans and small scale capitalists were among the most influential members of the fledgling society (Olssen 1984). This was helped by the fact that many of the wealthier landowners attracted by the initial settlement scheme chose to manage their properties from back home in Britain. The rise of industrialisation, however, saw a steep decline in demand for skilled workers, as most jobs could now be performed more efficiently by machines, and a combination of mass-production of goods and the rise of large, all-encompassing department stores pushed many of the smaller business owners and artisans out of business. As a result of this many people were forced to take jobs well below their skill level and for far lower wages than they were used to, a far cry from the idea that upwards social mobility was almost assured. This undoubtedly led to resentment against those who were thought responsible for this process, something which would have helped build a strong community spirit amongst the working population and thus further separated them from the capitalists. Thus the combination of industrialisation and the post-gold rush economic depression would have increased the wealth gap between the workers and their employees, creating the perfect environment for the emergence of a segregated class system (Bedggood 1980: 49).

Evidence of this shift can be found within the North Dunedin archaeological record, particularly in the fabric remains. Many of the earliest pieces of clothing are typical of the settler “uniform” of heavy boots, moleskins and felt hats which would have been worn by men from most professions and classes, a fact that highlights the lack of any real distinction between employers and employees during the first decades of the city’s existence. Several of the 1880s contexts, on the other hand, contain artefacts relating to seamstress such as thread and fabric offcuts. These deposits almost certainly relate to the piecework and
“sweating” that was to become such a concern for social reformers, such as Reverend Waddell, during this decade. The newly emphasised distinction between the classes can be seen in the range of high quality fabrics found in these contexts including silks, lace and very finely woven woollens which these women were working on for what many referred to as starvation wages. This was a major concern to the residents of the city as it signalled the reappearance of the conditions and societal evils that they had escaped from when they left Britain and had been so determined to hold at bay in their new city (Olssen 1984: 235).

**Ethnicity and identity**

The city of Dunedin was initially planned by the New Zealand Company in conjunction with the Free Church of Scotland with the intention of creating a perfect Presbyterian community in the antipodes. At first settlers were selected from the members of the Church, but it was only a year before it became necessary to extend the search for ideal emigrants. An office was reluctantly set up in London in order to attract more capitalists to the colony and the strict rules regarding faith were slowly dropped (Forrest 1990: 25). Regardless of this, a large proportion of colonists were still of Scottish origin and many visitors to the town throughout the nineteenth century remarked upon the Caledonian qualities of the inhabitants and surroundings. Most people had a distinctly Scottish accent, Highland games were the most popular community events, Scottish songs were clear favourites (Olssen 1984) and whiskey was “the one pleasure” many of the otherwise prudish residents were said to have allowed themselves (Hargreaves 1992: 5). While manners of speaking and song preference are near impossible to see in the archaeological record, there are certain qualities of the North Dunedin material culture assemblage that hint at this affiliation. The majority of the everyday household items were sourced from England and were rather generic in nature but several of the pieces that were intended to be displayed featured distinctly Scottish characteristics. This was particularly noticeable amongst items of teaware, with examples decorated with tartan, thistles (Chelsea Sprig) and patterns such as Balmoral and Buccleugh which would have, by their names alone, conjured thoughts of the home country. The fact that it was display pieces that bore these motifs suggests that at least some of the North Dunedin residents were making an effort to portray themselves as distinctly Scottish, perhaps with the intention of distinguishing themselves from other ethnicities within the city. This would have become more of an issue with the influx of a variety of people during
the gold rush period, many of whom were viewed as less desirable than those with respectable Scottish and Presbyterian ancestry. Also of interest is the fact that these motifs and patterns are not present in the slightly later contexts, evidence that Scottish ethnicity became a less important factor in identity as the century came to a close.

The other ethnicities residing in North Dunedin during the nineteenth century also left a mark on the archaeological record. As mentioned in the previous chapter the vast majority of material was distinctly British, although there were a few pieces of Australian, Chinese and possibly Maori origin. While the Scottish part of Dunedin and its people’s heritage is often celebrated, the other groups are sometimes forgotten. English immigrants arrived in almost as large a number as the Scots (McDonald 1965: 182) and the Irish population of the town was significant enough to cause concerns, as mentioned above. This is reflected in the figures for religious denomination taken from the 1891 census (Stenhouse 2005: 54). While almost 40% of inhabitants of central and northern Dunedin identified themselves as Presbyterian, close to 30% belonged to the Church of England and just over 10% were Catholic. The English in particular are often ignored in studies such as these as they tend to fade into the background—most of the material from New Zealand and other colonial areas is notably English so it is usually the pieces that stand out as belonging to other ethnic groups that receive most attention. The particularly patriotic Australian plate found at the Wall Street Mall site could very easily have been brought over by someone hoping to make their fortune from the gold rush as large numbers of Australians, particularly from Victoria, were known to have been attracted across the Tasman at this time. Most of the Chinese ceramics were very clearly export wares so they are not indicative of a Chinese community in the vicinity of any of the study area sites, even though most histories of Dunedin record their notable presence within the city, particularly during the gold rush of the 1860s. The area which is today the Museum Reserve between Great King and Cumberland Streets was originally called the “Chinaman’s Gardens” (Middleton and Woods 2012: 6), which would imply the presence of Chinese residents nearby. Olssen (1984) provides a possible explanation for this apparent lack of evidence: they tended to keep to themselves and integration with the existing community was minimal. This was mostly down to the fact that almost all intended to return home to China once they had made their fortune or the gold ran out. There are other parts of the city that were known to be mostly Chinese
neighbourhoods (such as the “Devil’s Half-Acre” south of the Octagon on Maclaggan Street) so it is possible that North Dunedin never had a Chinese population of any significant size. Of course it is also possible that they were living in parts of North Dunedin that are yet to be investigated archaeologically and it would be unwise to jump to conclusions on the relatively small amount of evidence collected on the matter. Maori are also notable by their relative absence in the archaeological material. The only potential Maori objects recovered from the study area were the woven bags found by Petchey (2009: 103), and it is not even clear if they are of Maori manufacture at all. One of the factors in the initial selection of the site for the settlement was removal from the “native troubles” that were causing concern in northern parts of New Zealand during the middle of the century (Forrest 1990: 11), so this lack of evidence is not overly surprising. The accounts we have from the early European settlers regarding the local native population emphasise the separation between the two communities, the latter of which were generally restricted to areas outside the town such as Waikouaiti to the north, the eastern end of the Otago Peninsula and inland on the Taieri Plains (Wood 2005: 18).

As the nineteenth century came to an end, these distinctions between ethnicities appear to have become much less important. The patriotic patterns on tea and dinner services gave way to a smaller variety of much simpler motifs and many New Zealand made products appear in the archaeological record. It is during this period that class became the defining factor in identity rather than country of origin, especially since many of the residents of the city were at least second generation by now. As mentioned in the previous section, the city had become visibly segregated with North Dunedin being home to a large proportion of the working class community. Although the residents in this area would probably have come from a range of backgrounds, their common lifestyle and surroundings would have encouraged a sense of community and allowed for the emergence of a distinct Dunedin identity. This process was occurring throughout the country at this time (what Smith (2008) refers to as the “Kiwi” period).
CHAPTER 5: Global Comparisons

When undertaking the study of a city, particularly one of late nineteenth century age, it is vital to remember that the neighbourhood did not exist in isolation but was intricately connected with and influenced by other settlements around the globe. This is especially true of colonial cities such as Dunedin which depended heavily on links with the British homeland and other New World communities not just for trade but also social and ideological connections. For this reason it is advantageous to compare the processes occurring and affecting North Dunedin at the end of the nineteenth century with those occurring elsewhere in the world. This will not only allow North Dunedin to be placed within a more meaningful, global context but it will also aid in the understanding of which social processes were unique to this settlement and which were relevant to all of the case studies used. In order to make these comparisons as meaningful as possible, the following locations and studies were chosen because of the similarities in the time scale and cultural framework within each emerged, as well as the comparable methods and outcomes most exhibited to the work being undertaken in this thesis.

Auckland, New Zealand

The field of urban archaeology, particularly in an academic sense, is extremely young in New Zealand. Prior to the mid-1980s much of the historical archaeology being undertaken around the country was occurring in rural areas and important historical sites within the urban centres were being recorded by interested amateurs rather than trained archaeologists (Macready 1991). The turning point came in Auckland when it was realised that the swift rate of urban development happening in the last half of this decade was having a huge impact on potential archaeological sites. A plan was hastily made to protect and record a slice of the city’s history, with a focus on important public buildings and a sample of sites representing the various activity types which impacted the growth of Auckland in its early years. This concern over the potential disappearance of our urban past consequently spread to other major centres and similar cultural resource management plans were put in place (for example The Dunedin Historical Archaeology Project (Smith 1991)). Large scale projects
have been undertaken in Wellington, including the harbour military defences (Smith 2004: 254) and work related to the construction of the inner city bypass during the 2000s (Davies 2009: 11), and the Christchurch earthquakes have created a enormous amount of work for archaeologists in that city, most of which is still in the very early stages. Almost all of these urban archaeological investigations have been driven by development pressures rather than academic enquiries so many are far more focused on recording and description than interpretation and placing the sites into a wider context. This is a common problem for this field of archaeology as it extremely unlikely that research focused archaeologists would get the necessary permissions and funds to undertake a full scale excavation of an inner city site. For this reason it is of extreme importance that these development based investigations and excavations are approached with the site’s research value in mind and put together in such a way that academics can easily access the findings and/or material when the opportunity for further study arises. It is also vital that academic archaeologists make the effort to utilise the resources created by these development driven investigations to their full potential, something which this thesis has been striving to demonstrate.

For the purposes of this study Auckland will be the focus of comparisons with Dunedin. This is mainly due to the relatively large amount of work completed there compared to the other cities. Works in Wellington have as yet not been wide ranging enough to form any meaningful conclusions through the archaeology and the work progressing in Christchurch, which once completed has the potential to be extremely comprehensive, is not at a stage where it can feasibly be utilised.

**Sydney and Melbourne, Australia**

Urban archaeology in Australia had its beginnings in the 1960s with the rise of historical archaeology as a discipline but, like New Zealand, did not reach full stride until the 1980s. Right from the start researchers recognised the need for archaeology to be used not just as a back-up but also to test and question the historical record, something which has not always been realised in publications in this field and can still be an issue today (Birmingham 1990: 14; Mayne and Murray 2001: 1). As the discipline has matured it has kept strong ties with both British and North American historical archaeology and has continued to have a strong multi-disciplinary element (Lawrence and Davies 2011: 13). Headway has also been made with regards to collaborations between academic and consultant archaeologists, something
which the field in New Zealand could aspire to (Birmingham 1990: 20; Lawrence and Davies 2011: 252).

Two major urban archaeology projects have been undertaken in Australia in recent years. Both had similar intentions to this thesis of characterising a particular neighbourhood based on a combination of historical records and archaeological material. The first was the “Little Lon” project based in Melbourne which used material excavated from an area of the city recorded as a nineteenth century slum in the late 1980s to attempt to piece together an accurate picture of everyday life in Little Lon. Murray and Mayne (2001) used the material culture (which had been collected during previous development related work) to challenge some of the established ideas about the area and its inhabitants and proved the danger of relying too heavily on historical accounts when discussing the past. Another “slum”, the Rocks district in Sydney, was approached in much the same way. Forty two house sites were excavated around Gloucester and Cumberland Streets in 1994 and, once the material had been analysed and compared with historical descriptions, the discrepancies between the archaeological and historical records were highlighted once again (Crook et al. 2005: 27; Crook and Murray 2006a: 108; Karskens 2001). The Sydney investigations have been incorporated into La Trobe University’s Archaeology of the Modern City project, which has been developed with the intention of aiding in the creation of an accurate social history for the city and addressing future cultural resource management concerns. The emphasis on using the material culture from these areas to tell the story of their inhabitants allows for easy comparison between Sydney, Melbourne and the work presented here on Dunedin. These two projects also demonstrate the potential for collaboration between contract and academic archaeologists, something which could be easily extended to New Zealand.

San Francisco, United States of America

Urban archaeology in the United States of America has seen considerable development over the last 50 years. It began with attempts in the 1960s merely to transplant the British style of open-area excavations across the Atlantic, although it soon became clear that this approach would not work in metropolitan America and alternatives were swiftly developed (Praetzellis and Praetzellis 2011: 46). An obsession with identifying patterns within the historical archaeological record subsequently arose, largely based around the work of South (1978). Many felt, however, that this approach de-humanised the archaeological record (for
example Praetzellis and Praetzellis (2011)) and more context driven methods were sought in order to ensure researchers were carrying out the archaeology of the city in which they were working rather than merely working in it (Salwen 1978: 151). As a result of the North American urban archaeology’s relatively lengthy history compared to New Zealand, as well as the nation’s much longer colonial history and higher number of researchers, there is a wealth of case studies available for use in comparative studies. It was, however, important to select cities that were relevant to New Zealand with regards to their time scale and development.

The replacement and realignment of a major freeway through part of San Francisco and West Oakland in the early 1990s following the Loma Prieta earthquake presented a significant archaeological problem. A number of entire blocks in a historically significant part of town were to be cleared and a research strategy was developed in order to efficiently and responsibly record archaeological features and materials encountered. As a result of this approach, a vast amount of archaeological evidence was collected and analysed (765 features and over a quarter of a million artefacts (Solari 2001: 22)). The culmination of this project was the publication of a collection of essays and reports ten years after this research plan was proposed (Stewart and Praetzellis 1997) which demonstrated the potential of urban archaeology to produce a comprehensive description of a neighbourhood such as West Oakland as well as the ability to place it within a meaningful social and global context. While Praetzellis and Praetzellis encouraged project contributors to use distinctly post-processual techniques, such as using oral histories and local literature to synthesise an image of the past and a focus on individual residents rather than the by necessity less contextual material culture emphasis of this thesis, both studies were working towards the same general outcome and can therefore be readily compared. This case study was chosen because of the similarities West Oakland shared with North Dunedin with regards to the period of greatest development and the similar processes which appeared to have influenced its growth. The benefit of the incredibly comprehensive study undertaken here could also not be ignored.
Comparisons

The following comparisons between nineteenth century North Dunedin and the other cities described above have been organised in the same way as the discussion in the previous chapter.

Environment

The physical environment of every city’s location creates unique challenges that need to be addressed during the settlement’s growth and development. Dunedin’s undulating and swampy terrain caused serious headaches for the initial surveyors who were determined that the city would have a regular gridded layout (as can be seen in Figure 2), a problem which was in places ignored and in others solved by extensive topographical alterations. This desire to make the land conform to an ideal city plan devised on paper can also be recognised in Auckland. When the site for the new capital city was chosen and settlement commenced in 1840, the shoreline featured a number of prominent spurs which were subsequently cut down and used as fill for harbour reclamations in the last half of the nineteenth century (Platts 1971: 60). While the resulting city layout is not quite as rigid as that of Dunedin it is still noticeably regular (Figure 77). The situation in the Rocks district of Sydney, however, was completely different. The area had been initially settled in the earliest days of Sydney’s existence in the late eighteenth century by a population of ex-convicts who were largely left to their own devices by the rest of the city. A combination of the steep and uneven topography and the residents disregard for formal town planning resulted in a decidedly organic and irregular streetscape (Figure 78), something which, when combined with the less than respectable background of much of the area’s population, went some way towards creating the Rocks’ reputation as a notorious slum (Karskens 2001: 69). The contrast here is interesting. Both Dunedin and Auckland were planned as new cities that would be free from the “un-planned and ill-conceived” sprawl that characterised the industrial centres of Britain at the time in an attempt to ward off the evils that were thought to accompany these types of urban spaces (Forrest 1964: 10). Sydney’s Rocks, on the other hand, was built by people who had ended up there against their wishes and who had taken measures to separate themselves from the rest of Sydney. The irregular layout of the district could be seen as a form of resistance on the part of the ex-convict population against the Victorian idea that order was the only path to progress (Praetzellis and Praetzellis 2001: 646).
Figure 77. Map of Auckland CBD showing fairly regular street layout

Figure 78. Detail from Higinbotham & Robinson’s City of Sydney Map, ca. 1885-1890, showing the irregular street layout of The Rocks district. Available at http://www.photosau.com.au/CoSMaps/scripts/displayIndex.asp?Index=AS
Dunedin’s struggles to provide adequate infrastructure and basic services such as water supply and waste disposal are mirrored in every city referred to above and for very similar reasons. Auckland was New Zealand’s capital city for the first 25 years of its life and so attracted large volumes of immigrants at a time when it was still being built. This caused problems when it came to issues such as roading, sewage disposal and water supply as the city lacked the capital with which to provide these services. The authorities at first left these improvements in the hands of the landowners, and parallel problems to those occurring in Dunedin were encountered when an initial attempt was made to retrieve rates from the residents (Bush 1971: 64). Even into the twentieth century residents were complaining of the poor state of the roads, despite the fact that the city was the first to have properly asphalt lined streets in 1902 (Foster 2010: 6). These issues were further exacerbated by the fact that, unlike Dunedin, defending the town against possible attack was a real concern and used up a reasonable proportion of Auckland’s resources (Smith 1989: 1). As a result of these factors, Auckland was repeatedly described as the filthiest and worst smelling place in New Zealand right up until the twentieth century (Bush 1971: 98).

The problems faced by residents of the Rocks in Sydney in this regard stemmed from the unorganised nature of the settlement there. This neighbourhood, as mentioned previously, was very much separate from other parts of the city and thus the residents were largely in charge of their own environment. As very few of the mostly ex-convict inhabitants would have had much knowledge regarding town planning or sanitation, this would have caused some serious issues. This lack of organisation would have been compounded by the rapid rate of population growth occurring in the last half of the nineteenth century (Sydney’s population tripled in the twenty years between 1871 and 1891 (Fitzgerald 1987: 15)). The harbour, like in Dunedin, was the city’s main sewage outlet and this led to regular outbreaks of disease. In some years the death rate in Sydney surpassed the large industrial cities back home, including London, a fact which made it clear that those oft cited Old World evils had made it to the colony (Mayne 1982: 23). The situation in Melbourne’s Little Lon was influenced by the some of the same factors. Whereas it had originated on the very periphery of the city, rapid urban growth fuelled by the Victoria gold rush and industrialisation meant that it was quickly absorbed and became an inner city neighbourhood by the mid-1870s (Mayne 2006: 320). The quick pace of the transformation of the neighbourhood did not
allow time for the provision of services and the general low incomes of most of the residents could not provide the funding for such an undertaking. As more people moved in and nothing was done to improve the area’s infrastructure conditions would have very swiftly deteriorated and fuelled the idea of the neighbourhood as one of Melbourne’s worst slums. Improvements in provision of these basic services were notable in all of these neighbourhoods as the nineteenth century came to a close. This can be explained by the major shift that was taking place within the scientific and medical community surrounding ideas about disease transmission. “Germ theory,” already mentioned in the previous chapters, shifted the focus away from miasmas and unpleasant smells being the major health concern towards micro-organisms that lived in the sewage and refuse that plagued these communities (Frost 1991: 138). Recognition of the real reason for the regular outbreaks of sickness allowed conditions to be improved markedly, although it was by no means an instant cure. At the turn of the century accounts of fever and sickness outbreaks could still be regularly found in newspapers (e.g. Auckland Star, 7/2/1896, page 4; Otago Daily Times, 12/4/1900, page 5).

Activity Types and Areas
The broad patterns of activity areas observed in North Dunedin (industrial activity in areas of cheap, undesirable land and commercial and retail areas along major thoroughfares) can be seen in each of the other cities being used for comparison. It is in the residential areas that the most interesting comments can be made, mostly because this type of occupation was the focus of these studies. In North Dunedin the swampy land on the flat was the realm of the area’s poorest residents prior to the infilling and improvements which occurred with the movement of the central business district. Once improved, the area became more diverse, with wealthy residents living next to squalid shacks, until the introduction of trams opened up the hill suburbs for those who could afford them and the area was returned to the working class. The conditions in West Oakland, California were comparable to the North Dunedin flat as the majority of the neighbourhood originated as marshland. Also like North Dunedin many of the area’s first colonial occupants were squatters and it was not until Oakland became a major transport hub with the construction of the Central Pacific Railway that the neighbourhood became a desirable place to live (Praetzellis and Praetzellis 2004: 33). Although being considered a working class area, the neighbourhood contained an
eclectic mix of inhabitants and extensive villas could be found abutting tiny worker’s cottages (Solari 2001: 25).

The development of one of Auckland’s main historic thoroughfares (Karangahape Road) also displays several parallels with North Dunedin. It began as the southern boundary of the town and remained largely undeveloped for the first decade of European occupation in the settlement (Gibb 2009: 5). Visitors in the 1840s would only have seen a few small cottages scattered along the road as most of the land was purchased by parties interested in land speculation rather than building homes or businesses (Rudd and Gibb 2011: 5). A major change in the character of the area occurred when Scoria House, a large mansion near the top of Queen Street, became Government House in 1851. The road itself was made a priority for improvements and the increased traffic attracted a number of businesses and residents which would eventually transform the area into a bustling suburb containing a variety of substantial homes and small cottages (Gibb 2009: 7), just like West Oakland and North Dunedin.

People
While the multitude of factors influencing daily life within each of the neighbourhoods used in this discussion makes it unfeasible to make in depth comparisons between the experiences of individual residents, several broad patterns are clearly visible. In each of the examples (excluding Auckland where research into this area has not been undertaken) there are blatant discrepancies between how the “working class” inhabitants viewed their surroundings and themselves and how they were characterised by outsiders. In the Rocks and Little Lon especially this led to the creation of a slum mythology that remains strong today. The Rocks neighbourhood has created an entire tourism industry based around this largely constructed idea of the area as a cesspool of humanity (Karskens 2001: 69). The archaeological investigations in these regions have revealed that they were fully functional communities with complex social structures and networks far removed from the dehumanised and rather two dimensional idea of slums (Karskens 2001; Murray and Mayne 2001). North Dunedin was never considered to be a slum as such, but the residents were subject to similar prejudices and stereotyping.

The tendency of residents in rented homes like many nineteenth century North Dunedin inhabitants to use whatever means available as expressions of identity and pride is also
apparent in some of the other study areas. The New South Wales Historic Houses Trust took over a row of intact 1840s worker’s cottages on Gloucester Street in the heart of the original Rocks district and during restoration of the interiors found that for the majority of their lives the properties had been lovingly cared for and decorated in keeping with passing fashions and trends (Karskens 2001: 70). Even though the outer shell of these cottages may have appeared tired and the surrounding area was poorly serviced the residents had clearly made an effort to make the parts of their environment which they had control over spaces to be proud of.

West Oakland was a community which contained a plethora of distinct ethnic sub-groups, including Native Americans, Mexicans, British Americans, African Americans and people from a range of continental European countries, each with their own unique way of life and sense of identity (Hattersley-Drayton 1997: 183). Despite this, the material culture record is relatively uniform between homes in the neighbourhood. The ceramics especially are mostly Staffordshire made and are decorated with the typical Victorian motifs that are common throughout the colonial world during the last half of the nineteenth century, evidence that would seem to point towards cultural assimilation into the British style of living (Praetzellis and Praetzellis 2001: 647). Investigations of the oral histories of a selection of members of these ethnic sub-groups revealed, however, that this was not the case, each group was still maintaining a largely traditional way of life and simply incorporating the mass-produced Victorian material culture into this (Hattersley-Drayton 1997). This apparent cultural assimilation is also visible in the North Dunedin material culture record, but although we lack the strong contextual information and oral histories used by the Oakland archaeologists, the evidence suggests that the ethnic boundaries were not as discreet in the New Zealand settlement and the residents really did develop into a cohesive community with a shared identity.

While these comparisons do reveal a number of interesting patterns and differences between the communities within the study areas, there are limitations. The question of class and comparisons between the experiences within this realm of the inhabitants of these neighbourhoods is limited by the lack of evidence from outside of the “working class” portion of these communities (Crook et al. 2005: 27). We are able to say that most of the residents had access to similar material culture and services but we have no way of knowing
whether this was very similar or completely different to the situation of the wealthier people within or around these areas. This fact makes any meaningful interpretations surrounding the “working class” experience extremely difficult to construct. The historical accounts written by the wealthier members of these societies of the lower classes have already proved to be almost totally inaccurate so it is not really possible to use these to fill in the gaps. More archaeological evidence relating to these other classes needs to be gathered before these discussions can happen in earnest.
CHAPTER 6: Conclusion

The material culture used as the basis of this research provided a wealth of information about daily life in nineteenth century North Dunedin. It provided evidence of the city’s wide ranging trade links which revealed interesting patterns in the types of products consumers were sourcing from overseas versus those for which local products were preferred. Information was also able to be extracted regarding the many problems with infrastructure and basic services that plagued the young settlement as well as the eclectic nature of land use patterns which resulted from the incredibly rapid development of this area of Dunedin. Perhaps most interestingly, however, the artefact assemblage revealed a wealth of information relating to the people of North Dunedin and the social processes which were at work during the nineteenth century. Evidence of how residents dressed, ate and worked was all unearthed, while ethnicity was somewhat visible in the archaeological record, although there was less emphasis on this aspect of identity than the historical record implies. These conclusions were out of necessity kept quite broad, however, as most of the sites and assemblages used were not able to be attributed securely to specific known households or individuals in a way that would allow for the highly contextual interpretations of some similar studies (for example Praetzellis and Praetzellis (2004)).

Major social and economic transformations that were occurring in North Dunedin during the second half of the nineteenth century have also proved to be visible through the artefactual material. The effect the Otago gold rush of the early 1860s had on the fledgling town is perhaps the most obvious, with the material from the sites around George Street clearly demonstrating the associated development boom that North Dunedin experienced. Evidence can also be found among the artefacts of the wide variety of immigrants that the discovery of gold attracted here, for example the patriotic Australian ceramics found at the Farmers Trading Company site. Tantalising clues about the effects of the subsequent economic slump once the gold ran out can potentially be seen in the commercial dumps of shop stock that were found in several of the study area sites. Caches of tableware items all bearing the same maker’s marks suggest discard of unsold stock and the deposit of a large number of Dr Neil’s Rosemary Tricopherous bottles at 234-242 George Street could be
evidence of tightening purse strings amongst consumers. The process of industrialisation, which had a significant impact on North Dunedin during the 1880s and 1890s, can also be seen in the material. Small scale industry and family businesses gave way to large department stores and factories which forever changed the social structure of the neighbourhood. The issues that arose with this change, for example the problem of “sweating” and unhealthy working conditions, are noticeable in the material culture, especially the fabric and seamstress related artefacts found in many of the sites which act as a tangible connection to an extremely important period in the North Dunedin’s (as well as New Zealand’s) social history. Finally, transformations in the way people perceived the world, in particular how diseases were transmitted, are evident in the changing nature of cleaning products towards the end of the century. The advent of germ-theory shifted priorities from merely covering up dirt and smells with products such as Taine’s Black Lacquer to disinfecting surfaces to remove microscopic bacteria with Jeye’s Fluid and similar products.

When this evidence from the material culture is considered alongside that from historical records and accounts some interesting conclusions can be drawn. The nineteenth century residents of North Dunedin were the subject of various stereotypes relating to characteristics such as ethnicity, slovenliness and heavy use of alcohol and tobacco that remain in place today, but the archaeological material analysed during this research challenges many of these ideas. Very little tobacco paraphernalia (pipes, tobacco tins and matchboxes) was found across the study area and while alcohol bottles dominated most of the glass assemblages, this can be explained by relatively short use-lives of these bottles compared to the other types found. There is also clear evidence in the supposed working class domestic rubbish deposits that many members of the community took pride in their homes and included various fashionably decorated items, especially tea and tablewares, in their décor. The city as a whole has always been considered quintessentially Scottish and there is evidence of displays of Scottish identity in the artefactual remains. These are relatively rare, however, and the majority of the material could be more accurately described as British, if not English. It is also apparent that ethnicity became a less important aspect of identity as the century came to a close as the material culture became more uniform and the Dunedin identity emerged.
Comparing North Dunedin with other nineteenth century colonial urban neighbourhoods has revealed that similar factors were influencing many cities during this period. While each community approached the challenges created by unforgiving topography, inadequate services and social prejudice in unique ways, the end goals and results were largely the same. Having said this, there were areas in which North Dunedin’s development was unique. The influx of wealth during the gold rush allowed for the city to handle the associated population growth better than some settlements with less capital. While there was still a vast disparity between the supply and demand of basic services the situation in North Dunedin was far superior, for example, to that of Auckland, which had a similar population boom during its early years as the nation’s capital but without the gold wealth, or the Rocks in Sydney, where the relatively low income residents were mostly left to their own devices when it came to improvements and services. The post-gold rush depression that hit Dunedin in the 1880s resulted in a decline in the population and meant that the city never faced the serious overcrowding and extortionate rent problems of some of the case studies examined. The smaller population instead could enjoy the city that was built and improved when the money was available and there was no shortage of adequate housing in the newly emerging suburban areas.

The results of this research have allowed for a broad description of nineteenth century North Dunedin and a number of meaningful conclusions to be drawn with regards to the environmental, social and economic processes and transformations which affected this neighbourhood during that period. This is despite the fact that very little of the artefactual material could be attributed to a specific household or individual, as Cusick (1995) has claimed is necessary for a true community study. While the presence of such information undoubtedly assists in the interpretation of the social meanings of material culture and allows for comparisons between people from different social groups and backgrounds, this thesis has shown that it is not vital to an understanding of a neighbourhood on a wider level. This has a number of implications for community and “neighbourhood” studies. Firstly, it allows for a much larger proportion of the archaeological record to be viewed as appropriate for this type of research. Whereas Cusick's approach requires household assemblages with strong contexts, this thesis demonstrates that material found in more general domestic, industrial or commercial rubbish deposits can provide a wealth of evidence relating to the
nature of the neighbourhood and its inhabitants. Secondly, it shows that a community study can, to a certain degree at least, be undertaken within a fairly limited time as opposed to the years it often takes to produce the volumes of interpretations many such studies end up with. This of course means that such condensed studies will lack some of the detail that larger projects contain but shows that undertakings such as these do not necessarily need to be restricted to those projects with access to large amounts of time, money and labour.

**Future Directions**

This thesis has demonstrated the potential of cultural resource management archaeological investigations as an academic resource but the next step is to begin to utilise these assemblages and reports as part of research projects more regularly. For many of the growing number of New Zealand urban archaeologists, these investigations will provide most, if not all, of the archaeological data available for the study of past communities. Collaboration between academic and consultant archaeologists is therefore imperative to the development of this field. This has slowly been occurring in Australia and the United States of America and has resulted in a number of highly successful collaborative projects.

Another area that is in need of serious development is our understanding of “middle class” communities (Murray 2013: 13). The majority of archaeological investigations undertaken in cities, not just in New Zealand but worldwide, take place in traditionally working class neighbourhoods. While this may result in an in depth understanding of those communities it makes any questions relating to differences in experiences between low and higher income sections of the population impossible to answer and thus renders any discussion of the class system or social hierarchy virtually meaningless. This situation will only improve once the number of “middle class” household investigations grows to a size that will enable meaningful interpretations of the evidence, something which may take some time as, as previously mentioned, most urban archaeology is at the mercy of development based projects, the majority of which take place in older, less desirable portions of cities as opposed to the “middle class” neighbourhoods.
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APPENDIX 1: Unidentified and Unprovenanced Ceramics Manufacturer’s Marks

This appendix contains those ceramics manufacturer’s marks that were unable to be identified or are unprovenanced.

Red UGTP bowl/cup (4/10/1871, parcel 9)

Blue UGTP Willow plate

Purple UGTP plate

Figure 79. Layer 4 unidentified manufacturer’s marks
Flow Blue UGTP saucer

Purple UGTP Ribbon pattern plate

Brown UGTP saucer

Chinese porcelain enameled bowl

Figure 80. Layer 3 unidentified manufacturer’s marks
Blue UGTP vessel (R. Hammersley (1860-1905))

Blue UGTP Willow plate (Possibly J. & M. P. Bell & Co.)

Blue UGTP Asiatic Pheasant plate (R. Hammersley (1860-1905))

Green UGTP bowl (Cockson, Chetwynd & Co (1867-1875))

Blue UGTP Asiatic Pheasant plate

Figure 81. Unprovenanced ceramic manufacturer’s marks
APPENDIX 2: Unidentified UGTP Ceramic Patterns

Romantic Designs

Figure 82. Romantic style patterns from Layer 4
Figure 83. Classical pattern from Layer 4

Figure 84. Classical pattern from Layer 3
Gothic Designs

Figure 85. Classical pattern from unprovenanced material

Figure 86. Gothic patterns from Layer 4
Figure 87. Gothic patterns from Layer 3

Figure 88. Gothic patterns from unprovenanced material
Border Designs

Figure 89. Border designs from Layer 4
Figure 90. Border designs from Layer 3

Figure 91. Border designs from unprovenanced material
Floral Designs

Figure 92. Floral patterns from Layer 4
Japanese Design

Figure 93. Floral patterns from unprovenanced material

Figure 94. Japanese style pattern from Layer 3
Other Designs

Figure 95. Other UGTP designs from Layer 4

Figure 96. Other UGTP design from Layer 3
Figure 97. Other UGTP designs from unprovenanced material